Biological Resources Report for the

Ocotillo Wells Solar Project




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SEPTEMBER 2013

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~~THIRD~~ FOURTH DRAFT

BIOLOGICAL RESOURCES REPORT
for the
OCOTILLO WELLS SOLAR PROJECT
CASE NUMBER(S): 3300-12-004 (MUP), 3910-12-12-001 (ER), APN 253-390-57 and 58, KIVA PROJECT: 11-0138055

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~~JANUARY~~ SEPTEMBER 2013

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GLOSSARY OF TERMS AND ACRONYMS

ACOE	U.S. Army Corps of Engineers
amsl	above mean sea level
APN	Assessor's Parcel Number
BCC	Birds of Conservation Concern
BLM	Bureau of Land Management
BMO	Biological Mitigation Ordinance
BMP	Best Management Practice
BRCA	Biological Resource Core Areas
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of San Diego
CPV	concentrated photovoltaic
CSS	Coastal Sage Scrub
CWA	Clean Water Act
DRECP	Desert Renewable Energy Conservation Plan
ECMSCP	East County Multiple Species Conservation Program
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FESA	Federal Endangered Species Act
FP	fully protected
GIS	Geographic Information System
GPS	Global Positioning System

IID	Imperial Irrigation District
kV	kilovolt
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
MW	megawatt
MUP	Major Use Permit
NABA	North American Butterfly Association
NCCP	Natural Communities Conservation Plan
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
OHWM	Ordinary High Water Mark
PDS	Department of Planning and Development Services
PV	photovoltaic
RDA	Rural Development Area
RPO	Resource Protection Ordinance
RWQCB	Regional Water Quality Control Board
SR	state route
SSC	Species of Special Concern
USDA	U.S. Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Service
WECO	Western Colorado Desert Routes of Travel Designations
WL	watch list

SUMMARY

The proposed Ocotillo Wells Solar Project consists of the creation of a 331-acre solar energy system in an unincorporated portion of San Diego County, California. General biological surveys of the property were conducted by Dudek biologists Mike Howard and Brock Ortega in June 2010 and January 2011. A formal jurisdictional delineation was conducted in August 2011 (project site) and September 2013 (off-site access road). Focused surveys for special-status[1] wildlife species were conducted in winter 2011/2012 and summer 2012. This report documents the results of Dudek's field work as well as an analysis of the impacts related to the proposed project.

Based on species composition and general physiognomy, two native plant communities were identified on site: Sonoran creosote bush scrub (433.0 acres) and Sonoran wash scrub (6.6 acres). Developed land (0.9 acre) also covers a small portion of the site. There is an addition 0.9 acre of Sonoran creosote bush scrub, 0.1 acre of Sonoran wash scrub, and 0.7 acre of disturbed habitat within the off-site access road easement. Based on a jurisdictional delineation, there are 10.03 acres of non-wetland waters on site, and 0.06 acre off-site, under the jurisdiction of U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game on site.

Focused surveys and habitat assessments for the following wildlife species were conducted in 2012: burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), Peninsular bighorn sheep (*Ovis canadensis nelsoni*) Distinct Population Segment (DPS), flat-tailed horned lizard (*Phrynosoma mcallii*), alkali skipper (*Pseudocopaeodes eunus eunus*), and Colorado Desert fringe-toed lizard (*Uma notata*). Focused rare plant surveys could not be conducted in spring and summer 2012 due to the lack of rainfall and annual plant growth in the project site.

Implementation of the proposed project and off-site access road improvements would result in direct permanent impacts to 0.9 acre of developed land, ~~and~~ 331~~0~~.3 acres of Sonoran creosote bush scrub, 0.1 acre of Sonoran wash scrub, and 0.7 acre of disturbed habitat. Implementation of the proposed development would also result in impacts to 0.66~~4~~ acre of jurisdictional non-wetland waters. Impacts to 331~~0~~.3 acres of Sonoran creosote bush scrub and 0.1 acre of Sonoran wash scrub are considered significant and require mitigation at a 1:1 ratio. Mitigation will be through both on-site habitat preservation and off-site compensatory mitigation. Impacts to 0.6653~~3~~ acre of jurisdictional non-wetland waters are considered significant and require

[1] The term "special-status" is used in this report instead of "sensitive" with the exception of where it occurs in headings required in accordance with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements (County 2010a) or text cited from this document. However, herein, these terms are interchangeable and have the same meaning.

mitigation at a minimum of a 1:1 ratio. Mitigation will be through off-site compensatory mitigation. Potential impacts to wildlife movement are not considered significant. No impacts to local policies, ordinances and adopted plans are anticipated to result with implementation of the proposed project.

Approximately 109.3 acres of land will be dedicated as on-site open space upon project completion, including 102.7 acres of Sonoran creosote bush scrub and 6.6 acres of Sonoran wash scrub. Approximately 239 acres will be preserved in off-site open space.

1.0 INTRODUCTION

1.1 Purpose of the Report

This biological resources report for the proposed Ocotillo Wells Solar Project provides the following information: (1) a description of the existing biological resources on the project site, including vegetation communities and land covers, jurisdictional resources, plants, wildlife, and wildlife habitats; (2) a discussion of the potential impacts to biological resources that would result from development of the property and the biological significance of these impacts in the context of federal, state, and local laws and policies; and (3) recommended mitigation measures for reducing identified significant impacts to biological resources to less than significant. Mitigation recommendations will follow federal, state, and local rules and regulations, including the California Environmental Quality Act (CEQA), the County of San Diego's (County) Significance Determination and Report and Format Requirements (County of San Diego 2010a), and the County's Resource Protection Ordinance (RPO) (County of San Diego 2007).

1.2 Project Location and Description

The Ocotillo Wells Solar Project proposes installation of a photovoltaic (PV) or concentrated photovoltaic (CPV) solar farm for the long-term generation of clean, renewable energy from solar power.

1.2.1 Project Location

The 440-acre project site (Assessor's Parcel Number (APN) 253-390-57 and 58) is located in an unincorporated portion of east San Diego County within the Desert Subregional Plan Area in the Ocotillo Wells area adjacent to Imperial County, California (Figure 1). The project is located off of an existing private easement road approximately 0.4 mile east of Split Mountain Road and 3 miles south of State Highway 78 (SR 78). The property is mapped on the U.S. Geological Survey (USGS) 7.5 minute Borrego Mountain SE quadrangle (Figure 2). Undeveloped lands surround the project site. The entire site is within the draft East County Multiple Species Conservation Program (ECMSCP) Plan Area; however, as this plan is available only in draft form with no specific timeline for finalization, only a preliminary evaluation of consistency with the ECMSCP Planning Agreement (County of San Diego 2008) is provided (see Section 7.0). The site is also located in the Desert Renewable Energy Conservation Plan (DRECP) planning area, but the DRECP is still in the early planning phase with an uncertain time period for completion.

1.2.2 Project Description

To allow for flexibility in the type of technology utilized for construction of the solar farm, four variations of available solar technologies are being considered by the project applicant, as

identified in Table 1 below. Although the overall layout within the proposed development footprint, project grading, and access requirements would be similar for each of the technologies, minor variations would occur. The project analyzed in this biological resources report is the Dual-Axis Tracker Units ("proposed project").

Table 1
Potential Solar Collection Systems for Ocotillo Wells Solar Farm

Type of Solar Generating System	Approximate Overall Production Capacity of System (Alternating Current – AC)	Description of System Components	Number of Equipment Pads
Fixed-Axis Rack System	42 megawatts (MW)	Series of solar panels on a fixed-axis rack system/ Supported on rack pilings of 4–6 inch diameter metal I-beams or 4-inch diameter round pipe	42
Single-Axis Rack System	49 MW	Series of single-axis tracking, rack-mounted solar panels / Supported on driven pier footings	28
Dual-Axis Rack System	45 MW	Series of concentration photovoltaic (CPV) solar panels installed on a dual-axis rack system/ Supported on pile-driven pier footings	46
Dual-Axis Tracker Units	54 MW	Series of concentrated photovoltaic (CPV) solar trackers/Supported on driven pier footings / concrete foundation	39

Energy generated by the proposed project would be transmitted to a private substation proposed in the northeast corner of the site, adjacent to an existing 92 kilovolt (kV) "R-Line." The substation would be dedicated to the Imperial Irrigation District (IID) for operation. The solar farm is proposed to be connected to the R-Line with an interconnection agreement with the IID. The R-Line runs aboveground and connects to the existing San Felipe Substation, located approximately 2.1 miles northwest of the proposed point of interconnection.

Long-term access would be provided from Split Mountain Road via an existing 24-foot-wide all-weather road (graded to 28 feet in width), over a 40-foot-wide private access/utility easement. A series of all-weather fire access roads, minimum 24-foot width and unsurfaced (covered with a binding agent), would be provided within the development footprint to meet design requirements of the San Diego County Fire Authority for emergency access. Additionally, a series of unsurfaced roads would be provided within the solar array field to support routine maintenance. A breakaway fence would surround the entire solar racking systems to limit human.

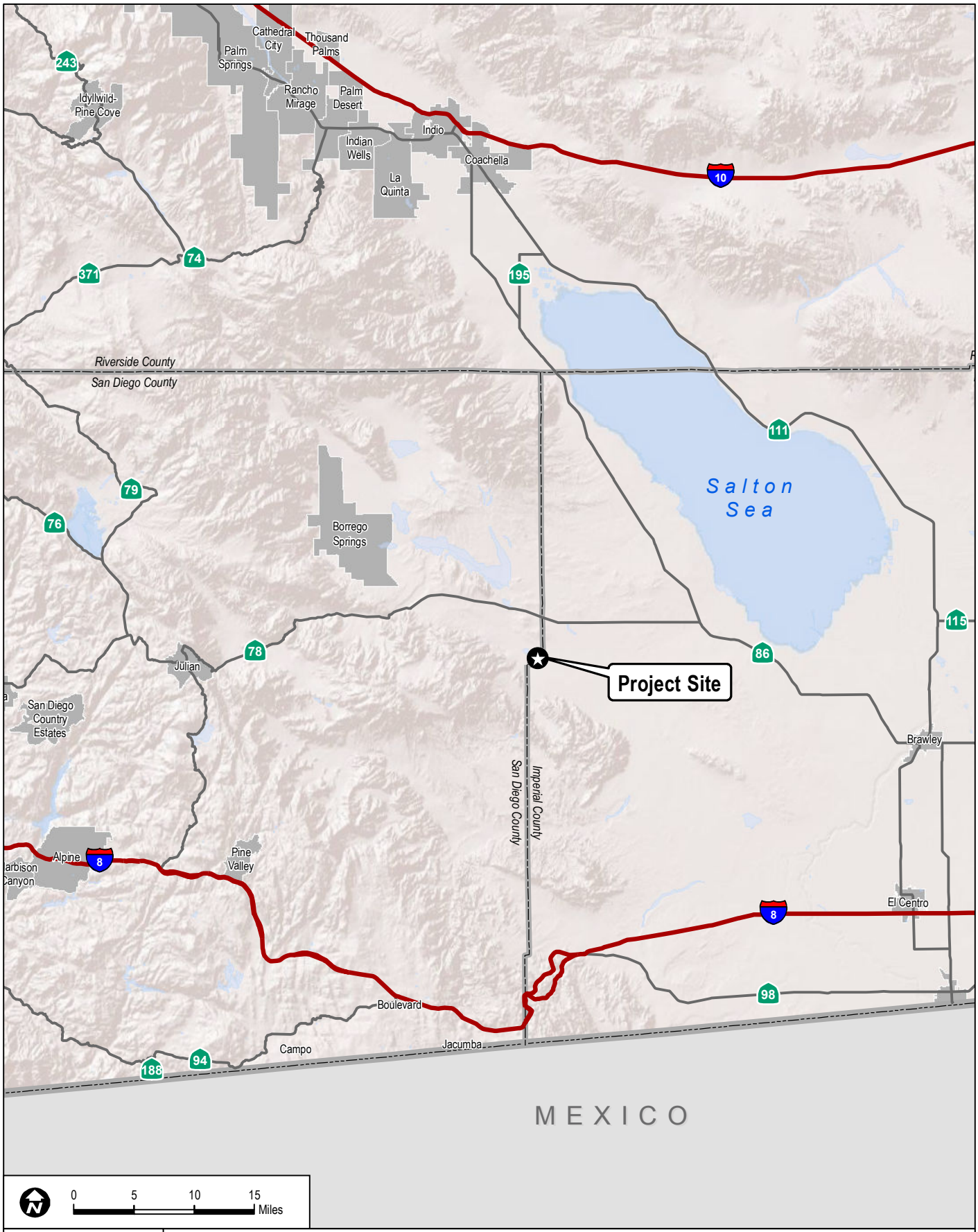

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FIGURE 1

Regional Map

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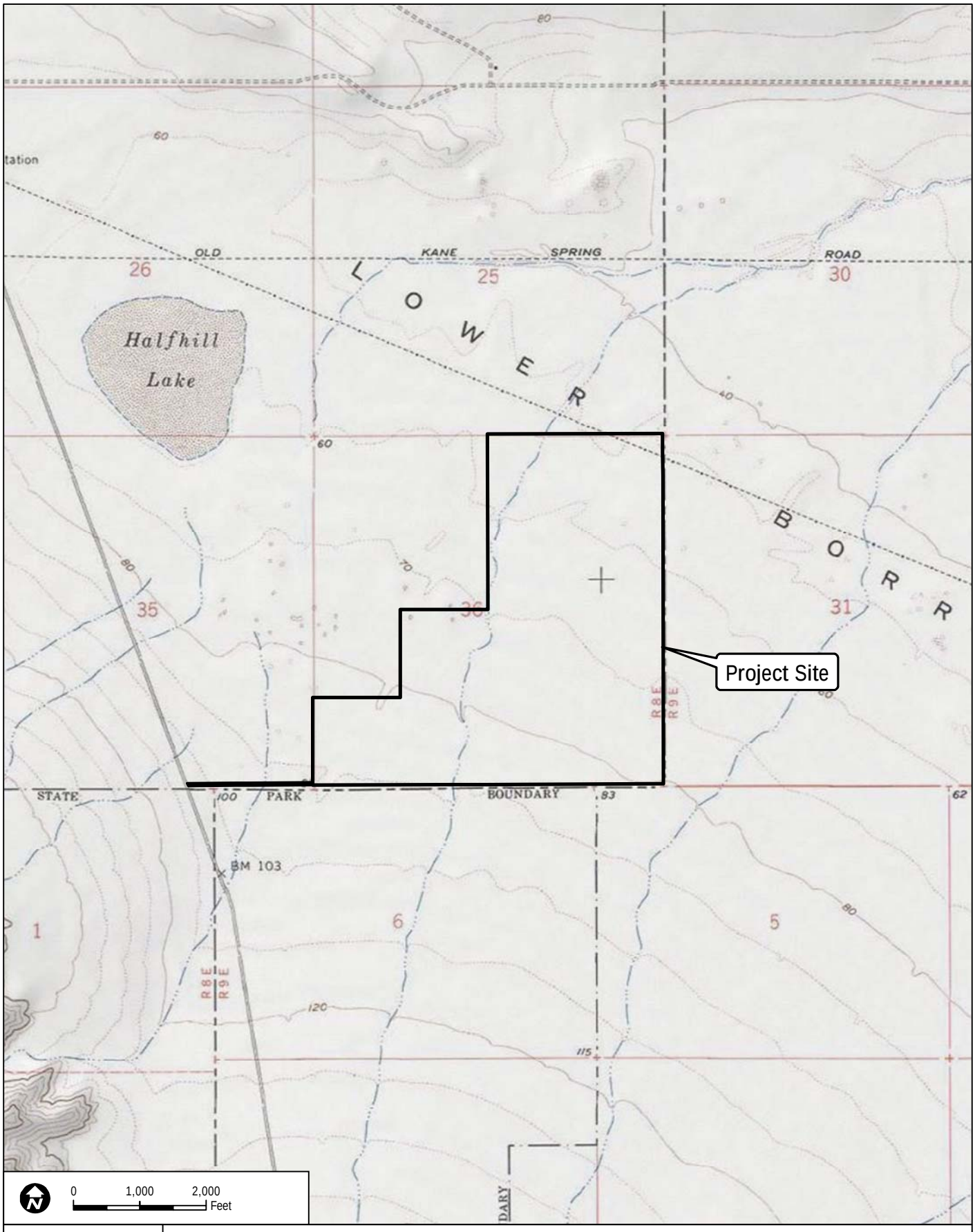

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SOURCE: USGS 7.5-Minute Series Borrego Mtn. SE Quadrangle.

FIGURE 2
Vicinity Map

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For purposes of dust control, a non-toxic, biodegradable, permeable soil-binding agent or permeable rock material would be applied to all disturbed or exposed surface areas as follows: a) a permeable soil-binding agent suitable for both traffic and non-traffic areas shall be used; these agents shall be biodegradable, eco-safe, with liquid copolymers that stabilize and solidify soils or aggregates and facilitate dust suppression; or b) a permeable rock material consisting of river stone decomposed granite or gravel may be placed in a thin cover over all exposed surface area in lieu of the binding agent referenced above; the binding agent would be reapplied approximately every 2 to 3 years for maintenance purposes.

The project site was designated Rural Lands (RL-80) on August 3, 2011, as part of the general plan update. This entitles the property owner to 1 dwelling unit per 80 acres.

1.3 Survey Methodologies

1.3.1 Literature Review

Special-status biological resources present or potentially present in the project site were identified through a literature search, conducted between 2011 and 2012. The following sources were used during the literature review process:

- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Geographic Information System (GIS) Data (USFWS 2011), accessed August 2011
- USFWS Critical Habitat and Occurrence Data (USFWS 2012) within 5 miles of the project site
- California Department of Fish and Game (CDFG's) (2011a, 2012a) Natural Diversity Database was queried to compile a list of potentially occurring flora and fauna in the Borrego Mountain SE quadrangle and surrounding eight quadrangles
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, 8th online edition (CNPS 2012), was searched to compose a list of potentially occurring flora in the Borrego Mountain SE quadrangle and surrounding eight quadrangles
- San Diego Plant Atlas (SDNHM 2012a) was queried to compile a list of potentially occurring special-status plant species in the grids that overlap the Borrego Mountain SE quadrangle and surrounding eight quadrangles
- Comprehensive List of Sensitive Species provided by the County Department of Planning and Land Use (DPLU) (Attachment G, County of San Diego 2011)
- County of San Diego Sensitive Animal List (Table 3, County 2010a)
- *Revised Preliminary Hydrogeologic Assessment Ocotillo Wells Solar Project Major Pre-Application Case Number 3992 11-003 (MPA)* (Wiedlin & Associates, Inc. 2012)
- Fire Protection Plan (RBF 2012a).

General information regarding wildlife species present in the region was obtained from Unitt (2004) for birds, Bond (1977) and Hall (1981) for mammals, Stebbins (2003) for reptiles and amphibians, and Emmel and Emmel (1973) for butterflies. The *Soil Survey, San Diego Area, California Part 1* (Bowman 1973) also was reviewed to identify potentially occurring special-status plants based upon known soil associations. General information regarding vegetation communities and plant species was obtained from *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008), and the Jepson Flora Project (2012a).

Target special-status biological resources present or potentially present on site were identified by the County DPLU staff via a letter dated February 15, 2011 (County of San Diego 2011). Based on a meeting with the County biologists, focused surveys were determined to be needed only for species with a high potential to occur. However, general surveys included habitat assessments and assumption of occurrence based on habitats present. For example, in the case of burrowing owl (*Athene cunicularia*), preconstruction surveys are generally required where suitable habitat exists regardless of whether individuals are observed or not during general and other focused wildlife surveys during the project planning process. Therefore, presence potential is assumed and preconstruction surveys would occur just prior to grading, and avoidance and minimization measures would be implemented if the species is observed during preconstruction surveys.

With regard to regional conservation planning efforts, the proposed project is located within the County of San Diego. Therefore, the County RPO (County of San Diego 2007) and guidelines (County of San Diego 2010a-b) were consulted to ensure consistency with local conservation efforts, goals, and policies. As discussed above, the project site is also located within the ECMSCP Plan Area as part of the draft East San Diego County Subarea Plan; this report provides only a preliminary evaluation of consistency with the ECMSCP. The project is also located within the DRECP area; however, as the DRECP is still in the early planning phases without defined development and conservation areas, the project is only generally analyzed in the context of this plan.

Development projects within the project vicinity were evaluated to determine the proposed project's cumulative impacts.

1.3.2 Field Reconnaissance

On June 17, 2010, Dudek biologist Mike Howard conducted vegetation mapping, an assessment of jurisdictional resources, and a habitat assessment for special-status species with the potential to occur on the project site. On January 26, 2011, Dudek wildlife biologist Brock Ortega performed habitat assessments for wildlife species. On August 3~~1~~0, 2011, Dudek biologists Callie Ford and Katie Dayton conducted a jurisdictional delineation. On January 4, 2013, staff from Jim Whalen Associates (JWA) conducted a site visit with the U.S. Army Corps of Engineers (ACOE) to review the

jurisdictional delineation. An additional jurisdictional delineation and vegetation mapping was completed for the off-site access road easement and 100-foot buffer on September 9, 2013. Table 2 lists the dates, conditions, and survey focus for each survey.

Per the County Pre-Application Summary Letter (County of San Diego 2011), and a subsequent meeting with staff, focused surveys and habitat assessments for the following special-status wildlife species were conducted in 2012 where appropriate: burrowing owl, ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), Peninsular bighorn sheep (*Ovis canadensis nelsoni*), flat-tailed horned lizard (*Phrynosoma mcallii*), alkali skipper (*Pseudocopaeodes eunus eunus*), and Colorado Desert fringe-toed lizard (*Uma notata*). In addition, winter raptor surveys were conducted in winter 2011/2012.

The County Pre-Application Summary Letter (County of San Diego 2011) also identified special-status plant species that require focused surveys. However, focused surveys for special-status plants were not conducted in 2012 for the reasons described in Section 1.3.4.1.

Table 2
Schedule of Surveys

Date	Hours	Personnel	Focus	Conditions
6/17/2010	Not Recorded	Mike Howard	Vegetation mapping, assessment of jurisdictional resources, habitat assessment for special-status species	Warm, sunny conditions with little wind
1/6/2011	0920–1300	Brock Ortega	Habitat assessment for special-status wildlife species	80% cloud cover (cc), 55–57º Fahrenheit (°F) temperatures, 1–3 mile per hour (mph) breezes
8/3/2011	0800–1430	Katie Dayton and Callie Ford	Jurisdictional delineation, vegetation mapping verification	0% cc; 99–115°F; 0–1 mph wind
12/23/2011	0600–1600	Brock Ortega	Winter Raptor Survey	60–0% cc; 50–65°F; 3–5 mph wind
1/14/2012	0600–1600	Brock Ortega	Winter Raptor Survey	75–20% cc; 45–70°F; 0–5 mph wind
2/5/2012	0600–1600	Brock Ortega	Winter Raptor Survey	90–25% cc; 47–70°F; 5–10 mph wind
6/5/2012	0930–1800	Shane Valiere and Thomas Liddicoat	Focused flat-tailed horned lizard and fringe-toed lizard surveys	0% cc; 90–98°F; 2–22 mph wind
6/6/2012	0840–1715	Marshall Paymard and Thomas Liddicoat	Focused flat-tailed horned lizard and fringe-toed lizard surveys	0% cc; 87–99°F; 0–4 mph wind
6/7/12	0726–1345	Marshall Paymard and Thomas Liddicoat	Focused flat-tailed horned lizard and fringe-toed lizard surveys	0% cc; 78–104°F; 0–4 mph wind

Table 2
Schedule of Surveys

Date	Hours	Personnel	Focus	Conditions
6/8/12	0708–1340	Marshall Paymard and Thomas Liddicoat	Focused flat-tailed horned lizard and fringe-toed lizard surveys	0% cc; 76–102°F; 0–3 mph wind
6/10/12	0930–1630	Jon Walker	Focused flat-tailed horned lizard and fringe-toed lizard surveys	0% cc; 95–117°F; 0–6 mph wind
6/11/12	0845–1500	Jon Walker	Focused flat-tailed horned lizard and fringe-toed lizard surveys	0% cc; 95–110°F; 0–1 mph wind
6/21/12	0700–1045	Marshall Paymard and Shane Valiere	Focused Surveys for Burrowing Owl, Prairie Falcon, Loggerhead Shrike, and Bighorn Sheep	0% cc; 81.3–96°F; 0–8 mph wind
1/4/2013	Not recorded	Rich Geisler (JWA), Jim Whalen (JWA)	Site visit with the ACOE to review/revise the jurisdictional delineation	Not recorded
9/9/2013	1030-1330	Britney Strittmater	Off-site access road jurisdictional delineation and vegetation mapping	10%-20% cc; 89°F-97°F;1–5 mph wind

1.3.3 Resource Mapping

Vegetation communities and land covers on and within 100 feet of the project site were mapped in the field directly onto a 250-foot-scale (1 inch = 250 feet) aerial-photograph-based field map of the project site. Following completion of the fieldwork, all vegetation polygons were transferred to a topographic base and digitized using ArcGIS and a geographic information system (GIS) coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present on site was calculated.

Consistent with the latest County of San Diego Report Format and Content Requirements for Biological Resources (County of San Diego 2010b), vegetation community classifications used in this letter report follow Holland (1986) and Oberbauer et al. (2008), where applicable, with modifications to accommodate the lack of conformity of the observed communities to those described by Holland (1986) or Oberbauer et al. (2008).

1.3.4 Flora and Fauna

All plant species encountered during the field surveys were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the *California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2012). For plant species without a California Rare Plant Rank, Latin names follow

the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2012b), and common names follow the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2012). A cumulative list of plant species observed on the project site is presented in Appendix A.

Focused surveys for special-status wildlife species were conducted in 2012. Wildlife species detected during the initial field surveys by sight, calls, tracks, scat, or other signs were recorded. Binoculars (7×50 power) were used to aid in the identification of observed wildlife. In addition to species actually detected, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU 2012) for birds, Wilson and Reeder (2005) for mammals, and North American Butterfly Association (NABA 2001) or SDNHM (2012b) for butterflies. A list of wildlife species observed within the project site is presented in Appendix B.

1.3.4.1 Focused Surveys and Habitat Assessment for Special-Status Plants

Focused surveys for special-status plant species were originally scheduled for spring 2012. A reference population check was conducted on site in March 2012 in order to determine the status of annual plant growth in the region. No annual plants were present on site, presumably due to lack of adequate fall and winter rainfall. Additionally, the Anza-Borrego Desert State Park reported limited numbers of annual flowers growing in canyons and washes (California Department of Parks and Recreation 2012). Therefore, focused plant surveys conducted in the spring of 2012 likely would not have been adequate for documenting representative annual plant species on the project site, and negative survey results for special-status species would not be conclusive.

Appendix C lists the special-status plant species reported in the USGS 7.5-minute Borrego Mountain SE quadrangle and the surrounding eight topographic quadrangles (CNPS and CNDDB occurrences), referred to as the "9-Quad Search." Appendix C also includes the special-status plant species reported in the recorded 31 grids of the San Diego Plant Atlas (SDNHM 2012a) that overlap the 9-Quad Search quadrangles, and those identified in the County Pre-Application Summary Letter (County of San Diego 2011). This appendix contains an analysis of each special-status species' occurrence or potential to occur based on known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period. Table C-1 lists the special-status plant species that are either not expected to occur or have a low potential to occur; these species are not further addressed in this report. Table C-2 lists the special-status species that have a high or moderate potential to occur on the project site, and which are therefore addressed in the impact analysis in this report.

For special-status plants with a high or moderate potential to occur (Table C-2 of Appendix C), habitat suitability models were generated in order to assess impacts. Habitat suitability is

primarily based upon habitat information provided by CNPS (2012). The habitat requirements for each of the special-status plant species were compared with the project-specific vegetation community maps to identify the location and acreages of suitable habitat for each special-status species present on site.

1.3.4.2 Focused Surveys for Flat-Tailed Horned Lizard and Fringe-Toed Lizard

Surveys for flat-tailed horned lizard were conducted in June 2012. The Flat-Tailed Horned Lizard Working Group of Interagency Coordinating Committee (2003) prepared a Flat-tailed Horned Lizard Interim Survey Protocol in order to provide an assessment of flat-tailed horned lizard presence or absence at a specific site. Surveys should be conducted between April and September when surface temperatures are between 95º F and 122º F (Flat-Tailed Horned Lizard Working Group of Interagency Coordinating Committee 2003). A minimum of 10 hours of survey effort should be expended for every 640 acres. Within the 434-acre proposed project site, 10 plots were surveyed for 1 hour at each plot. Each plot was a 100-meter x 100-meter (328-foot by 328-foot) square. Plots were evenly distributed across suitable habitat in the project site (Figure 3). Each plot was surveyed 5 times between June 5 and June 11, 2012.

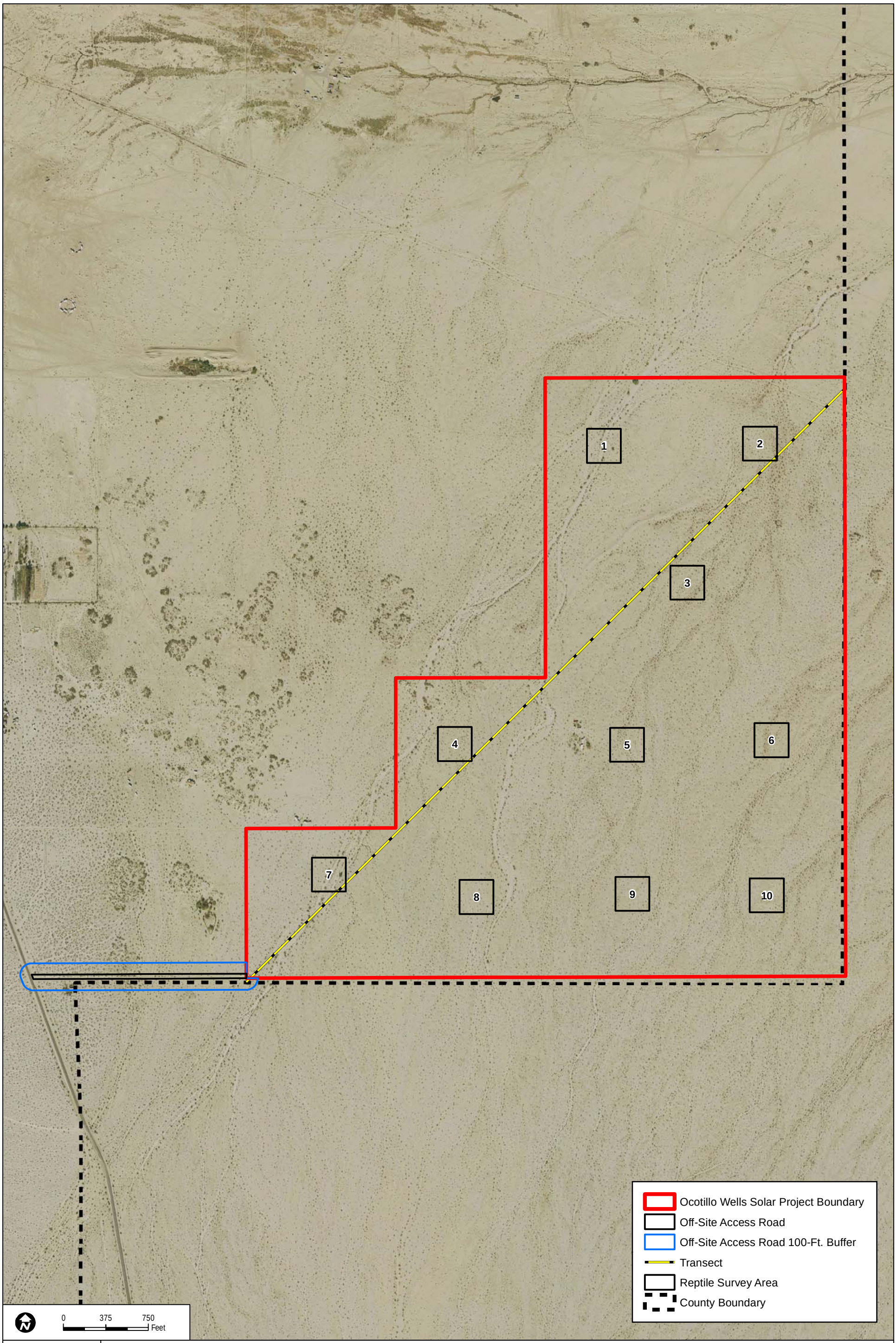
Surveys for Colorado Desert fringe-toed lizard were conducted in 2012 concurrent with focused surveys for flat-tailed horned lizard.

1.3.4.3 Focused Surveys for Burrowing Owl, Prairie Falcon, Loggerhead Shrike, and Bighorn Sheep

Surveys for burrowing owl, prairie falcon, loggerhead shrike, and bighorn sheep were conducted in 2012 via one 10-meter (33-foot) meandering transect survey across the entire site. This transect survey, combined with the winter raptor surveys, lizard surveys, and jurisdictional delineation surveys, cover these species' survey requirements. In addition, various other transects were walked while moving between horned lizard/fringe-toed lizard plots. The transect area is shown on Figure 3.

1.3.4.4 Focused Surveys for Alkali Skipper

Alkali skipper does not have an established survey protocol. The skipper's larval host plant, desert salt grass (*Distichlis spicata* var. *stricta*), was surveyed for during the reconnaissance survey and jurisdictional delineation. No desert salt grass was observed during these surveys. Future surveys may be conducted only in the vicinity of where this host species occurs on site if detected. The species may have several flights between April and September.



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SOURCE: Digital Globe 2008

FIGURE 3

Survey Areas

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1.3.4.5 Wintering Raptor Surveys

Wintering raptor surveys were conducted on the site between December 2011 and February 2012 to look for wintering raptors. Three site visits were conducted.

1.3.5 Jurisdictional Wetlands Delineation

On June 17, 2010, Dudek biologist Mike Howard conducted a preliminary jurisdictional wetlands assessment to identify potential jurisdictional features on the project site. On August 3, 2011, Dudek biologists Katie Dayton and Callie Ford conducted a formal delineation within the project site; and on September 9, 2013 Dudek biologist Britney Strittmater conducted a formal delineation for the off-site access road for areas falling under the jurisdiction of the following resource agencies:

- U.S. Army Corps of Engineers (ACOE), pursuant to Section 404 of the federal Clean Water Act (CWA)
- Regional Water Quality Control Board (RWQCB), pursuant to Section 401 of the federal CWA and the Porter-Cologne Act
- CDFG, pursuant to Section 1602 of the California Fish and Game Code
- County of San Diego pursuant to the RPO.

The ACOE wetlands delineation was performed in accordance with the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1; ACOE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008a), and guidance provided by the ACOE and U.S. Environmental Protection Agency (EPA) on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the CWA (ACOE and EPA 2007). On June 26, 2008, the ACOE released guidance Letter No. 08-02 (RGL 08-02) (ACOE 2008b) that streamlines the procedures for the issuance of new CWA Section 404 permits for applicants that do not contest the application of the ACOE's jurisdiction over a project. RGL 08-02 allows applicants to concede federal jurisdiction under Section 404 over a particular site through the "preliminary jurisdictional determination" (PJD) process and thereby sidestep the longer approved JD process via significant nexus determinations.

The boundaries of the ACOE jurisdictional features were delineated using a Global Positioning System (GPS) unit with sub-meter accuracy, where feasible. Areas under the jurisdiction of the RWQCB generally coincide with "waters of the United States"; however, isolated waters may be under the jurisdiction of the RWQCB as "waters of the State" as provided by the state Porter-Cologne Act. Vegetation, hydrology, and soils were examined at each of the potential wetland sites. The *North American Digital Flora: National Wetland Plant List* (ACOE 2012) was used to

determine the indicator status of plant species. The channel banks were examined for evidence of an ordinary high water mark (OHWM), including sediment deposition and water marks.

On January 4, 2013, JWA conducted a site visit with the ACOE to confirm the jurisdictional delineation conducted within the project site.

Jurisdictional areas were examined in the context of the County's current RPO. The RPO defines wetlands as "lands having one or more of the following attributes: (a) at least periodically, the land supports predominantly hydrophytes; (b) the substratum in predominantly undrained hydric soil; or (c) an ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system" (County of San Diego 2007).

1.3.6 Survey Limitations

Surveys generally were conducted in summer, which does not provide favorable conditions for detecting and identifying annual plant species that bloom in the spring, fall, or winter in response to fall and winter rains. Only the habitat assessment for special-status wildlife species was conducted outside the summer months (Table 1). As described in Section 1.3.4.1, Dudek conducted a reference site visit in March 2012 in order to determine the status of annual plant growth in the region. No annual plants were present at the reference site, presumably due to lack of adequate rainfall. Additionally, the Anza-Borrego Desert State Park reported a limited number of annual flowers growing in canyons and washes (California Department of Parks and Recreation 2012). Therefore, flora data collected and presented in Appendix A are not expected to include all annual species that occur on the project site.

The general biological surveys were conducted during the daytime, which is favorable for observing bird species and some reptiles and mammals, including those identifiable by sign, such as scat and tracks. Nocturnal surveys were not conducted. Birds represent the largest component of the vertebrate fauna, and because most are active in the daytime, diurnal surveys maximize the number of observations of this portion of the fauna. In contrast, daytime surveys usually result in few observations of mammals, many of which may be active at night (especially small rodents). Focused surveys for flat-tailed horned lizard and Colorado Desert fringe-toed lizard were conducted in June, which is during the recommended survey period (Flat-Tailed Horned Lizard Working Group of Interagency Coordinating Committee 2003). Many species of reptiles and amphibians are nocturnal or cryptic in their habits, especially in the hot summer months when they seek cover during the day, and are difficult to observe using standard meandering transects.

1.4 Environmental Setting (Existing Conditions)

The project site is situated between approximately 50 and 90 feet above mean sea level (amsl) in elevation. The site is relatively flat and does not support much topographic diversity other than the washes on site.

According to Bowman (1973), three soil types within two soil series occur on the project site. Rositas fine sand, 0%–2% slopes, and Rositas fine sand, hummocky, 5%–9% slopes, occur on site. These soils are somewhat excessively drained, very deep loamy coarse sands that are derived from granitic alluvium (Bowman 1973). Typical plants associated with these soils include ocotillo (*Fouquieria splendens*), cholla (*Cylindropuntia* spp.), creosote bush (*Larrea tridentata*), saltbush (*Atriplex* spp.), and annual grasses. While Rositas fine sand, 0%–2% slopes is nearly level, Rositas fine sand, hummocky, 5%–9% slopes is gently rolling and has hummocks to low dunes less than 6 feet high. Rositas fine sand, 0%–2% slopes, dominates the site, and only a small amount of the hummocky soil type occurs along the northern boundary of the project site. The project site also supports sloping gullied land, which consists of a wide variety of materials derived from igneous, sedimentary, and metamorphic rocks that forms in the desert on alluvial fans adjacent to mountains (Bowman 1973). Vegetation is sparse and includes desert shrubs, cactus, and annual forbs and grasses, as described in Section 1.4.2. Runoff is medium to very rapid, making the erosion hazard moderate to high. Sloping gullied land occupies an area extending from the northeastern portion of the site southwest to the southwestern corner of the site (Bowman 1973). Several "blue-line" streams on the USGS quadrangle cross the property and are tributaries to San Felipe Wash.

The project site generally has a warm, dry desert climate. Average temperatures in the nearby community of Borrego Springs range from approximately 55°F to 90°F, with high daily temperatures in the summer months typically exceeding 100°F. Borrego Springs generally receives less than 1 inch of rainfall from April to November, and the average yearly precipitation typically does not exceed 2 inches. Humidity generally ranges from approximately 60%–80% (Advameg Inc. 2011).

The project site is generally vacant, undeveloped land. Two (abandoned) mobile homes and several supporting miscellaneous outbuildings were recently present on site; however, all existing on-site structures, with the exception of a well house associated with an existing on-site well (not currently in use), have been demolished and removed from the property.

1.4.1 Regional Context

The Ocotillo Wells Solar Project site is located in an unincorporated portion of east San Diego County in the Ocotillo Wells area adjacent to Imperial County. In San Diego County, several resource conservation-planning efforts have been completed or are currently in progress with the long-term goal of establishing a regional reserve system that will protect native habitat lands and

their associated biota. The ultimate goals of these plans are the establishment of biological reserve areas in conformance with the State Natural Communities Conservation Planning (NCCP) Act, and to contribute to the preserve system already established by the approved Multiple Species Conservation Program (MSCP).

The entire site is located within the draft ECMSCP Plan Area; however, because this plan has not yet been adopted, the current project is evaluated for consistency with the ECMSCP Planning Agreement (County of San Diego 2008). The site is also located in the DRECP, but this plan is still in the early planning phase with an uncertain time period for completion.

The project area is located just west of the Western Colorado Desert Routes of Travel Designations (WECO) Plan area (BLM 2002). The project area is located east of the boundary for East San Diego County Resource Management Plan (BLM 2008). The Coachella Valley Multiple Species Habitat Conservation Plan boundary is within Riverside County; its southern extent is approximately 22 miles north of the project area.

The Flat-tailed Horned Lizard Rangewide Management Strategy (Flat-Tailed Horned Lizard Working Group of Interagency Coordinating Committee 2003) describes five Management Areas to focus conservation and management of habitat for flat-tailed horned lizard populations. These areas include Yuma Desert, East Mesa, West Mesa, Yuha Desert, and Borrego Badlands. The closest Management Area is the West Mesa, located approximately 5.5 miles east of the project area south of SR 78 and Highway 86. The document does not identify the project area as an important area or corridor between populations.

1.4.2 Habitat Types/Vegetation Communities

Four~~Three~~ vegetation communities and other land cover types were identified on site and within the off-site access road: Sonoran creosote bush scrub (433.9~~0~~ acres), Sonoran wash scrub (6.7~~6~~ acres), disturbed habitat (0.7 acre), and developed land (0.9 acre) (Table 3). These habitat types/vegetation communities are described below, and their locations are shown in Figure 4. Pursuant to County standards and regulations, Figure 4 also shows vegetation communities and other land cover types within 100 feet of the project boundary. Vegetation communities are considered special-status if ~~that~~they are unique, are of relatively limited distribution, or are of particular value to wildlife, or are recognized by local and regional resource agencies as special-status and considered a special-status biological resource. The status of vegetation communities was determined using Holland (1986), as modified by Oberbauer (2008), and the County's Guidelines for Determining Significance and Report Format and Content Requirements (2010a).

Table 3
Existing Acreages of Habitat Types/Vegetation Communities on Site

Habitat Types/Vegetation Communities	Code [1]	On-Site Existing Acreage	Off-Site Access Road Easement
Sonoran creosote bush scrub	33100	433.0	0.9
Sonoran wash scrub	33230	6.6	0.1
Disturbed Habitat	11000	--	0.7
Developed Land	12000	0.9	--
Total	—	440.5	1.7

[1] Holland (1986) as modified by Oberbauer (2008)

1.4.3 Sonoran Creosote Bush Scrub

Sonoran Creosote Bush Scrub is composed of a variety of shrubs ranging from 0.5–3 meters (2–10 feet) tall that are often widely spaced with bare ground. Creosote bush scrub occurs in well-drained secondary soils of slopes, valleys, and fans. This vegetation community on site is dominated by creosote bush, white bur-sage (*Ambrosia dumosa*), and Saharan mustard (*Brassica tournefortii*). Other species present on site include athel (*Tamarix aphylla*), honey mesquite (*Prosopis glandulosa*), buckwheat (*Eriogonum* sp.), ocotillo, woolly plantain (*Plantago patagonica*), and Mediterranean grass (*Schismus barbatus*). Sonoran creosote bush scrub occupies more than 98% of the project site.

Sonoran creosote bush scrub is widespread throughout the Sonoran desert. Sonoran creosote bush scrub is considered special-status based on mitigation recommendations of the County (2010a~~b~~).

1.4.3.1 Sonoran Wash Scrub

Sonoran wash scrub occupies the banks and islands within desert washes. Dominant plant species in this community on site include smoketree (*Psorothamnus spinosus*), Thurber's sandpaper plant (*Petalonyx thurberi*), honey mesquite, desert lavender (*Hyptis emoryi*), desert willow (*Chilopsis linearis*), cheesebush (*Ambrosia salsola*), and California croton (*Croton californicus*). Sonoran wash scrub occupies approximately 1.5% of the project site.

Sonoran wash scrub occurs within washes on site. Though not specifically addressed within Holland (1986), Sonoran wash scrub was added to the vegetation communities list by Oberbauer in 1996. Sonoran wash scrub is considered special-status based on mitigation recommendations of the County (2010a~~b~~).

1.4.3.2 Disturbed Habitat

Disturbed habitat refers to areas that lack vegetation but still retain a pervious surface, or are dominated by a sparse cover of ruderal vegetation. These areas are generally the result of severe

or repeated clearing or grading. Disturbed habitat refers to the existing dirt road within the off-site access road easement. Disturbed habitat is not considered a special-status community.

1.4.3.3~~2~~ Developed Land

Developed land is a category that includes buildings, roads, and graded surfaces that lack vegetation entirely or include manicured landscaping. At the time of the survey, developed land on site consists of three buildings and associated ornamental vegetation. Developed land has very little ecological importance and is not considered a special-status community.

1.4.4 Flora

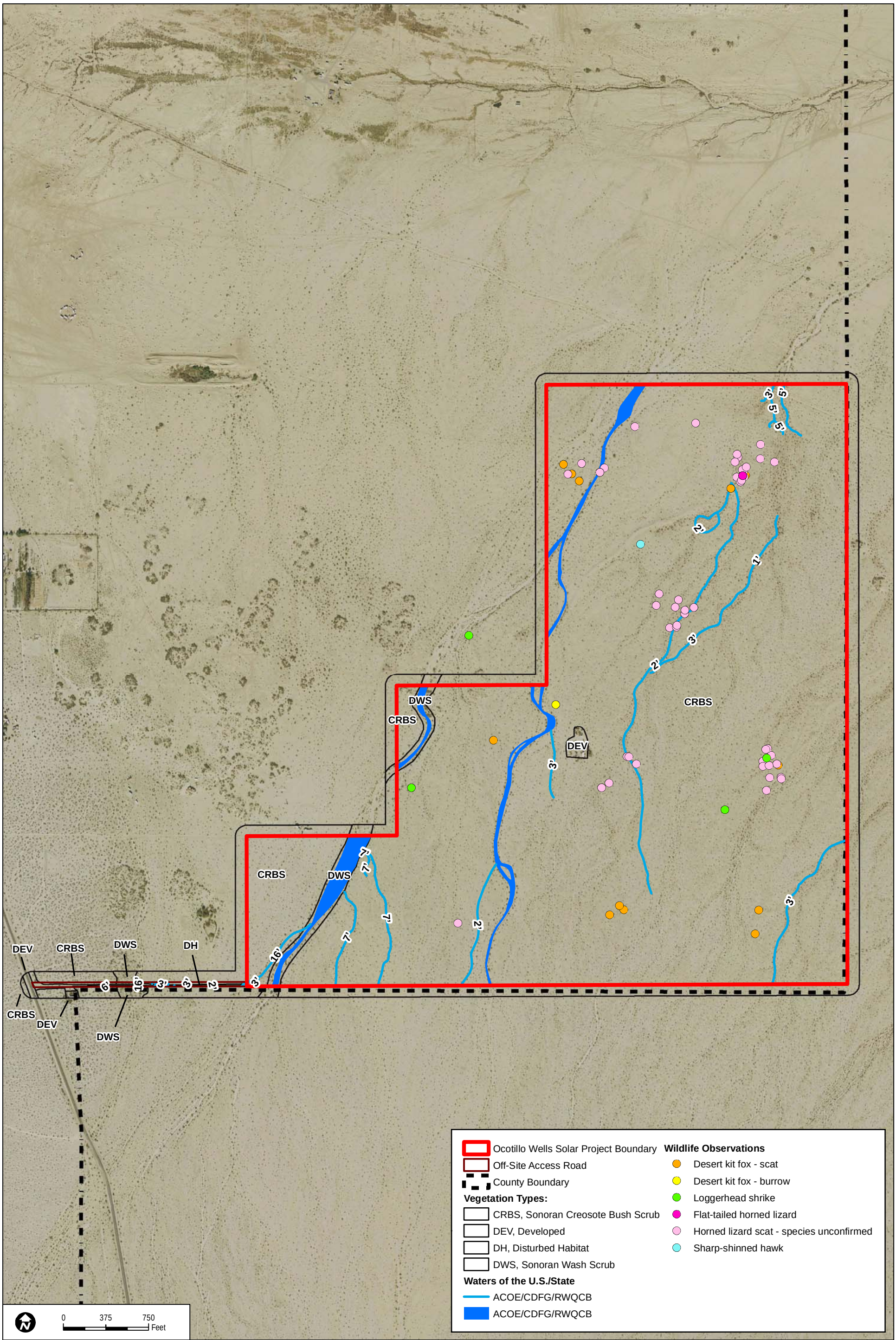
Twenty-six vascular plant species, consisting of 22 native species (85%) and 4 non-native species (15%), were recorded on site during the reconnaissance surveys and jurisdictional delineation. Appendix A includes a cumulative list of plant species observed on site. As noted in the discussion of survey limitations, the project vicinity had subnormal rainfall in winter of 2012 and annual plants exhibited poor production. Therefore, several undetected annual plant species may occur on site. Special-status plant species that have high potential to occur in the project site are discussed in Section 1.4.5.

1.4.5 Fauna

Seventeen wildlife species were observed on site during surveys, consisting of eight reptile species, four bird species, and five mammal species (Appendix B). Commonly observed species include desert iguana (*Dipsosaurus dorsalis*) and black-tailed jackrabbit (*Lepus californicus*). Most of the wildlife observed are relatively common, widely distributed, and adapted to living in proximity to human development (e.g., turkey vulture (*Cathartes aura*), black-tailed jackrabbit, and coyote (*Canis latrans*)). Special-status wildlife species detected or observed in the project site are discussed in Section 1.4.6.

1.4.6 Sensitive Plant Species

Endangered, rare, or threatened plant species, as defined in CEQA Guideline 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status plant species" in this report and include (1) endangered or threatened plant species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA); (2) plant species with a California Rare Plant Rank (CRPR) (CDFG 2012b; CNPS 2012) (List 1 through 4); and (3) plant species considered "sensitive" by the County of San Diego (Table 2, County of San Diego 2010a).



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SOURCE: Digital Globe 2008

FIGURE 4

Biological Resources Map

BIOLOGICAL RESOURCES REPORT FOR THE OCOTILLO WELLS SOLAR PROJECT

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Ten special-status plant species have a moderate or high potential to occur on the project site (Appendix C, Table C-2), four County List A or B species, five County List D species, and one special-status species that is not on the County of San Diego Sensitive Plant List (County of San Diego 2010a). Each of these special-status species is described in Sections 1.4.5.2 (County List A and B Species) and 1.4.5.3 (County List C and D Species and other special-status species).

1.4.6.1 Critical Habitat

There is no USFWS designated critical habitat for plant species within 5 miles of the project site.

1.4.6.2 County List A and B Species

The County List A and B species that follow have been identified as having high potential to occur within the project boundary.

Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*)

Harwood's milkvetch is a County List B and has a CRPR of 2.2. This annual herb is in the Fabaceae family, has been documented at elevations from sea level to 2,329 feet amsl, and blooms from January to May (CNPS 2012). Harwood's milkvetch occurs on sandy or gravelly soils in desert dunes and Mojavean desert scrub. It has been documented within Imperial, Riverside, San Bernardino, and San Diego Counties, but despite its limited range in California, it is not a California endemic species. Additional records are known from Arizona and Sonora, Mexico (CNPS 2011). Development in desert regions, trampling of individuals, and habitat disturbance resulting from off-highway vehicles are threats to the species. The project site is within the known geographic range of this species; there is a known occurrence less than 2 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub present on site. Therefore, there is a high potential for this species to occur on site.

There are ~~433.4~~440.6 acres of suitable habitat for Harwood's milk-vetch on the project site.

Peirson's pincushion (*Chaenactis carphoclinia* var. *peirsonii*)

Peirson's pincushion is a County List A and has a CRPR of 1B.3. It is a California endemic, and is primarily known from records in the eastern Santa Rosa Mountains in Imperial and San Diego Counties. It may potentially occur in Riverside County, although more research is needed to correctly assess its distribution (CNPS 2011). It is an annual herb in the Asteraceae family, it blooms from March to April, and has been documented at elevations of 10 to 1,640 feet amsl (CNPS 2012). Peirson's pincushion occurs on sandy soils in Sonoran desert scrub habitats. Because it is thought to be largely restricted to the Santa Rosa Mountains, the fragmentation and

disturbance of existing populations is considered to be a threat to the continued viability of the species. Additionally, habitat disturbance resulting from off-highway vehicles further degrades habitat and compromises population stability. The project site is within the known geographic range of this species; there is a known occurrence less than 2 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.

There are 44~~0~~39.1~~6~~ acres of suitable habitat for Peirson's pincushion on the project site.

Brown turbans (*Malperia tenuis*)

Brown turbans is a County List B and has a CRPR of 2.3. It is an annual herb in the Asteraceae family, blooms from March to April, and has been documented at elevations from 49 to 1,099 feet amsl (CNPS 2012). Records are known from Imperial and San Diego Counties, and Baja California, Mexico (CNPS 2011). Brown turbans occurs on sandy or gravelly soils in Sonoran desert scrub. The project site is within the known geographic range of this species; there is a known occurrence approximately 3 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for brown turbans on the project site.

Orcutt's woody aster (*Xylorhiza orcuttii*)

Orcutt's woody aster is a County List A and has a CRPR of 1B.2 species. It is a perennial herb in the Asteraceae family, and blooms from March to April. Orcutt's woody aster has been documented at elevations from sea level to 1,198 feet amsl in Sonoran desert scrub (CNPS 2012). It has been documented in Imperial and San Diego Counties, and in Baja California, Mexico. More studies need to be done to assess the extent of its range, since it may occur in Riverside County (CNPS 2011). Habitat degradation and trampling due to off-highway vehicles is a serious threat to Orcutt's woody aster. The project site is within the known geographic range of this species; there is a known occurrence less than 5 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for Orcutt's woody aster on the project site.

1.4.6.3 County List C and D Species and Other Special-Status Species

The County List D species that follow have been identified as having high or moderate potential to occur within the project boundary. In addition, gravel milkvetch (*Astragalus sabulonum*),

which is considered special-status by CNPS, but not on the County of San Diego Sensitive Plant List (County of San Diego 2010a) is described below. County List C plant species that are known to occur in the vicinity of the project are not expected to occur on site (see Table C-1 of Appendix C).

Salton milkvetch (*Astragalus crotalariae*)

Salton milkvetch is a County List D and has a CRPR of 4.3 species. It is a perennial herb in the Fabaceae family, and blooms from January to April. Salton milkvetch has been documented at elevations from 197 feet below msl to 820 feet amsl in Sonoran desert scrub habitats (CNPS 2012). In California, it has been documented in Imperial, Riverside, and San Diego Counties. No threats to this species have been identified (CNPS 2012). Salton milkvetch is known to occur within the vicinity of the project site (SDNHM 2012b). Additionally, the project site is in the known elevational range of the species, and desert scrub is present on site. Therefore, there is a high potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for Salton milkvetch on the project site.

Borrego milkvetch (*Astragalus lentiginosus* var. *borreganus*)

Borrego milkvetch is a County List D and has a CRPR of 4.3 species. It is an annual herb in the Fabaceae family and blooms from February to May. Borrego milkvetch occurs on sandy soils in desert dunes, Mojavean desert scrub, and Sonoran desert scrub communities, at elevations from 98 to 1,050 feet amsl (CNPS 2011; CNPS 2012). Borrego milkvetch is not a California endemic, and it is also found also in Arizona, Nevada, and Baja California and Sonora, Mexico (CNPS 2011). Within California, it is known from Imperial, Riverside, San Bernardino, and San Diego Counties. This species is known to occur within the vicinity of the project site (SDNHM 2012b). Because the project site is close to the documented lower elevation range of the species and desert scrub is present on site, there is a moderate potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for Borrego milkvetch on the project site.

Gravel milkvetch (*Astragalus sabulonum*)

Gravel milkvetch is not on the County of San Diego Sensitive Plant List (County of San Diego 2010a) but has a CRPR of 4.3. It is an annual or perennial herb in the Fabaceae family, and blooms from February to June. Gravel milk-vetch has been documented at elevations from 197 feet below msl to 3,051 feet amsl in desert dunes, Mojavean desert scrub, and Sonoran desert scrub (CNPS 2012). In California, it has been documented in Imperial, Inyo, Riverside, and San Diego Counties. Gravel milkvetch is threatened by solar energy development and possibly threatened by vehicles, recreational activities, and non-native plants (CNPS 2012). The project

site is within the known geographic range of gravel milkvetch; there is a known occurrence approximately 7 miles east of the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for gravel milkvetch on the project site.

Ribbed cryptantha (*Cryptantha costata*)

Ribbed cryptantha is a County List D and has a CRPR of 4.3. It is an annual herb in the Boraginaceae family and blooms from February to May. Ribbed cryptantha occurs on sandy soils in desert dunes, Mojavean desert scrub, and Sonoran desert scrub communities and has been documented at elevations from 197 feet below msl to 1,640 feet amsl (CNPS 2012). Ribbed cryptantha is not a California endemic, and is also found in Arizona and Baja California, Mexico (CNPS 2012). Within California, it is known from Imperial, Inyo, Riverside, San Bernardino, and San Diego Counties. This species is known to occur within the vicinity of the project site (SDNHM 2012b). The project site is within the known elevational range of the species, and desert scrub is present on site. Therefore, there is a high potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for ribbed cryptantha on the project site.

Baja California bur-comb (*Pectocarya peninsularis*)

Baja California bur-comb is a County List D species; it does not have a CRPR designation. It is an annual herb in the Boraginaceae family and has been documented at elevations from 98 to 984 feet amsl. This species is known from records in Riverside, San Diego, and Imperial Counties, as well as in Baja California, Mexico (CalFlora 2012). Baja California bur-comb occurs in Sonoran desert scrub habitats, and is known from washes, roadsides, and clearings. This species is known to occur less than 5 miles from the project site (SDNHM 2012b). Because the project site is close to the documented lower elevation range of the species and desert scrub is present on site, there is a moderate potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for Baja California bur-comb on the project site.

Thurber's pilostyles (*Pilostyles thurberi*)

Thurber's pilostyles is a County List D and has a CRPR of 4.3. This species is a parasitic perennial herb in the Apodanthaceae family that blooms during January. It grows inside and flowers on the stems of *Psorothamnus*, especially *P. emoryi*. Thurber's pilostyles occurs in Sonoran desert scrub habitats from sea level to 1,198 feet amsl (CNPS 2011; CNPS 2012). It occurs throughout the western United States, including California, Arizona, New Mexico,

Nevada, Texas, as well as Baja California and Sonora, Mexico (CNPS 2011). In Southern California, this species occurs in Imperial, Riverside, and San Diego Counties (CNPS 2011). This species is known to occur within the vicinity of the project site (SDNHM 2012b). The project site is within the known elevational range of the species, and desert scrub is present on site. Therefore, there is a high potential for this species to occur on site.

There are 440.6 ~~439.1~~ acres of suitable habitat for Thurber's pilostyles on the project site.

1.4.7 Sensitive Animal Species

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status wildlife species" and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of the CESA and ESA; (2) California Species of Special Concern (SSC) and Watch List (WL) species, as designated by the CDFG (2011b); (3) mammals and birds that are fully protected (FP) species, as described in Fish and Game Code, Sections 4700 and 3511; (4) Birds of Conservation Concern (BCC), as designated by the USFWS (2008); and (5) wildlife species considered "sensitive" by the County of San Diego (Table 3, County of San Diego 2010b).

Focused surveys and habitat assessments for the following special-status wildlife species were conducted in 2012: burrowing owl, ferruginous hawk, Swainson's hawk, prairie falcon, loggerhead shrike, peninsular bighorn sheep, flat-tailed horned lizard, alkali skipper (host plant), and Colorado desert fringe-toed lizard. In addition, winter raptor surveys were conducted in winter 2011/2012.

Special-status wildlife species known to occur in the surrounding region and their potential to occur on site are presented in Appendix D. Table D-1 lists the special-status wildlife species that are either not expected to occur, have a low potential to occur, or have been observed but the project site does not support these species as related to their sensitivity status (e.g., nesting); these species are not addressed further in this report. Table D-2 lists the special-status wildlife species that have been detected on site, or have high or moderate potential to occur on the project site, and which are therefore addressed in the impact analysis in this report. The evaluation of each species' potential to occur on site is based on the regional distribution of each species, habitat present on project site, and Dudek's knowledge of biological resources of the area.

1.4.7.1 Critical Habitat

There is no USFWS designated critical habitat for wildlife species within the project site. The eastern border of the critical habitat for peninsular bighorn sheep is located approximately 1 mile west of the project site. This is shown on Figure 5.

1.4.7.2 County Group I Species

The County Group 1 species that follow have been observed, detected, or identified as having high or moderate potential to occur within the project boundary.

Burrowing owl (*Athene cunicularia*)

Burrowing owl is a CDFG SSC and County Group 1 species. In California, the burrowing owl's range extends throughout the lowlands from the northern Central Valley to the U.S./Mexico border, with large populations in the Imperial Valley region of southeast California (Gervais et al. 2008) and a small (perhaps extirpated) population in the Great Basin bioregion in northeast California (Cull and Hall 2007). Breeding burrowing owls are absent from the coast north of Sonoma County and from high mountain areas, such as the Sierra Nevada and the Transverse Ranges extending east from Santa Barbara County to San Bernardino County (Gervais et al. 2008).

Throughout their range, burrowing owls require habitats with three basic attributes: open, well-drained terrain; short, sparse vegetation generally lacking trees; and underground burrows or burrow-like structures (e.g., pipe openings) (Gervais et al. 2008; Klute et al. 2003). Burrowing owls occupy grasslands, deserts, sagebrush scrub, agricultural areas (including pastures and untilled margins of cropland), earthen levees and berms, coastal uplands (especially by over-wintering migrants) (California Natural Diversity Database 2010), and urban vacant lots, as well as the margins of airports, golf courses, residential developments, and roads (CVMC 2007; Gervais et al. 2008).

A burrowing owl was observed in the project site during a site visit. This species has not been observed during subsequent wildlife surveys. The project site is open with very sparse herb and grass cover, but they have potential to forage and nest in the area.

Turkey Vulture (*Cathartes aura*)

The turkey vulture is a County Group 1 species and is widespread throughout North and South America. In California, it is common during the breeding season, and is a yearlong resident west of the Sierra Nevada Mountains, especially in coastal areas. Summer and yearlong ranges also include the southeastern United States; portions of Texas, Mexico, Central America, South America; and some islands in the Caribbean (Kirk and Mossman 1998).

Turkey vulture was observed foraging and flying over the project site during the June 2012 reptile surveys. This species could use the site for foraging, but there is no suitable nesting or roosting habitat.

Loggerhead shrike (*Lanius ludovicianus*)

The loggerhead shrike is a CDFG SSC and County Group 1 species; it is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). They are a yearlong resident species in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, while shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses.

Loggerhead shrikes were observed during the June 2010 reconnaissance survey, the 2011/2012 winter raptor surveys, and June 2012 reptile surveys (Figure 4). Based on the timing of the observations, loggerhead shrikes are likely residents in the project vicinity.

Lucy's warbler (Oreothlypis luciae)

Lucy's warbler is a USFWS BCC, CDFG SSC, and County Group 1 species. It occurs in very scattered locations in San Diego, Imperial, San Bernardino, Kern, and Inyo Counties (Zeiner et al. 1990a). Currently, it is a common breeder along the lower Colorado River, and localized populations occur in the Anza-Borrego Desert, Imperial Valley, Coachella Valley, and Death Valley areas (Shuford and Gardali 2008; Zeiner et al. 1990a); it winters almost exclusively in Mexico (Shuford and Gardali 2008). In the Anza-Borrego Desert, there is a small population that has been observed breeding in mesquite patches (Unitt 2004; Shuford and Gardali 2008). Lucy's warblers breed in dense thickets of mesquite or other trees and shrubs in desert wash scrub habitats.

Lucy's warbler was not observed during surveys. There is some suitable habitat in scattered palo verde trees and mesquite in the Sonoran Desert wash vegetation community, and this species has moderate potential to nest on site.

Flat-tailed horned lizard (*Phrynosoma mcallii*)

Flat-tailed horned lizard is a CDFG SSC and County Group 1 species. The flat-tailed horned lizard occurs from the Coachella Valley to the Imperial and Borrego Valleys and into Baja California, Mexico. The western limit of the species' range is Anza-Borrego Desert State Park in eastern San Diego County, and to the east they are found in Glamis and Ogilby, northwest of Yuma, Arizona, and then into the lower Colorado subdivision of the Sonoran Desert in Arizona (Jones and Lovich 2009). They occur where the substrate is composed of fine sands or silica. Suitable habitat is characterized as stabilized sand dunes that fall within the creosote-white bur-sage series of Sonoran Desert scrub community (Turner and Brown 1982; Jones and Lovich 2009). They also occur in loose, active sand dunes, although often at the dune periphery or in more stable regions within the active dune habitat. Flat-tailed horned lizards occur at elevations from below sea level to about 820 feet amsl (Arizona Game and Fish Department 2003).

Focused surveys were conducted for flat-tailed horned lizard in June 2012 by surveying 10 plots across the project site. One flat-tailed horned lizard was observed basking in the sun on June 5, 2012 (Figure 4). Numerous horned lizard scats were observed during the surveys, although the species of horned lizard is unconfirmed.

Colorado Desert fringe-toed lizard (*Uma notata*)

Colorado Desert fringe-toed lizard is a CDFG SSC and County Group 1 species. It occurs in sparsely vegetated habitat in arid regions of southeast California. Its range is the Colorado Desert from the Salton Sea and Imperial sand hills east to the Colorado River, south to the Colorado River delta and into northeastern Baja California, and west to the east side of Borrego Mountain (Nafis 2012). Colorado Desert fringe-toed lizards occur at elevations from below sea level to 1,600 feet amsl (Nafis 2012). They require areas with loose wind-blown sand for burrowing, such as sand dunes, sandy hummocks around the base of vegetation, or the banks of rivers (Nafis 2012).

Focused surveys were conducted for Colorado Desert fringe-toed lizard in June 2012 in conjunction with surveys for flat-tailed horned lizard by surveying 10 plots across the project site. No Colorado Desert fringe-toed lizards were observed during the surveys. However, there is some suitable habitat in loose sands on site, and this species has moderate potential to occur.

1.4.7.3 County Group II Species

The County Group 2 species that follow have been observed, detected, or identified as having high potential to occur within the project boundary.

Red-diamond rattlesnake (*Crotalus ruber*)

The red-diamond rattlesnake is a CDFG SSC and County Group 2 species. It occurs in a variety of habitats from the coast to the deserts, from San Bernardino County into Baja California, Mexico (below 5,000 feet in elevation). It commonly occurs in rocky areas within coastal sage scrub, chaparral, juniper woodlands, and desert habitats, but can also be found in areas devoid of rocks (Lemm 2006).

Red-diamond rattlesnake was not observed during surveys, but there is suitable habitat in the project site, and it has moderate potential to occur.

California horned lark (*Eremophila alpestris actia*)

The California horned lark is a CDFG SSC and County Group 2 species. It breeds and resides in the coastal region of California from Sonoma County southeast to the U.S./Mexican border, including most of the San Joaquin Valley, and eastward to the foothills of the Sierra Nevada (Grinnell and Miller 1944; AOU 1998). It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. It is less common in mountain regions, on the north coast, and in coniferous or chaparral habitats (McCaskie et al. 1979).

Unitt (2004) recorded this species in the area as probably breeding in low numbers. Horned lark was not observed during surveys. The site lacks grassland habitat, but there is some suitable habitat on site, and this species has high potential to occur.

Le Conte's thrasher (*Toxostoma lecontei*)

Le Conte's thrasher is a USFWS BCC, CDFG SSC, and County Group 2 species. It is a permanent resident throughout its range, which extends north to the San Joaquin Valley, through the Mojave and Colorado Deserts of California south of Mono County, Nevada and Arizona, and south into northern Mexico and central and coastal Baja California (Zeiner et al. 1990a; Sheppard 1996). Within its range, distribution is patchy and is uncommon to rare throughout much of its range.

Typical habitat includes sparsely vegetated desert flats, dunes, and alluvial fans, including open desert wash, desert scrub, alkali desert scrub, desert succulent shrub, and occasionally Joshua tree habitats. Dominant plant species include saltbush or shadscale (*Atriplex* spp.) and cholla (*Opuntia* spp.). This species requires a layer of leaf litter and sandy soils underneath shrubs in which to search for arthropod prey (Sheppard 1996) by probing and digging in the soil and litter with its bill. Le Conte's thrashers are not particular about arthropod prey, and are generalists that can consume ants, grasshoppers, beetles, and larvae.

Le Conte's thrasher is found in two separate areas of suitable sandy soils within the Anza Borrego Desert; the northern block includes Clark Dry Lake south to Ocotillo Wells, and the southern block is south of the Vallecito Mountain and Split Mountain (Unitt 2004). Several pairs are residents in the off-road vehicle area, although habitat degradation due to off-road vehicles is a primary conservation threat for this species. Although this species was not detected during surveys, there is suitable habitat for Le Conte's thrasher in the Sonoran creosote scrub and Sonoran wash scrub, and this species has high potential to occur on site.

Bendire's Thrasher (*Toxostoma bendirei*)

Bendire's thrasher is a USFWS BCC, CDFG SSC, and County Group 2 species. It occurs in southwestern United States and portions of north–central Mexico. It primarily occurs in the Mojave and Great Basin Deserts where it breeds; year-round residents and winter visitors occur in southern Arizona and New Mexico and parts of Mexico (England and Laudenslayer 1993). In California, it is mostly confined to the Mojave Desert (Unitt 2004).

In San Diego County, one breeding occurrence was documented in 1993 near Ocotillo Wells (Unitt 2004). This species is not typically found in San Diego County, but a relatively small number of fall and spring migrants and wintering individuals have been documented in the County (Unitt 2004). Its habitat includes open grassland, shrubland, or areas with scattered trees; at lower elevations, preferred habitat includes desert plant species, such as cholla (*Opuntia* spp.), yucca (*Yucca* spp.), palo verde (*Cercidium* spp.), mesquite (*Prosopis* spp.), catclaw (*Acacia* spp.), desert-thorn (*Lycium* spp.), and agave (*Agave* spp.) (England and Laudenslayer 1993).

This species was not observed on site during wildlife surveys, but there is moderate potential for foraging. There are very limited trees on site, and it is not expected to nest in the project site.

Common barn owl (*Tyto alba*)

The common barn owl is a not listed by federal or state agencies, but is a County Group 2 species. It is common throughout its range throughout most continents, and in the Americas, it occurs in much of continental United States, south through Central and South America to Tierra del Fuego (Marti et al. 2005).

In San Diego County, it is an uncommon permanent resident and occurs in urban settings, roosting in buildings, palm leaves, and nest boxes. Unitt (2004) considers this species uncommon in the Anza Borrego Desert region, and is found primarily in developed or agricultural areas, campgrounds, or other areas associated with human development. Nesting has been observed in the Borrego Valley and at Tamarisk Grove (Unitt 2004). Native fan palms, deeply eroded canyons, and other natural habitat types do not appear to be utilized by barn owls for nests.

Barn owls do not seem to exert specific habitat affinities, provided there are ample sites for nesting opportunities and adequate ground for hunting small mammals (Taylor 1994). Habitat types that are commonly utilized include open habitats such as grassland, chaparral, riparian, and other wetland types, from sea level to 1,680 meters (5,512 feet) (amsl) (Zeiner et al. 1990a).

This species was not observed on site during wildlife surveys, but there is moderate potential for foraging. There are very limited trees on site and it is not expected to nest in the project site.

Colorado Valley woodrat (*Neotoma albigula venusta*)

Colorado Valley woodrat is on the CDFG Special Animals List (CDFG 2011a), but is not considered special-status by other federal, state, or local agencies.

Colorado Valley woodrat is a subspecies of white-throated woodrat (*Neotoma albigula*). Limited published research has focused on the subspecies (*N. a. venusta*); therefore, this species account will focus on *N. albigula*. White-throated woodrat occurs from southeastern San Bernardino, eastern Riverside and San Diego Counties, and throughout Imperial County (Zeiner et al. 1990b).

It is common in desert habitats and pinyon – juniper habitat, especially desert scrub with cacti or mesquite, rock outcrops, and suitable shrubs for den construction. Local distribution appears to be determined by the availability of den-building materials (Zeiner et al. 1990b). Diet primarily consists of succulent vegetative materials, including cacti, mesquite, and yucca.

Colorado Valley woodrat, however, was historically found throughout San Bernardino, Riverside, San Diego, and Imperial Counties, although it is most likely extirpated from these areas with the exception of Riverside County (Hall 1981).

The project site is within this subspecies' range (Hall 1981). On site, this species has moderate potential to occur in the shrub habitat.

Palm Springs pocket mouse (*Perognathus longimembris bangsi*)

Palm Springs pocket mouse is a CDFG SSC species and is not included in the County sensitive animal lists. Palm Springs pocket mouse occurs in the Coachella Valley and south along the eastern edge of the Peninsular Ranges to Borrego Valley and on the east side of the San Felipe Narrows (Hall 1981). The Palm Springs pocket mouse inhabits alluvial fans with loose sands mixed with coarser gravel and areas with flat to gently sloping topography, sparse to moderate vegetative cover, on slopes ranging from 0% to approximately 15% (Barrows and Allen 2009; Dodd 1996, as cited in Sierra Club and Center for Biological Diversity 2006). A study by Barrows and Allen (2009) found that the Palm Springs pocket mouse avoids the active sand dunes of the Coachella Valley and are "less abundant on very active ephemeral sand fields and dry washes," but

were captured along the stabilized benches and bank areas of the creeks surveyed. The Palm Springs pocket mouse is adapted to feeding on native plants, with seeds from herbaceous plants and grasses providing the primary food source for the species (Dodd 1996; as cited in Sierra Club and Center for Biological Diversity 2006). Pocket mice require soils that allow them to construct burrows 2 to 3 feet deep for escape from the desert heat and predators.

The project site is located near the southern edge of this species' range, but there is suitable habitat in the sparsely vegetated and loose sands in the project site that indicate there is moderate potential for this species to occur.

Mule deer (*Odocoileus hemionus*)

The mule deer is a County Group 2 species and is considered a CDFG Trust Resource.

The mule deer is a common species with a widespread distribution throughout the western United States and Canada and south into mainland and Baja California, Mexico (Hall 1981). It occurs throughout most of California, except in deserts and intensively farmed areas without cover (Zeiner *et al.* 1990b). Globally, it is considered to be secure in its range, but it may be locally threatened in some areas because of cattle-grazing pressure or other sources of habitat degradation (NatureServe 2007).

Throughout its range, mule deer uses coniferous and deciduous forests, riparian habitats, desert shrub, coastal scrub, chaparral, and grasslands with shrubs. It is often associated with successional vegetation, especially near agricultural lands (NatureServe 2007).

On site, this species could use the washes for movement through the area.

Mountain lion (*Puma concolor*)

The mountain lion is designated by CDFG as a Specially Protected Mammal, which affords it some protections; it is unlawful to take, injure, possess, transport, import, or sell any species that is considered Specially Protected Mammals (except with a depredation permit for mountain lion). The mountain lion is also a County Group 2 species.

The mountain lion is a widespread species that occupies a latitudinal range of 100° in North and South America and is found in nearly all habitats from the northern limit of the Canadian forests to Patagonia in South America (NatureServe 2007). It is primarily limited to the mountainous regions of the western United States and Canada but has small, disjunct populations in southern Florida and the Upper Peninsula of Michigan (NatureServe 2007). Globally, it is considered to be secure in its range, but it may be locally threatened in some areas because of hunting pressure, lack of prey, and other anthropogenic factors (NatureServe 2007). Its range throughout

California extends from deserts to humid forests in the Coast Ranges and from sea level to 3,050 meters (10,000 feet), but mountain lions do not inhabit xeric regions of the Mojave and Colorado deserts. They are most abundant in habitats that support their primary prey, mule deer, and their seasonal movements tend to follow migrating deer herds.

The potential for mountain lions' occurrence on the project site would likely be related to the abundance of mule deer using the site, but at least could occasionally occur on site.

American badger (*Taxidea taxus*)

The American badger is a CDFG SSC and County Group 2 species; it ranges throughout the western United States, north into the western provinces of Canada, and east to Ohio; Michigan; and Ontario, Canada (Long 1972). It occurs from below sea level in Death Valley to the Arctic–Alpine Life Zone at about 3,600 meters amsl (11,810 feet). Within California, the badger occurs throughout the state except for the extreme northwestern coastal area (Zeiner *et al.* 1990b).

Badgers are generally associated with dry, open, treeless regions, prairies and grasslands, low intensity agriculture (e.g., pasture, dryland crops), drier open shrublands and forest, parklands, and cold desert areas (Long 1973; Zeiner et al. 1990b).

This species was not detected during wildlife surveys. However, this species could occur in the open scrub habitat on site.

Desert kit fox (*Vulpes macrotis arsipus*)

The desert kit fox is not considered special-status by any federal, state, or local agencies; however, agencies have expressed interest in potential impacts to this species, and it is included in this analysis. There is little information on the range of the desert subspecies, but there is information on the full species, *V. macrotis*. The California Wildlife Habitat Relationships System shows the kit fox range in two main areas of the state: the central valley and southeast Southern California. The Southern California range covers a large area from eastern Los Angeles, Kern, Riverside, and San Diego Counties and covering most or all of Inyo, San Bernardino, and Imperial Counties (Zeiner et al. 1990b).

Kit foxes occur in open desert scrub and creosote habitats and sand dunes where they build dens and den "colonies." They are primarily nocturnal animals and remain in their dens during the daytime to avoid the heat. They feed primarily on mammals, especially black-tailed jackrabbits and rodents; they also feed on birds, reptiles, insects, and plants.

Desert kit fox scat was observed in numerous locations during the reptile survey, and an active kit fox burrow was mapped and is shown on Figure 4.

Special-Status Bats

Several special-status bats have potential to forage on site, including Pallid bat, Mexican long-tongued bat, western mastiff bat, California leaf-nosed bat, long-eared myotis, pocketed free-tailed bat, and big free-tailed bat. There are no permanent sources of water on site that attract bats to forage on insects, but bats are known to forage and/or migrate over large distances and could occur on site.

1.4.8 Wetlands/Jurisdictional Waters

During the 2011 jurisdictional wetlands delineation performed by Dudek, jurisdictional non-wetland waters of the U.S./State were mapped on the project site. During the January 2013 site visit with the ACOE, additional areas were identified as waters of the U.S./State. Approximately 10.03 acres (22,655 linear feet) have been identified on site, and include ephemeral stream channels and desert washes; an additional 0.6 acre (377 linear feet) of waters of the U.S./State was mapped within the off-site access road easement (Figure 4). These jurisdictional resources are under the joint jurisdiction of the ACOE, the RWQCB, and the CDFG. This is based on the preliminary jurisdictional delineation approach described in Section 1.3.5.

The waters are characterized by ephemeral, low-flow channels. They do not meet ACOE and RWQCB criteria for wetlands because they do not have hydrophytic vegetation or hydric soils; however, they do occur below the OHWM and have evidence of hydrology indicators (i.e., drift deposits and drainage patterns).

None of these areas meet the County's RPO wetland definition (County 2007), which include lands that have one of the following attributes: 1) at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places); 2) the substratum is predominantly undrained hydric soils; or 3) an ephemeral or perennial stream is present, whose substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

It should be noted that non-wetland waters are mapped as an overlay in relation to the vegetation community mapping and therefore are not added in the cumulative total acreages of the site.

1.4.8.1 Watershed

San Felipe Creek is the primary waterway within the San Felipe Creek watershed, which occurs in the Anza-Borrego Planning Area. The watershed is composed of approximately 1,000 square miles in the southwest corner of the Colorado River Basin, mostly within San Diego and Imperial Counties. The planning area includes the communities of Salton City and Borrego

Springs. Except for two small areas of internal drainage in Clark and Borrego Valleys in the northwest corner of the planning area, drainage flows to the Salton Sea (RWQCB 2006).

1.4.9 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of wildlife, as well as dispersal corridors for some plants. Habitat linkages may function as corridors for some wildlife and plant species and permanent habitat for others. Wildlife corridors and habitat linkages contribute to population viability in several ways: (1) they assure the regular exchange of genes between populations which helps maintain genetic diversity; (2) they provide access to adjacent habitat areas representing additional territory for foraging and mating; (3) they allow for a greater carrying capacity of species populations; and (4) they provide routes for colonization of habitat lands following local populations extinctions or habitat recovery from ecological catastrophes (e.g., fires).

The southern portion of the project boundary is adjacent to Anza-Borrego Desert State Park (ABDSP) (see Figure 5), which encompasses approximately 600,000 acres. Vallecito Mountain is part of the Peninsular Range and is located a few miles to the west of the project site. Numerous wildlife species use and travel through the Peninsular Range, including mule deer, mountain lion, Peninsular bighorn sheep, coyote, bobcat, and a variety of bird species. The closest documented occurrence of bighorn sheep to the project site is a 1994 observation approximately 1.5 miles west of the project boundary (USFWS 2011). The closest recent records (2006) are located more than 15 miles northwest of the project site. The project site, however, likely is too removed from mountainous terrain to be provide high quality habitat attractive to bighorn sheep and also does not provide inter-mountain connectivity habitat between occupied mountain ranges. In addition, there are no water sources near the project site that would attract bighorn sheep to the area. The project site and surrounding open areas are likely used for local wildlife movement for species that do not require heavy cover of vegetation and/or mountainous terrain. These species could include bobcat, coyote, kit fox, mule deer, and possibly mountain lion, as well as many small mammals such as rodents, rabbits, and squirrels. Because there is very little development in the area, virtually the entire project site and surrounding vicinity is available for wildlife use and movement, although wildlife may trend toward using the washes on site because they provide flat, even terrain for easy movement. Their distribution on site and in the general vicinity would be related more to the distribution of resources (e.g., prey, cover) than any physical obstacles to movement. Wildlife species are also currently able to move between the flatter terrain of the project site to the rocky and nearby hills, ridges, and mountains with little or no constraint.

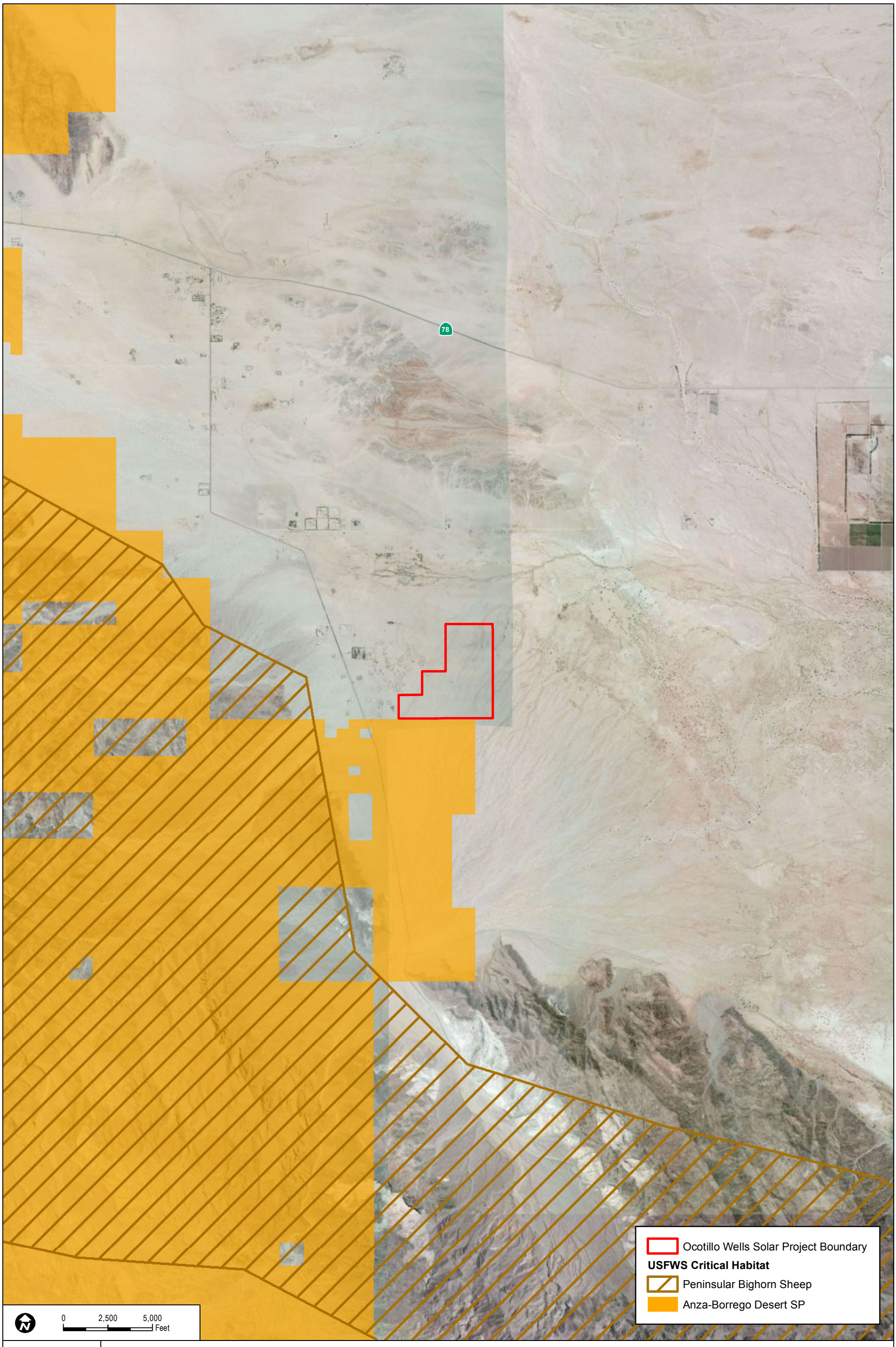
1.5 Applicable Regulations

1.5.1 Federal

The federal Endangered Species Act (FESA) of 1973 (16 U.S.C. 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), and National Marine Fisheries Service (NMFS). This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under provisions of Section 9(a)(1)(B) of FESA, it is unlawful to "take" any listed species. Take is defined in Section 3(19) of FESA as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The Migratory Bird Treaty Act (MBTA) prohibits the "take" of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, take is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 U.S.C. 703 et seq.). Additionally, Executive Order (EO) 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (EO 13186). The EO requires federal agencies to work with the USFWS to develop a memorandum of understanding. The USFWS reviews actions that might affect these species.

Pursuant to Section 404 of the CWA, the ACOE regulates the discharge of dredged and/or fill material into "waters of the United States." The term "wetlands" (a subset of waters) is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark" which is defined in 33 CFR 328.3(e).



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SOURCE: USFWS, CA Dept. of Fish and Game; Bing Maps

FIGURE 5

Surrounding Land Use Map

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1.5.2 State

The CDFG administers the California Endangered Species Act (CESA) (Fish and Game Code, Section 2050 et seq.; CDFG 1984), which prohibits the "take" of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the State of California. Under CESA Section 86, take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

According to Sections 3511 and 4700 of the Fish and Game Code, which regulate birds and mammals, respectively, a "fully protected" species may not be taken or possessed without a permit from the Fish and Game Commission, and "incidental takes" of these species are not authorized.

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating, "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Fish and Game Code, Sections 1900-1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001)."

Section 2081(b) and (c) of the Fish and Game Code authorizes take of endangered, threatened or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFG to coordinate consultations with the USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of the CESA allows CDFG to adopt a federal incidental take statement or a 10(a) permit as its own based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of "Fully Protected" species and "specified birds" (Fish and Game Code, Sections 3505, 3511, 4700, 5050, 5515, and 5517). If a project is planned in an area where a Fully Protected species or a specified bird occurs, an applicant must design the project to avoid take.

Pursuant to Section 1602 of the Fish and Game Code, the CDFG 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. A Streambed Alteration Agreement is required for impacts to jurisdictional wetlands in accordance with Section 1602 of the California Fish and Game Code.

Section 2835 of the Fish and Game Code allows the Department to authorize incidental take in a Natural Community Conservation Plan (NCCP). Take may be authorized for identified species

whose conservation and management is provided for in the plan, whether or not the species is listed as threatened or endangered under the federal or state Endangered Species Acts, provided that the NCCP complies with the conditions established in Section 2081 of the Fish and Game Code. The NCCP provides the framework for the San Diego MSCP Plans.

1.5.3 County

The RPO, administered by the County, regulates biological and other natural resources within the County. These resources include wetlands, wetland buffers, floodways, floodplain fringe, steep slope lands, sensitive habitat lands, and significant prehistoric or historic sites. Generally, the ordinance stipulates that no impacts may occur to wetlands except for scientific research, removal of diseased or invasive exotic plant species, wetland creation and habitat restoration, revegetation and management projects, and crossings of wetlands for roads, driveways, or trails/pathways when certain conditions are met. The same exemptions apply to impacts to wetland buffer areas and improvements necessary to protect adjacent wetlands. Sensitive habitat lands are unique vegetation communities, and support special-status species, lands essential to the healthy functioning of a balanced natural ecosystem, or wildlife corridors. Impacts to sensitive habitat lands are permitted when impacts have been reduced as much as possible and mitigation provides at least an equal benefit to the affected species (County of San Diego 2007).

2.0 PROJECT EFFECTS

This section summarizes the direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project. Significance determinations are presented in Sections 3.2, 4.2, 5.2, and 6.2.

Direct impacts refer to 100% permanent loss of a biological resource. For purposes of this report, it refers to the area where vegetation clearing, grubbing, and grading are proposed. Direct impacts include the development area. Direct impacts were quantified by overlaying the limits of grading on geographic information system (GIS)-located biological resources (Figure 6).

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct construction disturbance zone. Indirect impacts may affect areas within the defined project area but outside the construction disturbance zone, including open space and areas outside the project area, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long-term effects associated with development in proximity to biological resources within natural open space. In most cases, indirect effects are not quantified, but in some cases quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

Cumulative Impacts refer to incremental individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor, but collectively significant as they occur over a period of time.

The County Guidelines (County of San Diego 2010a, 2010b) discusses "impact neutral" areas, which are land that is not being directly impacted, but cannot be counted toward mitigation. Areas that are designated as impact neutral are not included in the project open space acreage. On site, there are no areas that are considered to be impact neutral.

2.1 Vegetation Communities/Land Covers

2.1.1 Temporary Direct Impacts

Short-term, construction-related, or temporary direct impacts to vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to all jurisdictional waters on site would be significant, absent mitigation. However, these short-term

direct impacts will be avoided and mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

2.1.2 Permanent Direct Impacts

Long-term or permanent direct impacts to vegetation communities were quantified by comparing the impact footprint with the boundaries of the vegetation communities mapped in the project area. Direct impacts to vegetation communities would occur as a result of grading activities associated with the development of the dual-axis tracker units and platform type inverters, a control and operations and management building, and a private substation. Table 4 shows the acreage of direct impacts to vegetation communities in the project area as a result of the limits of grading, as well as the impacts within the off-site access road. Figure 6 illustrates where impacts to biological resources will occur.

Table 4
Direct Impacts to Vegetation Communities and Land Covers

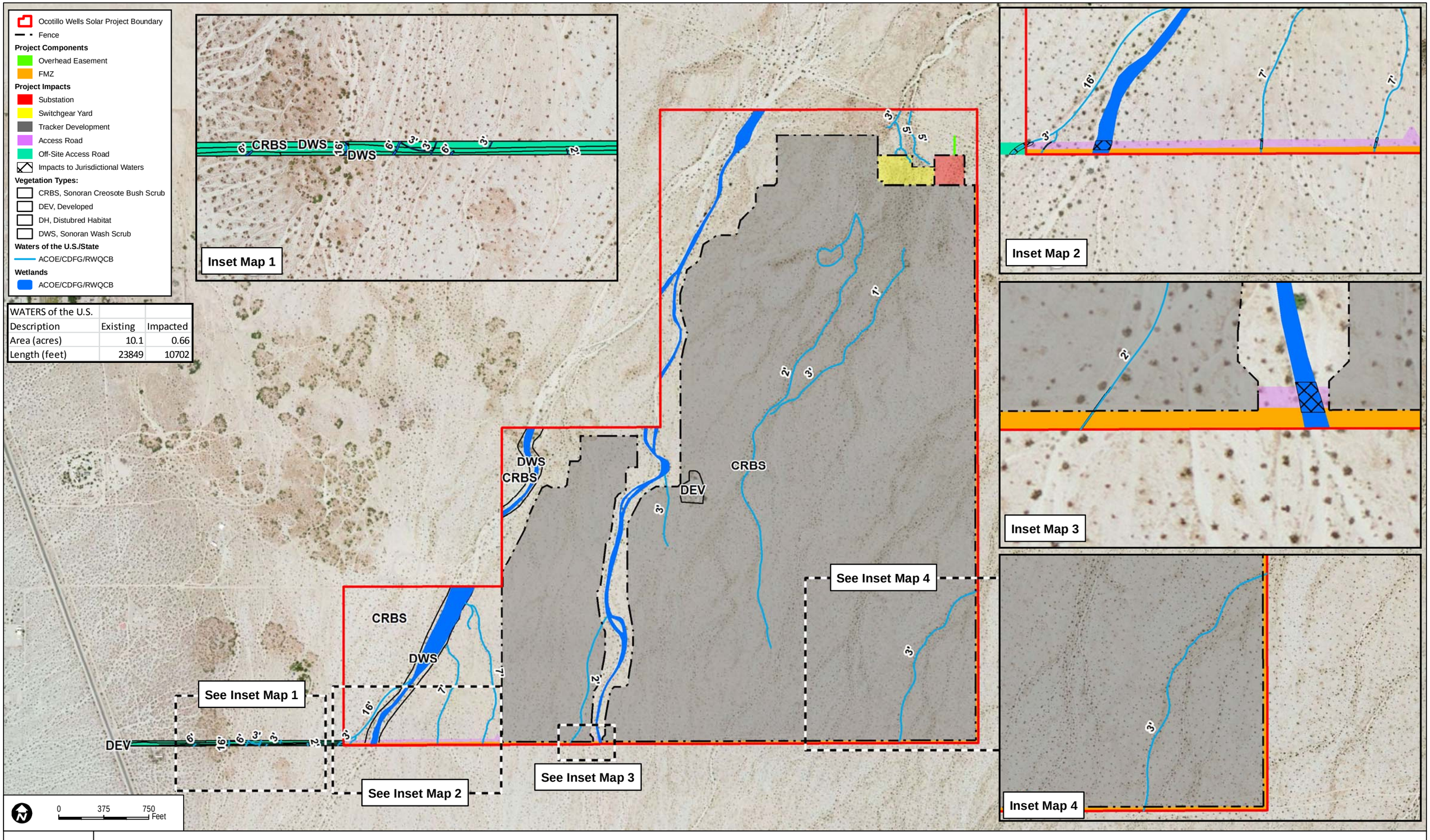
Vegetation Community/ Land Cover Type	On-Site Existing (Acres)	Proposed Project Impacts (Acres)	Biological Open Space (Acres)	Off-Site Access Road Easement (Acres)
Disturbed Habitat	—	—	—	0.7
Developed Land	0.9	0.9	—	—
Sonoran Creosote Bush Scrub	433.0	330.3	102.7	0.9
Sonoran Wash Scrub	6.6	—	6.6	0.1
Total *	440.5	331.3	109.3	1.7

* Totals may not add up precisely due to rounding.

2.1.3 Temporary Indirect Impacts

Potential short-term or temporary indirect impacts to special-status vegetation communities in the project area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all the special-status vegetation communities that occur on the project site are described in detail as follows.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.



WATERS of the U.S.		
Description	Existing	Impacted
Area (acres)	10.1	0.66
Length (feet)	23849	10702

SOURCE: RBF 2013; SanGIS 2013; Bing Maps

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FIGURE 6

Biological Resources Map with Limit of Impacts

BIOLOGICAL RESOURCES REPORT FOR THE OCOTILLO WELLS SOLAR PROJECT

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Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates, patterns in streams and rivers, and dewatering, which may affect adjacent and downstream aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation, resulting in increased erosion and transport of surface matter into vegetation communities. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status vegetation communities. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants. No herbicides will be used during construction.

All special-status vegetation communities on site could be impacted by potential temporary indirect impacts such as those previously listed.

2.1.4 Permanent Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to special-status vegetation communities after construction, including impacts related to operation and maintenance. Operation and maintenance activities will occur within the impact footprint. Permanent indirect impacts that could affect special-status vegetation communities include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, alteration of the natural fire regime, and shading. Each of these potential indirect impacts is discussed as follows.

Generation of Fugitive Dust. The effects of fugitive dust on special-status vegetation communities are described in Section 2.1.3.

Habitat Fragmentation. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). Although these effects are more readily observable in wildlife, there are potential ecological effects, such as changes in pollinator populations, that can result in altered plant community composition and thus adversely affect special-status vegetation communities.

Chemical Pollutants. The effects of chemical pollutants on special-status vegetation communities are described in Section 2.1.3. Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the San Diego County agriculture commissioner. No herbicides will be used.

Altered Hydrology. Water would be used for operational purposes for cleaning the solar modules and for reapplication of the nontoxic permeable soils stabilizers that may alter the on-site hydrologic regime. Minimal potable water would be provided only during solar panel rinsing activities once a year. These hydrologic alterations may affect special-status vegetation communities. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. However, the water and associated runoff used during operation and maintenance activities will be contained within the proposed project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within special-status vegetation communities.

Increased Human Activity. Employees will be on site approximately 4 times per year for solar panel washing. The proposed project includes an operation and maintenance building that would provide a base of operations and maintenance; however, it is not expected that the project will require regular, full-time employees. Increased human activity could result in the potential for trampling of vegetation outside of the impacts footprint, as well as soil compaction, and could affect the viability of plant communities. Trampling can alter the ecosystem, creating gaps in vegetation and allowing exotic, non-native plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction. Shorter-than-natural fire return intervals can preclude recovery of the native

vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and in some cases, result in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. However, the vegetation on site is so sparse that the proposed project is not expected to alter the natural fire regime of this area.

Shading. The proposed project includes dual-axis tracker units and platform type inverters. Shading can reduce the amount of sunlight available for photosynthesis, eliminating longer wavelengths of the visible light spectrum, and can reduce transpiration due to reduced photosynthetic rates, increasing soil moisture and resulting in changes to soil nutrient availability and microbial communities, potentially favoring non-native species and other shade-tolerant plants. However, shading will be contained within the proposed project impact footprint, and long-term indirect impacts associated with shading are not expected.

All special-status vegetation communities in the project area could be impacted by potential long-term or permanent indirect impacts such as those previously listed.

2.2 Sensitive Plant Species

2.2.1 Temporary Direct Impacts

Short-term, construction-related, or temporary direct impacts to special-status plants would primarily result from construction activities. Clearing, trampling, or grading of special-status plants outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to County List A and B special-status plant species with a moderate to high potential to occur on site would be significant, absent mitigation. However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

All special-status plant species on site could be impacted by potential temporary direct impacts such as those previously listed.

2.2.2 Permanent Direct Impacts

Long-term or permanent direct impacts to special-status plant species were quantified by comparing the impact footprint with the suitable habitat for each special-status plant species with a high or moderate potential to occur. Suitable habitat for the 10 special-status plant species includes Sonoran creosote bush scrub and Sonoran wash scrub and totals ~~439.1~~440.6 acres. Implementation of the proposed project would result in direct, permanent impacts to 331~~0~~.3 acres (or 75%) of the on-site suitable habitat for the 10 special-status species with a moderate or high potential to occur on site.

2.2.3 Temporary Indirect Impacts

Potential short-term or temporary indirect impacts to special-status plant species in the project area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all the special-status plant species that occur on the project site are described in detail as follows.

Generation of Fugitive Dust. The effects of fugitive dust on special-status plants are described in Section 2.1.3.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns in drainages. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into special-status plant occurrences. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status plant species. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants. No herbicides will be used during construction.

All special-status plant species on site could be impacted by potential temporary indirect impacts such as those previously listed.

2.2.4 Permanent Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to special-status plants after construction, including impacts related to operation and maintenance. Operation and maintenance activities will occur within the impact footprint. Permanent indirect impacts that could affect special-status plant species include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, alteration of the natural fire regime, and shading. Each of these potential indirect impacts is discussed as follows.

Generation of Fugitive Dust. The effects of fugitive dust on special-status plants are described in Section 2.1.3.

Habitat Fragmentation. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986).

Chemical Pollutants. The effects of chemical pollutants on special-status plants are described in Section 2.2.3. Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the San Diego County agriculture commissioner.

Altered Hydrology. Water would be used for operational purposes for cleaning the solar modules and for reapplication of the nontoxic permeable soils stabilizers that may alter the on-site hydrologic regime. Minimal potable water would be provided only during solar panel rinsing activities once a year. These hydrologic alterations may affect special-status plant species. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. However, the water and associated runoff used during operation and maintenance activities will be contained within the proposed project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of

non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for special-status plant species.

Increased Human Activity. The effects of increased human activity on special-status plants are described in Section 2.1.4.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction. Shorter-than-natural fire return intervals can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and in some cases, result in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. However, the vegetation on site is so sparse that the proposed project is not expected to alter the natural fire regime of this area.

Shading. The proposed project would result in shading. Shading can reduce the amount of sunlight available for photosynthesis, eliminating longer wavelengths of the visible light spectrum, and can reduce transpiration due to reduced photosynthetic rates, increasing soil moisture, and resulting in changes to soil nutrient availability and microbial communities, potentially favoring non-native species and other shade-tolerant plants. However, shading will be contained within the proposed project impact footprint, and long-term indirect impacts associated with shading are not expected.

All special-status plant species on site could be impacted by potential long-term or permanent indirect impacts such as those previously listed.

2.3 Sensitive Wildlife Species

2.3.1 Temporary Direct Impacts

Short-term, construction-related, or temporary direct impacts to special-status wildlife species would primarily result from construction activities. Clearing, trampling, or grading of vegetation communities outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could reduce suitable habitat for wildlife species and

alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native plant species to become established. Potential temporary direct impacts to suitable habitat for special-status wildlife species on site would be significant, absent mitigation. However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

2.3.2 Permanent Direct Impacts

Long-term or permanent direct impacts to special-status wildlife species were quantified by comparing the impact footprint with the suitable habitat for special-status wildlife species that were observed or have a high or moderate potential to occur. Suitable habitat for the wildlife species includes Sonoran creosote bush scrub and Sonoran wash scrub and totals ~~439.1~~440.6 acres. Implementation of the proposed project would result in direct, permanent impacts to 331~~0~~.3 acres (or 75%) of the on-site suitable habitat for the 10 special-status species with a moderate or high potential to occur on site.

The significance determination for these potential impacts is described in Section 3.0.

2.3.2.1 County Group 1 Species

The information provided in this section discusses the potential effects for County Group 1 species. More detailed information about observation of the species or having high or moderate potential to occur within the study area, suitable habitat, and range is provided in Section 1.4.6.2.

Birds

Several raptors have potential to forage on site based on observations during surveys and/or their range and records in San Diego (Unitt 2004; CDFG 2011a). There are no large trees or cliffs suitable for nesting for species such as turkey vulture (*Cathartes aura*) or golden eagle (*Aquila chrysaetos*). Burrowing owl (*Athene cunicularia*) could nest in the project area. There is one incidental observation during a site visit by Jim Whalen (pers. comm. 2012), but this species has not been observed in subsequent wildlife surveys. It was not observed during the winter raptor surveys, transect survey, or incidentally during the summer reptile surveys, which covered a representative portion of the site. The project site and adjacent areas are open and undeveloped and are suitable foraging habitat for raptors. Several special-status raptors were observed foraging over the site during the winter raptor surveys, including sharp-shinned hawk (*Accipiter striatus*)[1] and turkey vulture; other raptors that have potential to forage over the site based on their migration patterns, range, and records in San Diego include golden eagle, long-eared owl (*Asio otus*), Swainson's hawk (*Buteo swainsoni*), and prairie falcon (*Falco mexicanus*).

[1] Sharp-shinned hawk was observed once during the winter raptor surveys. They do not nest in Southern California and would occur in the project site only in the winter or during migration.

Lucy's warbler (*Oreothlypis luciae*) has moderate potential to nest on site. It typically breeds along the lower Colorado River, but there are breeding records in the nearby Anza-Borrego Desert State Park in mesquite thickets (Shuford and Gardali 2008). There are a few trees and large shrubs in the Sonoran wash scrub on site.

Loggerhead shrikes (*Lanius ludovicianus*) (including a pair) were observed during several of the surveys and likely nests on site or in the region. The majority of the project site is undeveloped and provides potential habitat for both nesting and foraging for loggerhead shrike.

There are impacts to 33~~0~~1.3 acres of suitable habitat for these bird species as a result of the proposed project.

Reptiles

One flat-tailed horned lizard (*Phrynosoma mcallii*) was observed in survey plot 2 (Figure 3) during the focused reptile surveys in June 2012; in addition, horned lizard scat was observed throughout much of the project site, particularly the northern portion of the site (Figure 4). This species could occur in areas with loose sands in the project site.

The Colorado Desert fringe-toed lizard (*Uma notata*) was not observed during the focused reptile surveys, but the project site does have suitable habitat and is within the range for this species.

There are impacts to ~~330.3~~331.3 acres of suitable habitat for these reptile species as a result of the proposed project.

2.3.2.2 County Group 2 Species

The County Group 2 species that follow have been observed, detected, or identified as having high or moderate potential to occur within the project boundary. More detailed information about observation of the species or its potential to occur within the study area, suitable habitat, and range is provided in Section 1.4.6.2.

Birds

Although these species were not observed during surveys, horned lark (*Eremophila alpestris*), Le Conte's thrasher (*Toxostoma lecontei*), and common barn owl (*Tyto alba*) have potential to forage and/or nest on site. There are impacts to ~~330.3~~331.3 acres of suitable habitat for these bird species as a result of the proposed project.

Reptiles

Red-diamond rattle snake (*Crotalus ruber*) has moderate potential to occur on site based on suitable habitat and its known range. There are impacts to ~~330.3~~331.3 acres of suitable habitat for this species as a result of the proposed project.

Mammals

Kit fox (*Vulpes macrotis*) scat and one active burrow were detected during the reptile surveys (Figure 4). Additional mammals have moderate or high potential to occur on site, but were not observed or detected during surveys, including Colorado Valley woodrat (*Neotoma albigula venusta*), Palm Springs pocket mouse (*Perognathus longimembris bangsi*), mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and American badger (*Taxidea taxus*). In addition, several special-status bats have potential to forage over the site, including Pallid bat (*Antrozous pallidus*), Mexican long-tongued bat (*Choeronycteris mexicana*), western mastiff bat (*Eumops perotis*), California leaf-nosed bat (*Macrotus californicus*), long-eared myotis (*Myotis septentrionalis*), pocketed free-tailed bat (*Nyctinomops femorosacca*), and big free-tailed bat (*Nyctinomops macrotis*).

There are impacts to ~~330.3~~331.3 acres of suitable habitat for these mammals as a result of the proposed project.

2.3.3 Temporary Indirect Impacts

Short-term, construction-related, or temporary indirect impacts to special-status wildlife species would primarily result from construction activities. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise, chemical pollutants, increased human activity, and non-native animal species.

Generation of Fugitive Dust. The effects of fugitive dust on special-status wildlife species are described above in Section 2.1.3.

Noise. Construction-related noise could occur from equipment used during vegetation clearing and construction of the solar panels and associated infrastructure. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, cited in Lovich and Ennen 2011).

Chemical Pollutants. Accidental spills of hazardous chemicals could contaminate nearby washes and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

Increased Human Activity. Construction activities can deter wildlife from using habitat areas near the proposed project footprint and increase the potential for vehicle collisions.

Non-Native Animal Species. Trash from construction-related activities could attract invasive predators such as ravens and coyotes that could impact the wildlife species in the project area.

All special-status wildlife species on site could be impacted by potential temporary indirect impacts such as those previously listed.

2.3.4 Permanent Indirect Impacts

Potential long-term or permanent indirect impacts to special-status wildlife species include generation of fugitive dust; non-native, invasive plant and animal species; habitat fragmentation; increased human activity; alteration of the natural fire regime; and altered hydrology.

Generation of Fugitive Dust. The effects of fugitive dust on special-status wildlife are described in Section 2.1.3.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. Planting non-native In addition, trash can attract invasive predators such as ravens and coyotes that could impact the wildlife species in the project area.

Habitat Fragmentation. The proposed project will impact approximately ~~330.3~~331.3 acres of vegetation communities, resulting in potential habitat fragmentation. Habitat fragmentation can reduce diversity of species, spread invasive species, and reduce access to important habitats (Lovich and Ennen 2011). In addition, habitat fragmentation and isolation of wildlife populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986).

Increased Human Activity. Employees will be on site approximately 4 times per year for solar panel washing. The proposed project includes an operation and maintenance building that would provide a base of operations and maintenance; however, it is not expected that the project will require regular, full-time employees. Increased human activity could result in the potential for trampling of vegetation outside of the impacts footprint, as well as soil compaction, and could affect the viability of plant communities. Trampling can alter the ecosystem, creating gaps in vegetation and allowing exotic, non-native plant species to become established, leading to soil erosion. Increased human activity can deter wildlife from using habitat areas near the proposed project footprint.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction. Shorter-than-natural fire return intervals can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and in some cases, result in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Alterations of plant communities could affect wildlife that relies on those habitat types. However, the vegetation on site is so sparse that the proposed project is not expected to alter the natural fire regime of this area.

Altered Hydrology. The effects of altered hydrology on special-status wildlife are described in Section 2.1.4.

The significance determination for these potential impacts is described in Section 3.0.

2.4 Wetlands/Jurisdictional Waters

2.4.1 Temporary Direct Impacts

Short-term, construction-related, or temporary direct impacts to jurisdictional non-wetland waterways would primarily result from construction activities. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to all jurisdictional non-wetland waterways on site would be significant, absent mitigation. However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

2.4.2 Permanent Direct Impacts

Development of the proposed project will impact 0.60~~53~~ acre (10,~~120~~325 linear feet) of jurisdictional non-wetland waterways (Figure 6). An additional 0.06 (377 linear feet) will be impacted from grading the off-site access road.

2.4.3 Temporary Indirect Impacts

Potential short-term or temporary indirect impacts to jurisdictional non-wetland waterways in the project area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all the jurisdictional non-wetland waterways that occur on the project site are described in detail as follows.

Generation of Fugitive Dust. The effects of fugitive dust on jurisdictional non-wetland waterways are similar to those described for vegetation communities in Section 2.1.3.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns in streams. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation, resulting in increased erosion and transport of surface matter into jurisdictional non-wetland waterways. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional non-wetland waterways. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

All jurisdictional non-wetland waterways on site could be impacted by potential temporary indirect impacts such as those previously listed.

2.4.4 Permanent Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional non-wetland waterways after construction, including impacts

related to operation and maintenance. Operation and maintenance activities will occur within the impact footprint. Permanent indirect impacts that could affect jurisdictional non-wetland waterways include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, alteration of the natural fire regime, and shading. Each of these potential indirect impacts is discussed as follows.

Generation of Fugitive Dust. The effects of fugitive dust on jurisdictional non-wetland waterways are similar to those described for vegetation communities in Section 2.1.3.

Habitat Fragmentation. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). Although these effects are more readily observable in wildlife, there are potential ecological effects, such as changes in pollinator populations, which can result in altered plant community composition and thus adversely affect jurisdictional non-wetland waterways.

Chemical Pollutants. The effects of chemical pollutants on jurisdictional non-wetland waterways are described in Section 2.4.3.

Altered Hydrology. Water would be used for operational purposes for cleaning the solar modules and for reapplication of the nontoxic permeable soils stabilizers that may alter the on-site hydrologic regime. Minimal potable water would be provided only during solar panel rinsing activities once a year. These hydrologic alterations may affect jurisdictional non-wetland waterways. However, the water, and associated runoff, used during operation and maintenance activities will be contained within the proposed project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and alteration of wetland plant communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within jurisdictional non-wetland waterways.

Increased Human Activity. The effects of increased human activity on jurisdictional non-wetland waterways are similar to those described for vegetation communities in Section 2.1.4.

Shading. The proposed project includes dual-axis tracker units and platform type inverters. Shading can reduce the amount of sunlight available for photosynthesis, eliminating longer wavelengths of the visible light spectrum, and can reduce transpiration due to reduced photosynthetic rates, increasing soil moisture, and resulting in changes to soil nutrient availability and microbial communities, potentially favoring non-native species and other shade-tolerant plants. However, shading will be contained within the proposed project impact footprint, and long-term indirect impacts associated with shading are not expected.

2.5 Habitat Connectivity and Wildlife Corridors

2.5.1 Temporary Direct Impacts

Short-term, construction-related, or temporary direct impacts to habitat connectivity and wildlife corridors would primarily result from construction activities. Construction-related impacts to potential habitat such as clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could impact wildlife movement through these areas by reducing cover and food sources. Potential temporary direct impacts to local wildlife corridors on site would be significant, absent mitigation. However, these short-term direct impacts will be avoided and mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

2.5.2 Permanent Direct Impacts

Implementation of the project is not expected to result in long-term or permanent direct impacts to habitat connectivity and wildlife corridors. Permanent fencing will be placed around the solar panels as shown on Figure 6. The open space areas will not be fenced and will allow for wildlife movement through the site. The access road along the southern portion of the site will be used for routine maintenance and is not expected to impede wildlife movement. Species such as birds, reptiles, and small mammals (e.g., mice, rabbits, and squirrels) will continue to be able to move throughout the site after the proposed project is constructed. The small wildlife species will be able to access the site through openings in the fence, and birds can continue to fly over the entire site and forage on the ground.

The project area is located approximately 1.5 miles from the base of the Vallecito Mountain to the west. Since larger mammals, such as mule deer, tend to prefer areas that provide more cover, they likely do not use the project site as a core wildlife corridor. Black-tailed jackrabbit and nocturnal species such as bobcat, kit fox, and coyote would likely use the washes to travel within the area, including the area between the proposed panel arrays. This area is approximately 200 to 500 feet wide, narrowing toward the bottom to approximately 100 feet wide (Figure 7). All of these species utilize areas of similar dimension to move within the region. During the day, these species would likely not be able to see the surrounding project once within the drainage. During the night, there is little lighting planned, so the impact to movement should be minimal. Even mule deer and mountain lion may still use the drainage feature to move. It is unlikely that they would be frightened from the drainages due to the project. The fencing is of an open design, and there is little human activity associated with the project once installed.

2.5.3 Temporary Indirect Impacts

Short-term indirect impacts to habitat connectivity and wildlife corridors could result from lighting and increased human activity.

Increased Human Activity. Project construction would likely take place during the daytime and would not affect wildlife species such as mammals that are most active in evenings and nighttime. Wildlife species such as birds, rabbits, and lizards are active in the daytime, but use a variety of habitats and could continue using other areas within and adjacent to the project area for wildlife movement.

Lighting. Some localized security-related lighting and/or remotely monitored alarm system may be required during construction and/or operations. These impacts would be short-term, and since the project area is not considered a core wildlife corridor, the proposed project is not expected to result in significant impacts to wildlife movement.

2.5.4 Permanent Indirect Impacts

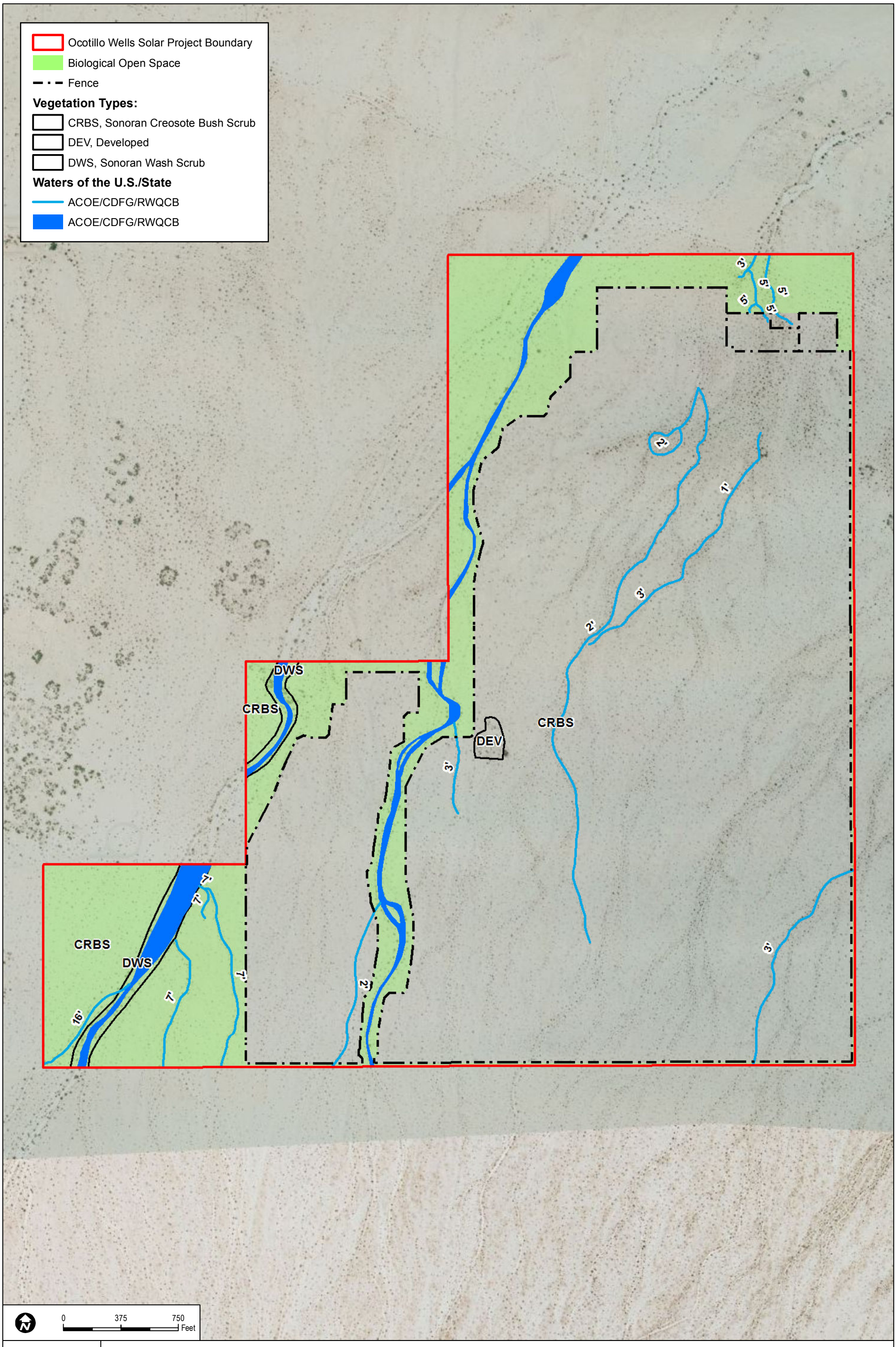
Long-term indirect impacts include fencing of the project site and lighting.

Fencing. Six-foot perimeter fencing will be constructed around the solar panel trackers, which could result in limited movement of certain species, such as large mammals (e.g., coyote and mule deer), but would not visually constrain the wildlife.

Lighting. Limited project lighting would be installed to allow for ongoing maintenance and security. Low-level lighting would also be installed at the main entry gate to facilitate access. Illuminated signage at the project entrance and each inverter station that notes the location and identification number of each electrical grid disconnect and circuit breaker would also be

installed. All lighting would be operated manually or activated via motion sensors, and would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships and would conform to County of San Diego outdoor lighting requirements.

The project area is not considered a core wildlife corridor and is surrounded by open, undeveloped land. The proposed project is not expected to result in significant impacts to wildlife movement.



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7111-01

SOURCE: Digital Globe 2008

FIGURE 7

Biological Resources - Open Space

BIOLOGICAL RESOURCES REPORT FOR THE OCOTILLO WELLS SOLAR PROJECT

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3.0 SPECIAL-STATUS SPECIES

3.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance (County of San Diego 2010a) are based on the criteria in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's Guidelines for Determining Significance and Report Format and Content Requirements (County of San Diego 2010a).

The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by CDFG or USFWS.

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

B. The project would impact an on-site population of a County List A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern. Impacts to these species are considered significant; however, impacts of less than 5 percent of the individual plants or of the sensitive species' habitat on a project site may be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.

C. The project would impact the local long-term survival of a County List C or D plant species or a County Group II animal species.

D. The project may impact arroyo toad aestivation, foraging or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers constrain movement) could only be considered less than significant if a biologically-based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.

E. The project would impact golden eagle habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.

F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5 percent of the raptor foraging habitat on a project site may be considered less than significant if a

biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.

I. The project would impact occupied burrowing owl habitat.

J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

K. The project would impact occupied Hermes copper habitat.

L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction.

Species*	Breeding Season
Coastal cactus wren	February 15 to August 15
Coastal California gnatcatcher*	February 15 to August 31
Least Bell's vireo	March 15 to September 15
Southwestern willow flycatcher	May 1 to September 1
Tree-nesting raptors	January 15 to July 15
Ground-nesting raptors	February 1 to July 15
Golden eagle	January 1 to July 31
Light-footed clapper rail**	February 15 to September 30

* The breeding seasons listed in this table do not supersede implementing agreements with the Wildlife Agencies, Habitat Conservation Plans (HCPs), Habitat/Resource Management Plans (HMPs/RMPs), and Special Area Management Plans (SAMPs). For example, inside the MSCP Subarea Plan, the gnatcatcher breeding season is March 1 to August 15.

** The light-footed clapper rail is a CDFG fully-protected species and under the Fish and Game Code, CDFG does not allow "take" of fully-protected species.

3.2 Analysis of Project Effects

3.2.1 Project Effects Relevant to Guideline 4.1.A

There are no federally listed or state-listed endangered or threatened plant species known to occur on site or that have a moderate to high potential to occur on site.

There are no federally listed or state-listed endangered or threatened wildlife species known to occur on site or have a moderate to high potential to occur on site. Species such as Swainson's hawk have potential to forage over the site during migration, but do not nest near the project site.

3.2.2 Project Effects Relevant to Guideline 4.1.B

3.2.2.1 Special-Status Plant Species (County List A and B Species)

Short-term, construction-related, or temporary direct impacts to County List A and B plant species would primarily result from construction activities. Clearing, trampling, or grading of special-status plants outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to County List A and B plant species on site would be significant, absent mitigation (Impact SP-1). However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

Suitable habitat for two County List A plant species that have a high potential to occur on site—Peirson's pincushion flower and Orcutt's woody aster—and two County List B plant species that have a high potential to occur on site—Harwood's milkvetch and brown turbans—would be directly impacted by the proposed project (Impact SP-2). Figure 6 shows the proposed project impacts to suitable habitat, Sonoran creosote bush scrub and Sonoran wash scrub, for County List A and B plant species on site.

Table 5 summarizes the proposed direct impacts to suitable habitat for County List A and B plant species and the significance of the impacts prior to mitigation. The proposed impacts to suitable habitat for these special-status plants would be considered significant prior to mitigation.

Table 5
Summary of Direct Impacts to Suitable Habitat for County List A and B Plant Species and Significance Prior to Mitigation

County List	Species	CRPR	Acreage of Suitable Habitat ~~On Site~~	Acreage of Suitable Habitat within Impact Footprint and Off-Site Access Road	Percentage of Suitable Habitat Impacted	Significance Prior to Mitigation
A	Peirson's pincushion flower	1B.3	~~439.1~~440.6	33~~0~~1.3	75%	Significant
	Orcutt's woody aster	1B.2	440.6~~439.1~~	331~~0~~.3	75%	Significant
B	Harwood's milkvetch	2.2	440.6~~439.1~~	331~~0~~.3	75%	Significant
	Brown turbans	2.3	440.6~~439.1~~	331~~0~~.3	75%	Significant

3.2.2.2 Special-Status Wildlife Species (County Group 1 Species and Species of Special Concern)

Loss of special-status wildlife species (County Group 1 or state SSC animals) including individual reptiles (i.e., flat-tailed horned lizard) and mammals from construction-related activities would be considered significant (Impact W-1), absent mitigation. This impact will be mitigated through mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), MM-3 (preparation of a biological monitoring report), MM-5 (flat-tailed horned lizard preconstruction surveys), MM-6 (biological monitoring for flat-tailed horned lizard), and MM-7 (monitor excavated areas and soil piles). If any active nests or the young of nesting special-status bird species (County Group 1 or state SSC animals) are impacted through direct grading, these impacts would be considered significant (Impact W-2), absent mitigation, based on the Migratory Bird Treaty Act (MBTA). This impact will be mitigated through mitigation measure MM-8 (preconstruction surveys for nesting birds and setbacks).

Four County Group 1 and/or state SSC animal species were detected within the project area during surveys: burrowing owl, turkey vulture, loggerhead shrike, and flat-tailed horned lizard (see Section 1.4.6). Figure 6 shows the proposed project impacts in relation to the special-status wildlife observations mapped on site. In addition, a sharp-shinned hawk was observed foraging over the project site during one of the winter raptor surveys; however, sharp-shinned hawk does not nest in San Diego County. Golden eagle was not observed during surveys, and the project site is located approximately 1.5 miles from the Vallecito Mountains where there may be suitable nesting habitat. This species has moderate potential to forage over the site.

Eight County Group 1 and/or state SSC wildlife species have moderate or high potential to occur within the project area: red-diamond rattlesnake, Colorado Desert fringe-toed lizard, California

horned lark, Bendire's thrasher, Le Conte's thrasher, Lucy's warbler, Palm Springs pocket mouse, and American badger.

The following six state SSC bats have moderate or high potential to forage in the project area, but not roost: Pallid bat, Mexican long-tongued bat, western mastiff bat, California leaf-nosed bat, pocketed free-tailed bat, and big free-tailed bat. Impacts to wildlife species are discussed in detail in Section 2.3.

Potential permanent direct impacts to the wildlife species described previously include removal of suitable nesting and/or foraging habitat. Loss of ~~330.3~~331.3 acres of suitable nesting/foraging habitat is considered a significant impact (Impact W-3), absent mitigation. These impacts will be mitigated through mitigation measure MM-4 (habitat preservation). While sharp-shinned hawk was detected in the project area, this species does not nest in San Diego County, but could use the project area during annual migration. Due to the low expected use of the project area by sharp-shinned hawk, direct impacts to potential stopover habitat are not considered significant.

3.2.3 Project Effects Relevant to Guideline 4.1.C

3.2.3.1 Special-Status Plant Species (County List C and D Species and Other)

There will be no direct impacts to suitable habitat for County List C plant species resulting from implementation of the proposed project because the County List C plant species that are known to occur in the vicinity of the project are not expected to occur on site (see Table C-1 of Appendix C).

Similar to County List A and B (Section 3.2.2.1) plant species, potential short-term, construction-related, or temporary direct impacts to suitable habitat for County List D plant species and gravel milk-vetch (CRPR 2.2) would primarily result from construction activities. Potential temporary direct impacts to gravel milk-vetch would be significant, absent mitigation (Impact SP-3) because this species is considered rare, threatened, or endangered in California (CNPS 2012). However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report). The potential short-term, temporary direct impacts to suitable habitat for County List D species would be not considered significant because it is not likely that these impacts would affect the local long-term survival of these species.

Suitable habitat for five County List D plant species would be directly impacted by the proposed project, including Salton milkvetch, Borrego milkvetch, ribbed cryptantha, Baja California bur-comb, and Thurber's pilostyles. One special-status species, gravel milk-vetch, a species with a CRPR of 2.2, is not on the County of San Diego Sensitive Plant List (County of San Diego 2010a); however, suitable habitat for gravel milk-vetch would be directly impacted by the proposed project.

Figure 6 shows the proposed project impacts to suitable habitat, Sonoran creosote bush scrub, and Sonoran wash scrub, for County List D plant species and gravel milk-vetch (CRPR 2.2) on site.

Table 6 summarizes the proposed direct impacts to suitable habitat for County List D plant species and gravel milk-vetch (CRPR 2.2) and the significance of the impacts prior to mitigation. The proposed direct impacts to suitable habitat for County List D species would be not considered significant because it is not likely that the project would affect the local long-term survival of these species. The proposed impacts to suitable habitat for these gravel milk-vetch would be considered significant prior to mitigation because this species is considered rare, threatened, or endangered in California (CNPS 2012) (Impact SP-4).

Table 6
Summary of Direct Impacts to Suitable Habitat for County List D and Other Sensitive Plant Species and Significance Prior to Mitigation

County List	Species	CRPR	Acreage of Suitable Habitat On Site	Acreage of Suitable Habitat within Impact Footprint	Percentage of Suitable Habitat Impacted	Significance Prior to Mitigation
D	Salton milkvetch	4.3	~~439.1~~440.6	331~~0~~.3	75%	Less than significant
	Borrego milkvetch	4.3	440.6~~439.1~~	331~~0~~.3	75%	Less than significant
	Ribbed cryptantha	4.3	440.6~~439.1~~	331~~0~~.3	75%	Less than significant
	Baja California bur-comb	None	440.6~~439.1~~	331~~0~~.3	75%	Less than significant
	Thurber's pilostyles	4.3	440.6~~439.1~~	331~~0~~.3	75%	Less than significant
None	Gravel milk-vetch	2.2	440.6~~439.1~~	331~~0~~.3	75%	Significant

3.2.3.2 Special-Status Wildlife Species (County Group 2 Species and Other)

Potential loss of individual special-status mammals (County Group 2[1]), including the Colorado Valley woodrat and kit fox[2] from construction-related activities would be considered significant (Impact W-4), absent mitigation. This impact will be mitigated through mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), MM-3 (preparation of a biological monitoring report), and MM-9 (preconstruction surveys for desert kit fox).

Potential permanent direct impacts to suitable habitat for Colorado Valley woodrat, kit fox, mountain lion and southern mule deer, and foraging habitat for long-eared myotis are not

[1] County Group 2 special-status wildlife species that are state SSC are addressed in Section 3.2.2.2, *Special-Status Wildlife (Group 1)*.

[2] The kit fox is not considered special-status by any federal, state, or local agencies, but is a species of interest by agencies and is addressed in this report.

considered to be significant due to their widespread presence or the project area's relative importance to the species. These species occur within a variety of habitats and through a wide geographic, topographic, and elevational range of which there is an abundance in the region.

If any active nests or young of special-status nesting bird species (County Group 2) are impacted through direct grading, these impacts would be considered significant (Impact W-5), absent mitigation, based on the MBTA. This impact will be mitigated through mitigation measure MM-8 (preconstruction surveys for nesting birds and setbacks).

3.2.4 Project Effects Relevant to Guideline 4.1.D

No arroyo toads have been detected in the project area, and they are not expected to occur in the project area. Arroyo toads are not known from this area and have not been documented in the Borrego Springs SE quadrangle or surrounding eight quadrangles (CDFG 2012a). The project area lacks suitable habitat for this species.

3.2.5 Project Effects Relevant to Guideline 4.1.E

Golden eagle was not observed during surveys. The closest suitable nesting habitat is located approximately 1.5 miles from the project area in the Vallecito Mountains where there may be rocky outcrops suitable for nesting. This species has potential to forage over the site, but there are no suitable nesting areas within 4,000 feet of the project area.

3.2.6 Project Effects Relevant to Guideline 4.1.F

Foraging habitat for raptors is present throughout the project area. Approximately ~~330.3~~331.3 acres of vegetation communities will be impacted. These habitats would be considered suitable foraging habitat for raptors. Therefore, impacts to raptor foraging habitat is considered a significant impact (W-6), absent mitigation. This impact will be mitigated through mitigation measure MM-4 (habitat preservation).

3.2.7 Project Effects Relevant to Guideline 4.1.G

The project area is not considered a core wildlife area, as described in Section 2.5. Wildlife can move freely through the site and will be able to travel through the proposed biological open space. Therefore, no significant impacts are related to this guideline.

3.2.8 Project Effects Relevant to Guideline 4.1.H

3.2.8.1 Special-Status Plant Species

Short-term indirect impacts to suitable habitat for County List A and B plant species and gravel milk-vetch (CRPR 2.2) as a result of the proposed project are described in Section 2.2 and include short-term, construction-related, or temporary indirect impacts, as well as changes in

hydrology resulting from construction and the introduction of chemical pollutants. Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2).

Short-term indirect impacts to suitable habitat for County List A and B plant species and gravel milk-vetch (CRPR 2.2) would be considered a significant impact (Impact SP-5), absent mitigation. Short-term indirect impacts to suitable habitat for County List A and B plant species and gravel milk-vetch will be mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP)), and MM-3 (preparation of a biological monitoring report).

Potential long-term or permanent indirect impacts to suitable habitat for County List A and B plant species and gravel milk-vetch (CRPR 2.2) as result of the proposed project are described in Section 2.2 and include habitat fragmentation, chemical pollutants (herbicides), non-native invasive species, increased human activity, and the alteration of the natural fire regime. Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2).

Potential long-term indirect impacts to suitable habitat for County List A and B plant species and gravel milk-vetch (CRPR 2.2) would be considered a significant impact (Impact SP-6), absent mitigation. Long-term indirect impacts to suitable habitat for County List A and B plant species and gravel milk-vetch will be mitigated to a level below significant through implementation of mitigation measure MM-4 (habitat preservation), MM-10 (restrictions on operation and maintenance personnel activity), MM-11 (implementation of a Fire Protection Plan), and MM-12 (regulated weed control treatments).

As mentioned above, County List C plant species that are known to occur in the vicinity of the project are not expected to occur on site (see Table C-1 of Appendix C). Therefore, indirect impacts to County List C species are also not expected to occur. Potential indirect impacts to suitable habitat for County List D species would be not considered significant because it is not likely that the potential indirect impacts would affect the local long-term survival of these species.

3.2.8.2 Special-Status Wildlife Species

Short-term indirect impacts to County Group 1 and 2 special-status wildlife species (described in Section 2.3) as a result of the proposed project are described in Section 2.3 and include short-term, construction-related, or temporary indirect impacts including noise, chemical pollutants, increased human activity, and non-native animal species. Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2).

Short-term indirect impacts to special-status wildlife species would be considered a significant impact (Impact W-7), absent mitigation. Short-term indirect impacts to special-status wildlife species will be mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits, preparation and implementation of an SWPPP, and containment and removal of trash), MM-3 (preparation of a biological monitoring report), MM-5 (flat-tailed horned lizard preconstruction surveys), MM-6 (biological monitoring for flat-tailed horned lizard), MM-7 (monitor excavated areas and soil piles), MM-8 (preconstruction surveys for nesting birds and setbacks), and MM-13 (minimize night lighting).

Potential long-term or permanent indirect impacts to County Group 1 and 2 special-status wildlife species (described in Section 2.3) include non-native, invasive plant and animal species; habitat fragmentation; increased human activity; and alteration of the natural fire regime. Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2). These potential long-term indirect impacts to special-status wildlife species would be considered a significant impact (Impact W-8), absent mitigation.

Long-term indirect impacts to County Group 1 and 2 special-status wildlife species (described in Section 2.3) will be mitigated to a level below significant through implementation of mitigation measure MM-4 (habitat preservation), MM-10 (restrictions on operation and maintenance personnel activity), and MM-11 (implementation of a Fire Protection Plan).

3.2.9 Project Effects Relevant to Guideline 4.1.I

One burrowing owl was observed in the project area by Jim Whalen (pers. comm. 2012); however, no burrowing owls have been observed during the reconnaissance survey, jurisdictional delineation, winter raptor surveys, or reptile surveys. Therefore, the project site is not considered occupied territory. However, if the project area becomes occupied prior to construction activities, impacts to occupied burrowing owl habitat would be considered a significant impact (Impact W-9), absent mitigation. This impact will be mitigated to a level below significance through implementation of mitigation measure MM-14 (preconstruction surveys for burrowing owl).

3.2.10 Project Effects Relevant to Guideline 4.1.J

No cactus wrens have been detected in the project area; therefore, there are no impacts to occupied cactus wren habitat.

3.2.11 Project Effects Relevant to Guideline 4.1.K

No Hermes copper butterflies have been detected in the project area. The adult butterflies' preferred nectaring plant, California buckwheat (*Eriogonum fasciculatum*), and larval host plant

(i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), have not been detected on site. Based on the lack of suitable habitat for this species, the project area is not considered occupied Hermes copper butterfly habitat. Therefore, there are no impacts related to this guideline.

3.2.12 Project Effects Relevant to Guideline 4.1.L

Although there are very few trees on site, indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be considered a significant impact (Impact W-10), absent mitigation, and would be mitigated through MM-8 (preconstruction surveys for nesting birds and setbacks).

Impacts to the nesting success of tree-nesting raptors (e.g., American kestrel (*Falco sparverius*) and red-tailed hawk (*Buteo jamaicensis*)) as a result of habitat removal associated with the proposed project are not anticipated. The only trees on site are located in the Sonoran wash scrub, which will not be impacted. Impacts to vegetation communities that provide potential foraging habitat for nesting raptors are described in Table 4. Impacts to the nesting success of tree-nesting raptors associated with the loss of suitable foraging habitat are not considered significant based on the expanses of open, undeveloped habitat surrounding the project site.

Coastal cactus wren, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, golden eagle, and light-footed clapper rail do not nest in the project area; therefore, the proposed project would not impact the nesting success of those species. No ground-nesting raptors (e.g., northern harrier) are expected to nest on the project site. Therefore, the proposed project would not impact the nesting success of those species.

3.3 Cumulative Impact Analysis

Table 7 summarizes the projects in San Diego County within 5 miles of the project site. There are no projects in Imperial County within 5 miles of the project site. The majority of these projects are located within urban/developed land, and they are very small in acreage, or would not result in large impacts to vegetation (e.g., cellular site). There is one proposed solar farm within 5 miles on 100 acres of Sonoran creosote bush scrub. No environmental documents are available yet to determine if special-status species are impacted.

Table 7
Cumulative Impacts

APN	Project Name	Project Type	Vegetation Community (SANDAG)	Lot Acreage
253-090-06-00	Lemmon	Unknown	Urban/Developed	1
253-090-07-00	#850-03 Hoeptner Ranch	Unknown - Approved	Urban/Developed	1.7
	SD827-01 Ocotillo Wells - CNG	Cingular - Application Withdrawn		
	Cingular Wireless ZAP	Cellular site		
253-090-46-00	Sprint PCS	Cellular site	Sonoran creosote bush scrub	2.5
	Sprint PCS ZAP	Sprint Facility - Application withdrawn		
253-111-02-00	GRAMCKO, MUP 71-373-01 MINORD	Minor Deviation to combine 6 MH spaces into 2 MH spaces within existing mobile home Park	Disturbed habitat/Sonoran creosote bush scrub	5 acres DH; 5 acres Sonoran creosote bush scrub
253-220-69-00	Split Mountain, MUP PV Power	26 MW Solar Farm - Open	Sonoran creosote bush scrub	100

3.4 Mitigation Measures and Design Considerations

The following mitigation measures are proposed in order to mitigate for the significant impacts described above. These mitigation measures are intended to minimize and avoid potential impacts to the extent possible.

MM-1 To prevent inadvertent disturbance to areas outside the limits of grading, all grading located shall be monitored by a biologist. A County-approved biologist "Project Biologist" shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.

The following shall be completed:

1. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the County of San Diego *Biological Report Format and Requirement Guidelines* and this permit. The contract provided to the County shall include an agreement that this will be completed, and a Memorandum of Understanding (MOU) between the biological consulting company and the County of San Diego shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the County of

San Diego *Biological Report Format and Requirement Guidelines* the Project Biologist also will perform the following duties:

a. Attend the preconstruction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).

b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading.

c. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.

d. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.

e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading.

~~e.~~f. Ensure fencing is installed per the Fencing and Removal Survey Protocols (Appendix 7 of the Flat-tailed Horned Lizard Interagency Coordinating Committee 2003), or otherwise agreed upon by resource agencies.

~~f.~~g. Be present during initial vegetation clearing, grubbing, and grading.

~~g.~~h. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities.

~~h.~~i. To address hydrology impacts, the Project Biologist shall verify that grading plans include an SWPPP (see MM-2 for required best management practices (BMPs)).

2. The cost of the monitoring shall be added to the grading bonds that will be posted with the Department of Public Works (DPW), or bond separately with the PDS.

3. Documentation: The applicant shall provide a copy of the biological monitoring contract, cost estimate, and MOU to the PDS. Additionally, the cost amount of the monitoring work shall be added to the grading bond

cost estimate. Timing: Prior to approval of any grading and or improvement plans and issuance of any grading or construction permits. Monitoring The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate should be forwarded to the project manager, for inclusion in the grading bond cost estimate, and grading bonds. The DPW shall add the cost of the monitoring to the grading bond costs.

MM-2 The SWPPP will include, at a minimum, the BMPs listed below. The combined implementation of these requirements shall protect adjacent habitats and special-status species during construction to the maximum extent practicable. At a minimum, the following measures and/or restrictions shall be incorporated into the SWPPP and noted on construction plans, where appropriate, to avoid impacts on special-status species, special-status vegetation communities, and/or jurisdictional waters during construction. The Project Biologist shall verify the implementation of the following design requirements:

1. No planting or seeding of invasive plant species on the most recent version of the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory for the project region will be permitted.
2. Location and details will be provided for any dust-control fencing.
3. Construction activity will not be permitted in jurisdictional waters of the U.S./State except as authorized by applicable law and permit(s), including permits and authorizations approved by the U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and Regional Water Quality Control Board (RWQCB).
4. Silt settling basins installed during the construction process will be located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes.
5. Temporary structures and storage of construction materials will not be located in jurisdictional waters, including wetlands and riparian areas.
6. Staging/storage areas for construction equipment and materials will not be located in jurisdictional waters, including wetlands and riparian areas.
7. Any equipment or vehicles driven and/or operated within a jurisdictional waters of the U.S./State will be checked and maintained by the operator daily

to prevent leaks of oil or other petroleum products that could be deleterious to aquatic life if introduced to the watercourse.

8. No stationary equipment, such as motors, pumps, generators, and welders, or fuel storage tanks will be located within jurisdictional waters of the U.S./State.
9. No debris, bark, slash sawdust, rubbish, cement, or concrete, or washing thereof, oil, or petroleum products will be stored where it may be washed by rainfall or runoff into jurisdictional waters of the U.S./State.
10. When construction operations are completed, any excess materials or debris will be removed from the work area.
11. No equipment maintenance will be performed within or near jurisdictional waters of the U.S./State where petroleum products or other pollutants from the equipment may enter these areas.
12. Fully covered trash receptacles that are animal-proof and weather-proof will be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Prohibit littering and remove trash from construction areas daily. All food-related trash and garbage shall be removed from the construction sites on a daily basis.
13. Pets on or adjacent to construction sites will not be permitted by the operator.
14. Enforce speed limits in and around all construction areas. Vehicles shall not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site or 10 miles per hour during the night.

MM-3 To ensure that the biological monitoring occurred during the grading phase of the project, a final biological monitoring report shall be prepared. The Project Biologist shall prepare a final biological monitoring report. The report shall substantiate the supervision of the grading activities, and state that grading or construction activities did not impact any additional areas or any other special-status biological resources. The report shall conform to the County of San Diego *Report Format Guidelines for Biological Resources*, and include the following items:

1. Photos of the temporary fencing that was installed during the trenching, grading, or clearing activities.
2. Monitoring logs showing the date and time that the monitor was on site.
3. Photos of the site after the grading and clearing activities.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval. Timing: Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved. Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform DPW that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform DPW to release the bond back to the applicant.

MM-4 Per the County guidelines (County of San Diego 2010a), impacts to Sonoran creosote bush scrub require mitigation at a 1:1 ratio for a total of ~~330.3~~331.3 acres of required mitigation. There are approximately 109.3 acres of Sonoran creosote bush scrub that will be preserved in on-site open space (Figure 7); an additional 239 acres of Sonoran creosote bush scrub (or similar vegetation) will be preserved off site. Mitigation for the loss of suitable habitat for special-status plants and loss of habitat for special-status wildlife species will also include on-site and off-site preservation of 348.3 acres of suitable habitat.

Preservation of off-site open space shall be provided through one of the following options:

Option 1 The project applicant owns or has identified several parcels in San Diego County to serve as off-site mitigation for this project (Figures 8A and 8B). They total 239 acres, which meet the mitigation requirement. Appendix E provides an evaluation for the mitigation sites, and includes vegetation community mapping and an assessment of associated flora and fauna to the extent necessary to determine if the off-site conservation area provided commensurate biological function and value for each significantly impacted biological resource.

One of the parcels (APN 201-150-06) is located northwest of the project area**.** It is owned by the Gildred Building Company (project applicant) and is approximately 36 acres.

The remaining parcels (APNs 200-140-05, 200-140-07, and a portion of 200-140-08) total approximately 203 acres and are located off of Yaqui Pass in Borrego Springs. The owner of these parcels is willing to sell the property.

Option 2: Under this option, the DRECP process would be utilized to mitigate for habitat-related impacts. The DRECP is a 22.5-million-acre Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) designed to streamline

the permitting of renewable energy projects while conserving biological resources in California's desert region. The DRECP Plan Area includes the proposed project site and adjacent lands in Imperial County. The DRECP is currently in development, and information regarding the proposed development alternatives (Development Focus Areas; DFAs) and reserve system (Plan-wide Biological Reserve Design Context) is available on www.DRECP.org located under the July 2012 DRECP stakeholder meeting materials folder.

Similar to the process the County employs in its MSCP Planning, the DRECP has identified potential development areas (i.e., DFAs) and planned biological reserve system. Under DRECP, renewable energy development (solar, wind, geothermal) is streamlined from a permitting perspective only within DFAs when state or federal threatened or endangered species take authorizations are needed provided that the project complies with the DRECP and mitigates appropriately within the biological reserve system. Development may occur outside DFAs, but will not receive the endangered species permitting provided by DRECP.

As it relates to the DRECP, the project site is located within San Diego County where the DRECP has not identified development areas (i.e., DFAs) under the current alternatives. Therefore, Ocotillo Wells Solar would not be able to receive permitting streamlining under DRECP because their project site is not within a DFA. Since the project has no listed species, it will not need the endangered species permits from DRECP. Instead, the Ocotillo Wells Solar will obtain all of its approvals for impacts to biological resources from the County.

Directly adjacent to the project site in Imperial County, the project proponent owns 241.9 acres of land (Imperial County property). This property is located in an area designated as a High Biological Sensitivity (HBS) Conservation Area, which are areas of high biological value where more biological resources are concentrated or where fewer compatible uses would be allowed. The DRECP reserve system would preferably be assembled from these HBS focus areas. In contrast, the Ocotillo Wells Solar site itself is mapped in a less sensitive category by the DRECP, the Moderate Biological Sensitive (MBS) Conservation Area. The DRECP biological reserve design context map provides justification for mitigating the proposed project impacts within Imperial County because this area is identified as a "blue" HBS conservation area that abuts Legally and Legislatively Protected Areas (LLPAs; existing conservation). The blue designation indicates high conservation priority. This particular blue area in Imperial County was identified primarily for the following resources located on site: San Felipe Creek tributaries and buffer, east-west connectivity to from the mountains to the Salton Sea, flat-tailed horned lizard, and burrowing owl.

Although the DRECP has not yet been approved, the process for obtaining covered project status in the NCCP Planning Agreement would be followed. In this way, the preserve segment can be approved for inclusion in the DRECP. The biological reserve design context map provides documented guidance for conservation priorities in the desert regions including eastern San Diego County and Imperial County. The Imperial County property has been identified by the DRECP as a high biological sensitivity area, and it provides connectivity to large public lands considered building blocks of the regional reserve system. Additionally, the Imperial County property supports nearly the same habitat and species as the project site.

Under this mitigation option, the Imperial County property would be conveyed to the DRECP Implementing Entity and become part of the DRECP reserve system and be managed under the DRECP program. If the DRECP Implementing Entity is not established when this mitigation option is executed, the Imperial County property would be protected through a restrictive covenant, deed restriction, or other legal mechanism, with explicit specifications allowing for the future management and incorporation of the property into the DRECP reserve system.

MM-5 A biological monitor will be employed to assist the Project Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, and O&M activities. The biological monitor(s) will have sufficient education and field experience to understand flat-tailed horned lizard biology, have experience conducting flat-tailed horned lizard field monitoring, be able to identify flat-tailed horned lizard and flat-tailed horned lizard scat, and be able to identify and follow flat-tailed horned lizard tracks.

The biological monitor's duties include:

a. Be present during surveying, geotechnical testing, grubbing, clearing, grading, and ground-disturbing activities that take place in flat-tailed horned lizard habitat to prevent or minimize harm or injury to flat-tailed horned lizard. Activities of the biological monitor(s) include, but are not limited to, ensuring compliance with all avoidance and minimization measures, monitoring for flat-tailed horned lizards and removing them from harm's way, and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits.

b. At the end of each work day, inspect all potential wildlife pitfalls (e.g., trenches, bores, other excavations) for wildlife and remove wildlife as

necessary. If the potential pitfalls will not be immediately backfilled following inspection, the biological monitor will ensure that the construction crew slopes the ends of the excavation (3:1 slope) to provide wildlife escape ramps or will ensure that the construction crew completely and securely covers the excavation to prevent wildlife entry.

c. During construction, examine areas of active surface disturbance periodically, at least hourly, when surface temperatures exceed 29 degrees Celsius (85 degrees Fahrenheit) for the presence of flat-tailed horned lizard and remove them per mitigation measure MM-6 below.

d. Remove flat-tailed horned lizards from harm's way during all ground-disturbing construction activities as outlined previously.

MM-6 Prior to conducting ground-disturbing construction activities, as defined in MM-5, surveys for, and relocation of, flat-tailed horned lizard will be conducted. Surveys and relocation shall be conducted in accordance with the Fencing and Removal Survey Protocols (Appendix 7 of the Flat-tailed Horned Lizard Interagency Coordinating Committee 2003).

To the extent feasible, methods to find flat-tailed horned lizards will be designed to achieve a maximal capture rate and will include, but not be limited to, using strip transects, tracking, and raking around shrubs. During construction, the minimum survey effort will be 30 minutes per 0.40 hectare (1 acre). Persons that handle flat-tailed horned lizards will first obtain all necessary permits and authorization from the CDFG. Flat-tailed horned lizard removal surveys also will include:

1. Accurate records maintained by the biological monitor(s) for each relocated flat-tailed horned lizard including sex, snout-vent length, weight, air temperature, location, date, time of capture and release, a close-up photo of the lizard, and a photo of the habitat where it was first encountered. To the extent feasible, a sample of the lizard scat will be collected. A Horned Lizard Observation Data Sheet and a Project Reporting Form, from Appendix 8 of the Flat-tailed Horned Lizard Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003) will be completed. During construction, quarterly reports describing flat-tailed horned lizard removal activity will be submitted to the County and CDFG.

2. The removal of flat-tailed horned lizards out of harm's way, including those found on access or maintenance roads, will include their relocation to nearby suitable burrowing habitat away from proposed project

components and roads. Relocated flat-tailed horned lizards will be placed in the shade of a large shrub in undisturbed habitat. The Project Biologist or biological monitor will be allowed some judgment and discretion when relocating lizards to maximize survival of flat-tailed horned lizards found on the proposed project site.

MM-7 Cover and/or provide escape routes for wildlife from excavated areas and monitor these areas daily. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access. Soil piles will be covered at night to prevent wildlife from burrowing in. The edges of the sheeting will be weighed down by sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected daily (i.e., morning) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.

MM-8 Within 72 hours of ground-disturbing activities associated with construction activities during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the impact area or within 300 feet (500 feet for raptors) of the impact area.

If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. A biological monitor shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report.

MM-9 Preconstruction surveys for desert kit fox shall be conducted in the project area prior to implementation of any ground-disturbing construction activities (i.e., vehicle use, geotechnical testing, grubbing, clearing, grading). Preconstruction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project.

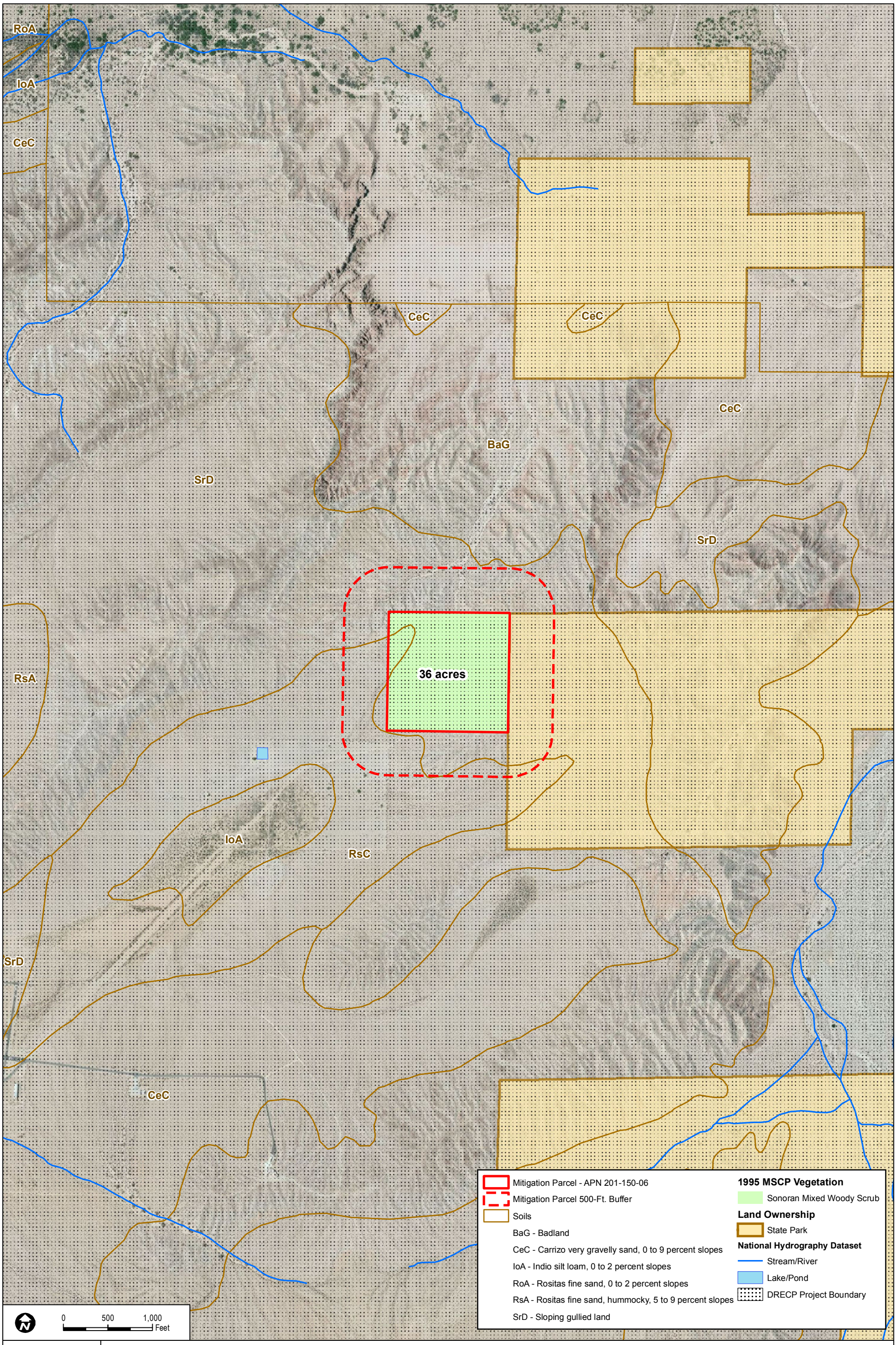
If more than 30 days lapse between the time of the preconstruction survey and the start of ground-disturbing activities, another preconstruction survey shall be completed. The preconstruction surveys shall cover the project area and a 200-foot buffer around the project area.

1. Preconstruction surveys will identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens will be determined and mapped.

2. If a natal/pupping den is discovered within the project site or within 200 feet of the project boundary, the CDFG shall be notified. A natal/pupping den shall not be disturbed or destroyed while occupied.

3. If avoidance of den destruction is not feasible or practicable, destruction of the den shall be accomplished by careful excavation until it is certain that no kit foxes are inside. The den shall be fully excavated, filled with dirt, and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den will conducted as described below. Destruction of the den may be completed when in the judgment of the qualified biologist the animal has escaped, without further disturbance, from the partially destroyed den. Occupied natal/pupping dens shall not be destroyed until vacated by kit foxes and only after consultation with the CDFG. Only when the den is determined to be unoccupied will the den be excavated under the direction of the qualified biologist. Use of spotting scopes and game cameras are encouraged to confirm presence/absence.

4. Because kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured, all construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods will either be caped or covered such that no animal can enter, or be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the CDFG has been consulted. If necessary, and under the direct supervision of the qualified biologist, the pipe may be moved only once to remove it from the path of construction activity, until the kit fox has escaped.



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SOURCE: USGS; SanGIS 2012; SANDAG 1995; Bing Maps

FIGURE 8A

Off-Site Mitigation Parcel - APN 201-150-06

BIOLOGICAL RESOURCES REPORT FOR THE OCOTILLO WELLS SOLAR PROJECT

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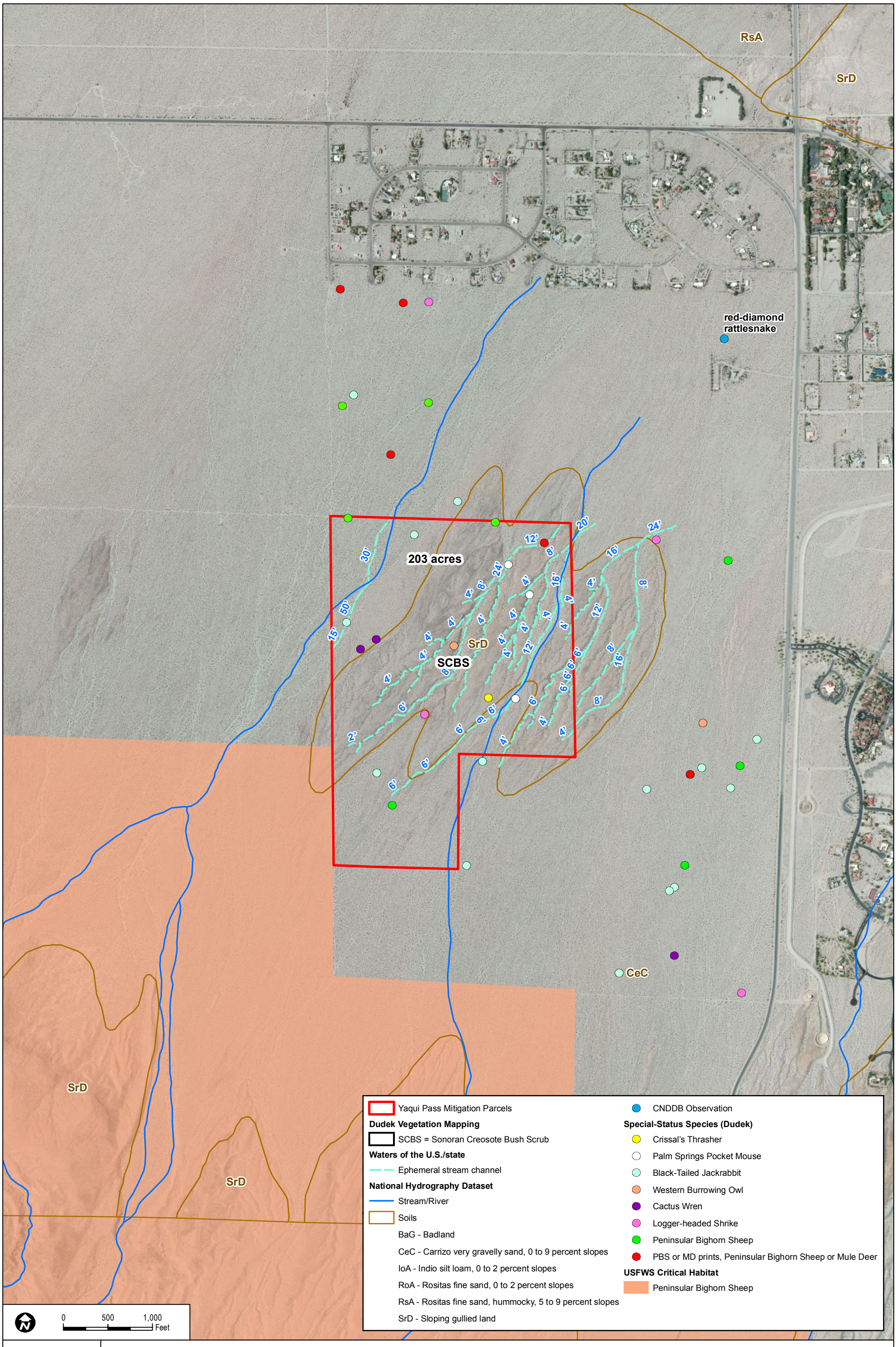

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SOURCE: CDFG/CNDDB 2012; USFWS; USGS; SanGIS 2012; SANDAG 1995; Bing Maps

FIGURE 8B

Off-Site Mitigation Parcel - Yaqui Pass Parcels

BIOLOGICAL RESOURCES REPORT FOR THE OCOTILLO WELLS SOLAR PROJECT

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MM-10 Operation and maintenance personnel will be prohibited from:

1. Harming, harassing, or feeding wildlife and/or collecting special-status plant or wildlife species.
2. Traveling (either on foot or in a vehicle) outside of project footprint in undisturbed portions of the project area.
3. Bringing pets on the project area.
4. Littering on the project area.

MM-11 To minimize the potential exposure of the project area to fire hazards, all features of the Fire Protection Plan (RBF Consulting 2012a) shall be implemented in conjunction with development of the proposed project.

MM-12 Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the San Diego County agriculture commissioner. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the San Diego County agriculture commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the PCA, the San Diego County agriculture commissioner, and Cal-IPC with the goal of controlling populations before they start producing seeds.

MM-13: Minimize night construction lighting adjacent to native habitats. Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, and directed/shielded appropriately to minimize lighting in adjacent native habitats.

MM-14: Prior to the start of construction, a preconstruction survey for the burrowing owl will be conducted in accordance with the DFG Staff Report (2012). The pre-construction surveys shall identify active burrowing owl burrows, and estimate the number of burrowing owls, as well as determine whether they are considered breeding pairs or migrants. If it is discovered that there is an occupied burrowing owl burrow, then a Bburrowing ~~o~~Owl Mitigation and ~~m~~Management P~~p~~lan will be developed in accordance with the DFG Staff Report (2012), which outlines the methods of removal (if necessary) and the methods and placement of, replacement burrows. At a minimum, occupied burrows will be replaced at a 2:1 ratio.

The management plan shall include the following information:

- Setbacks, consistent with the existing conditions described in MM-8;
- A description of shelter in place and its purpose to minimize impacts to burrowing owl while allowing existing burrows to remain intact;
- A plan for excavation of inactive burrowing owl burrows, as appropriate;
- A passive relocation plan;
- Additional measures to ensure protection of burrowing owl through construction and during operation and maintenance phases of the project; and
- On-site and off-site mitigation plan for impacts to burrowing owl (if they occur).

3.5 Conclusions

3.5.1 Sensitive Plant Species

The significant short-term direct impacts to suitable habitat for Peirson's pincushion flower, Orcutt's woody aster, Harwood's milkvetch, brown turbans, and gravel milk-vetch will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, and MM-3, which require biological monitoring, restrictions on construction vehicle speeds, and preparation of a biological monitoring report.

The significant long-term direct impacts Peirson's pincushion flower, Orcutt's woody aster, Harwood's milkvetch, brown turbans, and gravel milk-vetch will be reduced to a level that is less than significant through implementation of mitigation measure MM-4, which provides for 348.3 acres of on-site and off-site habitat conservation of equivalent function and value.

The significant short-term indirect impacts to Peirson's pincushion flower, Orcutt's woody aster, Harwood's milkvetch, brown turbans, and gravel milk-vetch will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, and MM-3, which require biological monitoring, restrictions on construction vehicle speeds, and preparation of a biological monitoring report.

The significant long-term indirect impacts to Peirson's pincushion flower, Orcutt's woody aster, Harwood's milkvetch, brown turbans, and gravel milk-vetch will be reduced to a level that is less than significant through implementation of mitigation measures MM-4, MM-10, MM-11, and MM-12, which provides for 348.3 acres of on-site and off-site habitat conservation of equivalent

function and value, and will require restrictions on operation and maintenance personnel activity, implementation of a Fire Protection Plan, and regulates herbicide application.

3.5.2 Sensitive Wildlife Species

The significant short-term direct impacts to active nests or the young of nesting County Group 1 or Group 2 species will be reduced to a level that is less than significant through implementation of mitigation measure MM-8, which requires preconstruction surveys for nesting birds and setbacks for active nests. Potential significant short-term direct impacts from loss of individual red-diamond rattlesnake, flat-tailed horned lizard, Colorado Desert fringe-toed lizard, Palm Springs pocket mouse, American badger, Colorado Valley woodrat, and desert kit fox will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, MM-3, MM-5, MM-6, MM-7, and MM-9, which require biological monitoring, restrictions on construction vehicle speeds, preparation of a biological monitoring report, flat-tailed horned lizard preconstruction surveys and monitoring, monitor excavated areas and soil piles, and preconstruction surveys for kit fox.

The significant long-term direct impacts to County Group 1 species, SSC species, and raptor foraging habitat as a result of removal of suitable habitat will be reduced to a level that is less than significant through implementation of mitigation measure MM-4, which provides for 348.3 acres of habitat conservation of equivalent function and value.

The significant short-term indirect impacts to special-status wildlife species will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, MM-3, MM-5, MM-6, MM-7, MM-8, MM-9, and MM-13, which require biological monitoring, restrictions on construction vehicle speeds, preparation of a biological monitoring report, flat-tailed horned lizard preconstruction surveys and monitoring, monitor excavated areas and soil piles, preconstruction surveys for nesting birds and setbacks for active nests, preconstruction surveys for kit fox, and minimizing night lighting.

The significant long-term indirect impacts to special-status wildlife species will be reduced to a level that is less than significant through implementation of mitigation measures MM-4, MM-10, and MM-11, which provide for 348.3 acres of habitat conservation of equivalent function and value, and require restrictions on operation and maintenance personnel activity, and implementation of a Fire Protection Plan.

The significant direct or indirect impact on potential occupied burrowing owl habitat will be reduced to a level that is less than significant through implementation of mitigation measure MM-14, which requires preconstruction surveys for burrowing owl.

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4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

4.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance (County of San Diego 2010a) are based on the criteria in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources (County of San Diego 2010a).

The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.

A. Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site. This Guideline would not apply to small remnant pockets of habitat that have a demonstrated limited biological value. No *de minimus* standard is specified under which an impact would not be significant, however; minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acre in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors including, but not limited to, type of habitat, relative presence of habitat type in project vicinity, its condition and size, presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in project vicinity, and current degree of urbanization and edge effects in project vicinity, etc. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g. vernal pools). An area that is disturbed or partially developed may provide a habitat "island" that would serve as a functional refuge area "stepping stone" or "archipelago" for migratory species.

B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE), CDFG and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.

C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.

D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance, buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance. The following examples provide guidance on determining appropriate buffer widths.

- A 50-foot wetland buffer would be appropriate for lower quality RPO wetlands where the wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive and slopes do not exceed 25%.
- A wetland buffer of 50-100 feet is appropriate for moderate to high quality RPO wetlands which support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25%) with highly erosive soils. Within the 50-100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that could not be mitigated.
- Wetland buffers of 100–200 feet are appropriate for RPO wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
- Buffering of greater than 200 feet may be necessary when an RPO wetland is within a regional corridor or supports significant populations of wetland associated sensitive species and lies adjacent to land use(s) which could result in a high degree of edge effects within the buffer. Although the RPO stipulates a maximum of 200 feet for RPO wetland buffers, actions may be subject to other laws and regulations (such as the Endangered Species Act) that require greater wetland buffer widths.

4.2 Analysis of Project Effects

4.2.1 Project Effects Relevant to Guideline 4.2.A

Short-term, construction-related, or temporary direct impacts to special-status upland vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of special-status vegetation communities outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to special-status vegetation communities on site and in the proposed off-site access roads would be significant, absent mitigation (Impact V-1). However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

Permanent direct impacts to developed land are not considered significant. Permanent direct impacts to 33~~0~~1.3 acres of Sonoran creosote bush scrub would occur as a result of the proposed project. This impact would be considered a significant impact (Impact V-2). This impact will be mitigated through mitigation measure MM-4 (habitat preservation), which will conserve approximately 348.3 acres of habitat with equivalent function and value.

Table 8 summarizes direct impacts to vegetation communities and land covers found on site. Figure 6 illustrates the distribution of biological resources on site and the locations where proposed impacts would occur.

Table 8
Proposed Mitigation for Impacts to Vegetation Communities and Land Covers

Vegetation Community/ Land Cover Type	Existing (acres)	Development Impacts and Off-Site Access Road (acres)	Mitigation Ratio	Mitigation Required (acres)	Biological Open space (acres)	Impact Neutral
Disturbed Habitat	0.7	0.7	None	0	---	0
Developed Land	0.9	0.9	None	0	---	0
Sonoran Creosote Bush Scrub	433.90	3310.23	1:1	3301.23	102.7	0
Sonoran Wash Scrub	6.76	0.1—	12:1	—0.1	6.6	0
Total *	4420.25	3331.03	—	3301.3	109.3	0

* Totals may not equate due to rounding.

4.2.2 Project Effects Relevant to Guideline 4.2.B

The proposed project has been designed to avoid wetlands to the maximum extent practicable.

Short-term, construction-related, or temporary direct impacts to jurisdictional waters would primarily result from construction activities. Clearing, trampling, or grading of jurisdictional waters outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to jurisdictional waters on site would be significant, absent mitigation (Impact V-3). However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

Direct impacts to 0.66~~53~~ acre (10,702~~120~~ linear feet) jurisdictional non-wetlands waterways would occur due to implementation of the proposed project. However, the more prominent drainages in the western portion of the site are avoided, as well as some narrower drainages in the northern portion of the site. In total, 9.43~~50~~ acres of jurisdictional waterways are avoided. Impacts to 0.66~~53~~ acre of non-wetland waterways is considered significant (Impact V-4) and will be mitigated to a less-than-significant level through implementation of mitigation measure MM-15 (require permits from ACOE, RWQCB, and CDFG).

Short-term, construction-related, or temporary indirect impacts to jurisdictional non-wetlands waterways would primarily result from construction activities. Indirect impacts could include the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2). Potential temporary indirect impacts to jurisdictional waters on site would be significant, absent mitigation (Impact V-5). However, these short-term indirect impacts will be mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (preparation and implementation of an SWPPP), and MM-3 (preparation of a biological monitoring report).

Potential long-term indirect impacts to jurisdictional non-wetlands waterways would be considered a significant impact (Impact V-6), absent mitigation. Long-term indirect impacts to jurisdictional non-wetlands waterways will be mitigated to a level below significant through implementation of mitigation measure MM-4 (habitat preservation), MM-10 (restrictions on operation and maintenance personnel activity), MM-11 (implementation of a Fire Protection Plan), and MM-13 (regulated weed control treatments).

Figure 6 illustrates the distribution of biological resources on site and the locations where proposed impacts would occur.

4.2.3 Project Effects Relevant to Guideline 4.2.C

Based on the Preliminary Hydrogeologic Assessment prepared for the proposed project (Wiedlin & Associates, Inc. 201~~2~~3), groundwater depth was measured on June 2, 2011, at 92 feet. Groundwater flow is toward the northeast and the water table may be 10 to 20 feet higher in elevation along the southern boundary of the project site (Wiedlin & Associates, Inc. 201~~2~~3).

During construction activities, an estimated water demand of 39 acre-feet over a period of 9 weeks is anticipated. Water used for construction activities would be supplied via water trucked in from a local water source. Operational water demand for annual soil binding and dust control solar is estimated at 0.85 acre-feet. The water required for panel washing varies based on the type of solar technology used. Panel washing for the proposed project would use 1.23 acre-feet per year. Water used for maintenance purposes would be supplied by the on-site well, replacement well, or via water trucked in from a local water source. Water supplies from the well have been determined adequate to supply anticipated operation-related project demands. This information is based on the Project Description for Ocotillo Wells Solar (RBF Consulting 2012b).

4.2.4 Project Effects Relevant to Guideline 4.2.D

Short-term indirect impacts to special-status upland vegetation communities as a result of the proposed project are described in Section 2.2.2.1 and include short-term, construction-related, or temporary indirect impacts and include generation of fugitive dust, changes in hydrology resulting from construction, and the introduction of chemical pollutants (including herbicides). Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2). Short-term indirect impacts to special-status upland vegetation communities would be considered a significant impact (Impact V-7), absent mitigation. Short-term indirect impacts to special-status upland vegetation communities will be mitigated to a level below significant through implementation of mitigation measure MM-1 (biological monitoring), MM-2 (preparation and implementation of an SWPPP), and MM-3 (preparation of a biological monitoring report).

Potential long-term or permanent indirect impacts to special-status upland vegetation communities as a result of the proposed project are described in Section 2.2.2.2 and include generation of fugitive dust, habitat fragmentation, chemical pollutants (herbicides), non-native invasive species, increased human activity, and alteration of the natural fire regime. Impacts from fugitive dust are not anticipated based on the dust control activities described in the Project Description (Section 1.2.2).

Potential long-term indirect impacts to special-status upland vegetation communities would be considered a significant impact (Impact V-8), absent mitigation. Long-term indirect impacts to special-status upland vegetation communities will be mitigated to a level below significant through implementation of mitigation measure MM-4 (habitat preservation), MM-10 (restrictions on operation and maintenance personnel activity), MM-11 (implementation of a Fire Protection Plan), and MM-12 (regulated herbicide application).

4.2.5 Project Effects Relevant to Guideline 4.2.E

There are no RPO wetlands on site; therefore no wetlands buffer would be required.

4.3 Cumulative Impact Analysis

Table 9 summarizes the projects in San Diego County within 5 miles of the project site. There are no projects in Imperial County within 5 miles of the project site. The majority of these projects are located within urban/developed land, and they are very small in acreage, or would not result in large impacts to vegetation (e.g., cellular site). There is one proposed solar farm within 5 miles on 100 acres of Sonoran creosote bush scrub. No environmental documents are available yet to determine the acreage of proposed impacts. If there are impacts to the entire parcel, this would result in cumulative impacts to approximately 415.2 acres of Sonoran creosote bush scrub.

Table 9
Cumulative Impacts

APN	Project Name	Project Type	Vegetation Community (SANDAG)	Lot Acreage
253-090-06-00	Lemmon	Unknown	Urban/Developed	1
253-090-07-00	#850-03 Hoeptner Ranch	Unknown - Approved	Urban/Developed	1.7
	SD827-01 Ocotillo Wells – CNG	Cingular - Application Withdrawn		
	Cingular Wireless ZAP	Cellular site		
253-090-46-00	Sprint PCS	Cellular site	Sonoran creosote bush scrub	2.5
	Sprint PCS ZAP	Sprint Facility - Application withdrawn		
253-111-02-00	GRAMCKO, MUP 71-373-01 MINORD	Minor Deviation to combine 6 MH spaces into 2 MH spaces within existing mobile home Park	Disturbed habitat/Sonoran creosote bush scrub	5 acres DH; 5 acres Sonoran creosote bush scrub
253-220-69-00	Split Mountain, MUP PV Power	26 MW Solar Farm - Open	Sonoran creosote bush scrub	100

4.4 Mitigation Measures and Design Considerations

The following mitigation measures are proposed in order to mitigate for the significant impacts described above. These mitigation measures are intended to minimize and avoid potential impacts to the extent possible.

The proposed project would avoid impacts to vegetation communities to the maximum extent practicable as previously described, with avoidance of approximately 25% of these habitats within the on-site project area (109.3 of 440.5 acres).

Mitigation for short-term direct impacts to special-status vegetation communities include MM-1 (biological monitoring), MM-2 (preparation and implementation of an SWPPP), and MM-3 (preparation of a biological monitoring report), which are described in Section 3.4.

In accordance with the County Guidelines (County of San Diego 2010b), impacts to 33~~0~~1.3 acres of Sonoran creosote bush scrub and Sonoran wash scrub will require mitigation. No mitigation will be required for direct impacts to developed land. Mitigation measure MM-1, described in Section 3.4, will mitigate for these impacts to this vegetation community through on-site and off-site compensatory mitigation.

Permanent direct impacts to 0.66~~53~~ acre (10,702~~120~~ linear feet) of impacts to ephemeral stream channel under the jurisdiction of ACOE, RWQCB, and CDFG will be mitigated to a less-than-significant level through implementation of mitigation measures MM-1 (habitat preservation), described in Section 3.4, and MM-15.

MM-15 To comply with the state and federal regulations for impacts to "waters of the United States and State," the following agency permits are required, or verification that they are not required shall be obtained.

1. The following permit and agreement shall be obtained, or provide evidence from the respective resource agency satisfactory to the director of Planning and Land Use that such an agreement or permit is not required:
    a. A Clean Water Act, Section 401/404 permit issued by the California RWQCB and the ACOE for all project-related disturbances of waters of the United States and/or associated wetlands.
    b. A Section 1602 Streambed Alteration Agreement issued by the CDFG for all project-related disturbances of any streambed.
2. Documentation: The applicant shall consult each agency to determine if a permit or agreement is required. Upon completion of the agency review of

this project, the applicant shall provide a copy of the permit(s)/agreement(s), or evidence from each agency that such an agreement or permit is not required to the Department of Planning and Land Use (DPLU) for compliance.

3. Timing: Prior to approval of any grading and or improvement plans and issuance of any Grading or Construction Permits.
4. Monitoring: The DPLU shall review the permits/agreement for compliance with this condition. Copies of these permits should be transmitted to the Department of Public Works (DPW) for implementation on the grading plans.

Mitigation for short-term and long-term indirect impacts to special-status vegetation communities and jurisdictional waters include MM-1 (biological monitoring), MM-2 (preparation and implementation of an SWPPP), MM-3 (preparation of a biological monitoring report), MM-4 (habitat preservation), MM-10 (restrictions on operation and maintenance personnel activity), MM-11 (implementation of a Fire Protection Plan), and MM-12 (regulated herbicide application), which are described in Section 3.4.

4.5 Conclusions

The significant short-term direct impacts to special-status upland vegetation communities and jurisdictional wetlands and waters will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, and MM-3, which require biological monitoring, restrictions on construction vehicle speeds, and preparation of a biological monitoring report.

The significant permanent direct impact to 33~~0~~1.3 acres of Sonoran creosote bush scrub and Sonoran wash scrub will be reduced to a level that is less than significant through implementation of mitigation measure MM-4, which provides for 348.3 acres of habitat conservation of equivalent function and value.

The significant permanent direct impact to 0.66~~53~~ acre (10,702~~120~~ linear feet) of ephemeral stream channel under the jurisdiction of ACOE, RWQCB, and CDFG will be reduced to a level that is less than significant through implementation of mitigation measures MM-4 (habitat preservation) and MM-15 (federal and state permits).

The significant short-term indirect impacts to special-status upland vegetation communities and jurisdictional non-wetland waters will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, and MM-3 which require biological

monitoring, restrictions on construction vehicle speeds, and preparation of a biological monitoring report.

The significant long-term indirect impacts to special-status upland vegetation communities and jurisdictional non-wetland waters will be reduced to a level that is less than significant through implementation of mitigation measures MM-4, MM-10, MM-11, and MM-12, which provide for 348.3 acres of habitat conservation of equivalent function and value, and require restrictions on operation and maintenance personnel activity, implementation of a Fire Protection Plan, and regulates weed control treatments.

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5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance (County 2010a) are based on the criteria in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources (County of San Diego 2010a).

The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

For federally protected wetlands the significance of impacts shall be determined under Guidelines 4.2.B, C, and E (County of San Diego 2010a).

5.2 Analysis of Project Effects

The proposed project will result in significant impacts that are mitigated under the guidelines above for the following reasons:

5.2.1 Project Effects Relevant to Guideline 4.3

Impacts to jurisdictional wetlands and waters are discussed in Sections 4.2.B, 4.2.C, and 4.2.D. There are no permanent direct impacts to federal wetlands. Permanent direct impacts to 0.5~~6~~63 acre (10,702~~1~~20 linear feet) of waters under the jurisdiction of U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game are described in Section 4.2.B.

5.3 Cumulative Impact Analysis

Table 10 summarizes the projects in San Diego County within 5 miles of the project site. There are no projects in Imperial County within 5 miles of the project site. The majority of these projects are located within urban/developed land, and they are very small in acreage, or would not result in large impacts to vegetation (e.g., cellular site). There is one proposed solar farm within 5 miles on 100 acres of Sonoran creosote bush scrub. No environmental documents are available yet to determine if there are any jurisdictional wetlands or waterways.

Table 10
Cumulative Impacts

APN	Project Name	Project Type	Vegetation Community (SANDAG)	Lot Acreage
253-090-06-00	Lemmon	Unknown	Urban/Developed	1
253-090-07-00	#850-03 Hoeptner Ranch	Unknown – Approved	Urban/Developed	1.7
	SD827-01 Ocotillo Wells – CNG	Cingular – Application Withdrawn		
	Cingular Wireless ZAP	Cellular site		
253-090-46-00	Sprint PCS	Cellular site	Sonoran creosote bush scrub	2.5
	Sprint PCS ZAP	Sprint Facility – Application withdrawn		
253-111-02-00	GRAMCKO, MUP 71-373-01 MINORD	Minor Deviation to combine 6 MH spaces into 2 MH spaces within existing mobile home Park	Disturbed habitat/Sonoran creosote bush scrub	5 acres DH; 5 acres Sonoran creosote bush scrub
253-220-69-00	Split Mountain, MUP PV Power	26 MW Solar Farm - Open	Sonoran creosote bush scrub	100

5.4 Mitigation Measures and Design Considerations

Mitigation for potential short-term and long-term direct impacts to jurisdictional wetlands and/or waters are described in Section 4.2.B. Mitigation for potential short-term and long-term indirect impacts are described in Section 4.2.B.

5.5 Conclusions

See Section 4.5.

6.0 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance (County of San Diego 2010a) are based on the criteria in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's Determining Significance and Report Format and Content Requirements for Biological Resources (County of San Diego 2010a).

The project would interfere substantially with the movement of a native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction

B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage. For example, if the project proposes roads that cross corridors, fencing that channels wildlife to underpasses located away from interchanges will be required to provide connectivity. Wildlife underpasses shall have dimensions (length, width, height) suitable for passage by the affected species based on a site-specific analysis of wildlife movement. Another example is increased traffic on an existing road that would result in significant road-kill or interference with an existing wildlife corridor/linkage.

C. The project would create artificial wildlife corridors that do not follow natural movement patterns. For example, constraining a corridor for mule deer or mountain lion to an area that is not well-vegetated or that runs along the face of a steep slope instead of through the valley or along the ridgeline.

D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path. The adequacy of the width shall be based on the biological information for the

target species, the quality of the habitat within and adjacent to the corridor, topography and adjacent land uses. Where there is limited topographic relief, the corridor should be well-vegetated and adequately buffered from adjacent development. Corridors for bobcats, deer and other large animals should reach rim-to-rim along drainages.

F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage. For example, development (such as homes or structures) sited along the rim of a corridor could present a visual barrier to wildlife movement. For stepping-stone/archipelago corridors, a project does not maintain visual continuity between habitat patches.

6.2 Analysis of Project Effects

6.2.1 Project Effects Relevant to Guideline 4.4.A

Short-term, construction-related, or temporary direct impacts to potential foraging and breeding habitat for species that use the project area (e.g., special-status birds) would primarily result from construction activities. Clearing, trampling, or grading of foraging and breeding habitat outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to foraging and breeding habitat on site would be significant, absent mitigation (Impact WM-1). However, these short-term direct impacts will be mitigated to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), and MM-3 (preparation of a biological monitoring report).

The project does not prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction. Permanent fencing will be placed around the solar panels as shown on Figure 6. The open space areas will not be fenced and will allow for wildlife movement through the site. Species such as birds, reptiles, and small mammals (e.g., mice, rabbits, and squirrels) will continue to be able to move throughout the site after the proposed project is constructed. Black-tailed jackrabbit and nocturnal species such as bobcat, kit fox, and coyote would likely use the washes to travel within the area, including the area between the proposed panel arrays. In addition, the area surrounding the project site is undeveloped and wildlife can continue moving around the project site. Permanent direct impacts to the project area would not be considered a significant impact to wildlife movement or habitat connectivity.

Short-term and long-term indirect impacts are discussed in detail in Section 2.6 and would not be considered a significant impact.

6.2.2 Project Effects Relevant to Guideline 4.4.B

The project site does not lie between substantial blocks of habitat, nor is it located in a regional wildlife corridor or linkage. The topography and landscape of the project site is similar to the large, open areas surrounding the site, including the Anza-Borrego Desert State Park, which borders the site to the south. The project site is not considered unique when compared to its surroundings, but is a part of a large, open desert landscape with scattered rural residences, roads, and other infrastructures.

The proposed project has been designed to minimize impacts to washes within the project area where wildlife may travel. Figure 7 shows the locations of the on-site open space that will continue to function as local wildlife corridors for species such as bobcat, coyote, or kit fox.

The proposed project does not interfere with blocks of habitat and would not be a significant impact.

6.2.3 Project Effects Relevant to Guideline 4.4.C

The project would not create any artificial wildlife corridors. As described above, wildlife likely use the washes to travel within the area, and will continue to do so after the project is constructed. However, wildlife is also expected to continue moving freely through the relatively undeveloped areas surrounding the project site.

6.2.4 Project Effects Relevant to Guideline 4.4.D

The project would not increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site specific analysis of wildlife movement due to implementation of BMPs.

There would be short-term, construction-related noise as described in Section 2.6. Long-term noise associated with routine maintenance is not expected to impact wildlife movement because these activities will typically occur within the fenced areas and on an as-needed basis. Additionally, the project area is not considered a core wildlife corridor, and the potential noise and lighting impacts as a result of the Proposed Project would not be considered significant. Nighttime lighting would be minimal and directed toward the ground.

6.2.5 Project Effects Relevant to Guideline 4.4.E

Although the project site does not have a designated regional wildlife corridor, it does support wildlife movement. As shown on Figure 7, wildlife can continue using open space areas to move through the region. Small wildlife species (e.g., lizards and small mammals) will be able to access a variety of the project area through openings in the fence. The proposed project would

result in the removal of vegetation adjacent to the open space areas, but wildlife can move in a variety of local corridors surrounding the project area. The proposed project is not expected to reduce an existing wildlife corridor or linkage and would not be considered significant.

6.2.6 Project Effects Relevant to Guideline 4.4.F

Although the project site does not have a designated regional wildlife corridor, it does support wildlife movement. The proposed solar panel trackers will be constructed approximately 30 feet off of the ground and will be open and undeveloped underneath. The solar panels will be fenced, but many small mammals (e.g., mice and rabbits), reptiles, and birds can move freely through the small openings in the fence and will continue using the entire site. Larger mammals that use the project site are already adapted to the rural desert environment and will continue moving through the open space areas and around the project site. Visual continuity from surrounding undeveloped areas could be impacted from the solar panels and fencing. Although there are potential impacts to visual continuity, the topography is not steep in and around the project area and wildlife can likely use a variety of local wildlife corridors to move throughout the region.

6.3 Cumulative Impact Analysis

Table 11 summarizes the projects in San Diego County within 5 miles of the project site. There are no projects in Imperial County within 5 miles of the project site. The majority of these projects are located within urban/developed land, and they are very small in acreage, or would not result in large impacts to vegetation (e.g., cellular site). There is one proposed solar farm within 5 miles on 100 acres of Sonoran creosote bush scrub. The solar farm project is located off of Split Mountain Road south of Ocotillo Wells. It is unlikely that this project will impact any core wildlife corridors because it is located near some rural residential areas and is bordered by Split Mountain Road.

Table 11
Cumulative Impacts

APN	Project Name	Project Type	Vegetation Community (SANDAG)	Lot Acreage
253-090-06-00	Lemmon	Unknown	Urban/Developed	1
253-090-07-00	#850-03 Hoeptner Ranch	Unknown - Approved	Urban/Developed	1.7
	SD827-01 Ocotillo Wells – CNG	Cingular - Application Withdrawn		
	Cingular Wireless ZAP	Cellular site		
253-090-46-00	Sprint PCS	Cellular site	Sonoran creosote bush scrub	2.5
	Sprint PCS ZAP	Sprint Facility - Application withdrawn		

Table 11
Cumulative Impacts

APN	Project Name	Project Type	Vegetation Community (SANDAG)	Lot Acreage
253-111-02-00	GRAMCKO, MUP 71-373-01 MINORD	Minor Deviation to combine 6 MH spaces into 2 MH spaces within existing mobile home Park	Disturbed habitat/Sonoran creosote bush scrub	5 acres DH; 5 acres Sonoran creosote bush scrub
253-220-69-00	Split Mountain, MUP PV Power	26 MW Solar Farm - Open	Sonoran creosote bush scrub	100

6.4 Mitigation Measures and Design Considerations

The proposed project would avoid impacts to vegetation communities to the maximum extent practicable, as described previously, with avoidance of approximately 25% of these habitats within the on-site project area (109.3 of 440.5 acres).

Mitigation for short-term direct impacts to potential foraging and breeding habitat include MM-1 (biological monitoring), MM-2 (preparation and implementation of an SWPPP), and MM-3 (preparation of a biological monitoring report), which are described in Section 3.4.

6.5 Conclusions

The significant short-term direct impacts to potential foraging and breeding habitat will be reduced to a level that is less than significant through implementation of mitigation measures MM-1, MM-2, and MM-3, which require biological monitoring, restrictions on construction vehicle speeds, and preparation of a biological monitoring report.

There would be no permanent direct impacts or short-term or long-term significant impacts to wildlife corridors or habitat linkages as a result of the proposed project.

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7.0 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

7.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance (County of San Diego 2010a) are based on the criteria in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's Determining Significance and Report Format and Content Requirements for Biological Resources (County of San Diego 2010a).

The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

A. For lands outside of the MSCP, the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

B. The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.

E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.

F. For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).

G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).

L. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

7.2 Analysis of Project Effects

The proposed project will not result in significant impacts under the guidelines specified above for the following reasons:

7.2.1 Project Effects Relevant to Guideline 4.5.A

The project site does not support nor would it impact CSS vegetation.

7.2.2 Project Effects Relevant to Guideline 4.5.B

The proposed project would not preclude or prevent the preparation of the subregional NCCP because the area outside of the adopted MSCP is planned in accordance with the Draft East County MSCP Subarea Plan. More specifically, the project is designed in accordance with the Preliminary Conservation Objectives outlined in the ECMSCP Planning Agreement (County of San Diego 2008). These objectives and the project compliance are listed in Table 12.

Table 12
ECMSCP Planning Agreement Conservation Objectives

Conservation Objectives	Project Compliance/Applicability
Provide for the protection of species, natural communities, and ecosystems on a landscape level.	The proposed project, with mitigation, includes the protection and conservation of natural communities and special-status species.
Preserve the diversity of plant and animal communities throughout the Planning Areas.	The proposed project, with mitigation, would preserve the diversity of plant and animal communities.

Table 12
ECMSCP Planning Agreement Conservation Objectives

Conservation Objectives	Project Compliance/Applicability
Protect threatened, endangered, or other special-status plant and animal species, and minimize and mitigate the take or loss of proposed Covered Species.	The proposed project, with mitigation, minimizes and mitigates the loss of proposed Covered Species.
Identify and designate biologically sensitive habitat areas	Biological studies have been conducted for the study area and identified sensitive habitat areas.
Preserve habitat and contribute to the recovery of Covered Species	The proposed project, with mitigation, would preserve habitat for proposed Covered Species.
Reduce the need to list additional species	The proposed project provides minimization and mitigation efforts to conserve and protect species.
Set forth species-specific goals and objectives.	N/A
Set forth specific habitat-based goals and objectives expressed in terms of amount, quality, and connectivity of habitat.	N/A

7.2.3 Project Effects Relevant to Guideline 4.5.C

The proposed project does not impact any wetlands as outlined in the RPO (County of San Diego 2007). The project impacts 33~~0~~1.3 acres of Sonoran creosote bush scrub and Sonoran wash scrub. Impacts to these~~is~~ vegetation communities~~y~~ will be mitigated in accordance with the *Guidelines for Determining Significance and Report Format and Content Requirements* (County of San Diego 2010a).

7.2.4 Project Effects Relevant to Guideline 4.5.D

The project site does not support nor would it impact CSS vegetation.

7.2.5 Project Effects Relevant to Guideline 4.5.E

Regional planning efforts include the preparation of the DRECP, which encompasses a vast area of southeastern California, covering over 35,000 square miles. It is being developed by the Renewable Energy Action Team to provide for the protection and conservation of California desert ecosystems while providing streamlining of permitting for appropriate renewable energy development projects. However, it is still in the early planning phase with an uncertain time period for completion. The project site is located within the overall planning area, but the closest development focused area is located near the Salton Sea[1]. The project conforms to the goals and requirements as outlined in all applicable regional planning efforts.

As described in the Regional Context (Section 1.4.1), the project area is not located within any other planning regions.

[1] An Administrative Draft of the DRECP is expected to be ready for public review by the end of 2012.

The proposed project conforms to the goals and requirements as outlined in all applicable regional planning efforts.

7.2.6 Project Effects Relevant to Guideline 4.5.F

Since the Draft ECMSCP has not yet been adopted, the project does not analyze resources defined in the BMO.

7.2.7 Project Effects Relevant to Guideline 4.5.G

The project is not expected to preclude habitat connectivity as discussed in Section 6.2.B.

7.2.8 Project Effects Relevant to Guideline 4.5.H

Since the Draft ECMSCP has not yet been adopted, the project does not analyze resources defined in the BMO.

7.2.9 Project Effects Relevant to Guideline 4.5.I

Narrow endemic species covered by the draft ECMSCP have not yet been defined.

7.2.10 Project Effects Relevant to Guideline 4.5.J

No federally or state-listed plant or wildlife species have been observed in the project area.

7.2.11 Project Effects Relevant to Guideline 4.5.K

Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the Migratory Bird Treaty Act (MBTA) are considered a significant impact (Impact P-1). This impact will be mitigated through mitigation measure MM-8 (preconstruction surveys for nesting birds and setbacks).

7.2.12 Project Effects Relevant to Guideline 4.5.L

No golden eagles or bald eagles were observed during the 2011/2012 surveys. In addition, there is no suitable nesting habitat for these species within or near the project area; therefore, no take of golden eagle or bald eagles would occur.

7.3 Cumulative Impact Analysis

The cumulative projects will not result in impacts to local policies, ordinances, or adopted plans. All of the projects are prepared in accordance with the County of San Diego.

7.4 Mitigation Measures and Design Considerations

Construction will be phased, where appropriate, to avoid work during the bird breeding season (i.e., January/February through August). If construction activity is to commence during the breeding season, a one-time biological survey for nesting bird species must be conducted within the proposed impact area 72 hours prior to construction, as described in mitigation measure MM-8.

No other mitigation is proposed for impacts to local policies, ordinances, and plans, because the proposed project remains consistent with all relevant planning documents/plans.

7.5 Conclusions

Implementation of the proposed project does not conflict with local policies, ordinances, or plans currently established. Biological resources protected under these documents are expected to remain safeguarded given the compliance of the proposed project with the stipulations indicated in these regulations.

The significant short-term direct impacts to active nests or the young protected by the federal MBTA will be reduced to a level that is less than significant through implementation of mitigation measure MM-8, which requires preconstruction surveys for nesting birds and setbacks for active nests.

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8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

A brief summary of the proposed project impacts and mitigation is provided below. Additionally, a matrix of the significant impacts to each biological resource, proposed mitigation, level of significance after mitigation, and the County's relevant guidelines for determining significance (County of San Diego 2010a) is provided in Table 13.

Habitat Types/Vegetation Communities

Implementation of the proposed development and off-site access road improvements would result in direct impacts to 0.9 acre of developed land, 0.7 acre of disturbed habitat, ~~and~~ 33~~0~~1.~~3~~2 acres of Sonoran creosote bush scrub, and 0.1 acre Sonoran wash scrub (Table 4). Impacts to the Sonoran creosote bush scrub and Sonoran wash scrub will require 1:1 mitigation for a total of 33~~0~~1.3 acres of required mitigation based on the County of San Diego's mitigation requirements (Table 5; County of San Diego 2010a). Approximately 109.3 acres will be preserved in on-site open space; 348.3 acres will be mitigated through compensatory mitigation as described in mitigation measure MM-4 (habitat preservation) in Section 3.4.

Direct impacts to 0.66~~53~~ acre (10,702~~120~~ linear feet) jurisdictional non-wetlands waterways would occur due to implementation of the proposed project. This impact would be mitigated through MM-1~~6~~5, which requires permits from the ACOE, CDFG, and RWQCB, and those permits will include conditions to mitigate this impact.

There would be direct impacts to potential foraging and breeding habitat for wildlife species, discussed in Section 6.0, which will be mitigated through mitigation measure MM-4 (habitat preservation). No impacts to wildlife movement, or local policies, ordinances and adopted plans are anticipated to result with the implementation of the proposed project. Impacts associated with the Migratory Bird Treaty Act are discussed in both Sections 3.0 and 7.0 and are mitigated through mitigation measure MM-8 (preconstruction surveys for nesting birds and setbacks).

Sensitive Plant Species

The proposed project would result in potential short-term and long-term direct impacts to suitable habitat for suitable habitat for County List A and B special-status species, including Peirson's pincushion flower (CRPR 1B.3), Orcutt's woody aster (CRPR 1B.2), Harwood's milkvetch (CRPR 2.2), and brown turbans (CRPR 2.3), and gravel milk-vetch, a special-status plant with a CRPR of 2.2. Additionally, the proposed project would result in potential short-term and long-term indirect impacts to suitable habitat for suitable habitat for County List A and B special-status species and gravel milk-vetch (CRPR of 2.2). These direct and indirect impacts would be considered significant and will be reduced to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), MM-3 (preparation of a biological monitoring report), MM-4 (habitat preservation), MM-10 (restrictions on

operation and maintenance personnel activity), MM-11 (implementation of a Fire Protection Plan), and MM-12 (regulated weed control treatments).

Sensitive Wildlife Species

The proposed project would result in potential short-term and long-term direct impacts to individual County Group 1 and SSC species; potential short-term and long-term direct impacts to suitable habitat for County Group 1 and 2 species; and potential short-term and long-term indirect impacts to County Group 1 and 2 species and/or suitable habitat. In addition, there are potential direct and indirect impacts to nesting birds and occupied burrowing owl habitat. These direct and indirect impacts would be considered significant and will be reduced to a level below significant through implementation of mitigation measures MM-1 (biological monitoring), MM-2 (restrictions on construction vehicle speed limits), MM-3 (preparation of a biological monitoring report), MM-4 (habitat preservation), MM-5 (flat-tailed horned lizard preconstruction surveys), MM-6 (biological monitoring for flat-tailed horned lizard), MM-7 (monitor excavated areas and soil piles), MM-8 (preconstruction surveys for nesting birds and setbacks), MM-9 (preconstruction surveys for desert kit fox), MM-10 (restrictions on operation and maintenance personnel activity), MM-11 (implementation of a Fire Protection Plan), MM-12 (regulated weed control treatments), MM-13 (minimize night lighting), MM-14 (preconstruction surveys for burrowing owl).

A summary of the aforementioned significance criteria, references to their locations within this document, and the significance determination is provided in Table 13.

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.1 *The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by CDFG or USFWS.*						
3.2.2.1	Impact SP-1	Suitable Habitat for Special-Status Plants, County List A and B: • Peirson's pincushion flower (CRPR 1B.3) • Orcutt's woody aster (CRPR 1B.2) • Harwood's milkvetch (CRPR 2.2) • Brown turbans (CRPR 2.3)	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.1, B
3.2.2.1	Impact SP-2	Suitable Habitat for Special-Status Plants, County List A and B: • Peirson's pincushion flower (CRPR 1B.3) • Orcutt's woody aster (CRPR 1B.2) • Harwood's milkvetch (CRPR 2.2) • Brown turbans (CRPR 2.3))	Long-Term Direct	• MM-4 (habitat preservation)	Less than significant	4.1, B
3.2.3.1	Impact SP-3	Suitable Habitat for Gravel milk-vetch (CRPR 2.2)	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.1, C
3.2.3.1	Impact SP-4	Suitable Habitat for Gravel milk-vetch (CRPR 2.2)	Long-Term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.1, C

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
3.2.2.2	Impact W-1	Special-Status Wildlife, County Group 1 or CDFG Species of Special Concern • Red-diamond rattlesnake • Flat-tailed horned lizard • Colorado Desert fringe-toed lizard • Palm Springs pocket mouse • American badger	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report) • MM-5 (flat-tailed horned lizard preconstruction survey) • MM-6 (biological monitoring for flat-tailed horned lizard) • MM-7 (monitor excavated areas and soil piles)	Less than significant	4.1, B
3.2.2.2	Impact W-2	Special-Status Wildlife, County Group 1 or CDFG Species of Special Concern Impacts to active nests or young of nesting County Group 1 or CDFG Species of Special Concern	Short-term Direct	• MM-8 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, B
3.2.2.2	Impact W-3	Special-Status Wildlife, County Group 1 or CDFG Species of Special Concern Removal of suitable habitat of County Group 1 wildlife species including: • Burrowing owl • Turkey vulture • Loggerhead shrike • Flat-tailed horned lizard • Red-diamond rattlesnake • Colorado Desert fringe-toed lizard • California horned lark • Bendire's thrasher	Long-term Direct	• MM-4 (habitat preservation)	Less than significant	4.1, B

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
		• Le Conte's thrasher • Lucy's warbler • Palm Springs pocket mouse • American badger • Pallid bat • Mexican long-tongued bat • Greater western mastiff bat • California leaf-nosed bat • Pocketed free-tailed bat • Big free-tailed bat				
3.2.3.2	Impact W-4	Special-Status Wildlife, County Group 2 Wildlife • Colorado Valley woodrat • Desert kit fox	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report) • MM-9 (desert kit fox preconstruction survey)	Less than significant	4.1, C
3.2.3.2	Impact W-5	Special-Status Wildlife, County Group 2 Impacts to active nests or young of nesting County Group 2 species	Short-term Direct	• MM-8 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, C
3.2.3.6	Impact W-6	Special-Status Wildlife, Loss of foraging habitat for raptors	Long-term Direct	• MM-4 (habitat preservation)	Less than significant	4.1, F
3.2.8.1	Impact SP-5	Suitable Habitat for Special-Status Plants, including • County List A and B species o Peirson's pincushion flower (CRPR 1B.3) o Orcutt's woody aster (CRPR 1B.2)	Short-term Indirect	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.1, H

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
		o Harwood's milkvetch (CRPR 2.2) o Brown turbans (CRPR 2.3) • Gravel milk-vetch (CRPR 2.2)				
3.2.8.1	Impact SP-6	Suitable Habitat for Special-Status Plants, including • County List A and B species o Peirson's pincushion flower (CRPR 1B.3) o Orcutt's woody aster (CRPR 1B.2) o Harwood's milkvetch (CRPR 2.2) o Brown turbans (CRPR 2.3) • Gravel milk-vetch (CRPR 2.2)	Long-term Indirect	• MM-4 (habitat preservation) • MM-10 (restrictions on operation and maintenance personnel activity) • MM-11 (implementation of a Fire Protection Plan) • MM-12 (regulated weed control treatments)	Less than significant	4.1, H
3.2.8.2	Impact W-7	Special-Status Wildlife, County Group 1 and 2 species • Burrowing owl • Turkey vulture • Loggerhead shrike • Flat-tailed horned lizard • Red-diamond rattlesnake • Colorado Desert fringe-toed lizard • California horned lark • Bendire's thrasher • Le Conte's thrasher • Lucy's warbler • Palm Springs pocket mouse • American badger • Pallid bat • Mexican long-tongued bat	Short-term Indirect	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits and preparation and implementation of a SWPPP) • MM-3 (preparation of a biological monitoring report) • MM-5 (flat-tailed horned lizard preconstruction survey) • MM-6 (biological monitoring for flat-tailed horned lizard) • MM-7 (monitor excavated areas and soil piles) • MM-8 (preconstruction surveys for nesting birds and setbacks) • MM-13 (minimize night lighting)	Less than significant	4.1, H

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
		• Greater western mastiff bat • California leaf-nosed bat • Pocketed free-tailed bat • Big free-tailed bat				
3.2.8.2	Impact W-8	Special-Status Wildlife, County Group 1 and 2 species • Burrowing owl • Turkey vulture • Loggerhead shrike • Flat-tailed horned lizard • Red-diamond rattlesnake • Colorado Desert fringe-toed lizard • California horned lark • Bendire's thrasher • Le Conte's thrasher • Lucy's warbler • Palm Springs pocket mouse • American badger • Pallid bat • Mexican long-tongued bat • Greater western mastiff bat • California leaf-nosed bat • Pocketed free-tailed bat • Big free-tailed bat	Long-term Indirect	• MM-4 (habitat preservation) • MM-10 (restrictions on operation and maintenance personnel activity) • MM-11 (implementation of a Fire Protection Plan)	Less than significant	4.1, H
3.2.9	Impact W-9	Special-Status Wildlife, Occupied Burrowing Owl Habitat	Direct and/or Indirect	• MM-14 (preconstruction surveys for burrowing owl)	Less than significant	4.1, J

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
3.2.12	Impact W-10	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Construction-related (e.g., noise)	Short-term Indirect	• MM-8 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, L
Guideline 4.2 *The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.*						
4.2.1	Impact V-1	Special-Status Upland Vegetation Communities	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.2, A
4.2.1	Impact V-2	Special-Status Upland Vegetation Communities	Long-term Direct	• MM-4 (habitat preservation)	Less than significant	4.2, A
4.2.2	Impact V-3	Jurisdictional Waters	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (restrictions on construction vehicle speed limits) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.2, B
4.2.2	Impact V-4	Jurisdictional Waters	Long-term Direct	• MM-4 (habitat preservation) • MM-15 (federal and state permits)	Less than significant	4.2, B
4.2.2	Impact V-5	Jurisdictional Waters	Short-term Indirect	• MM-1 (biological monitoring) • MM-2 (preparation and implementation of a SWPPP) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.2, B

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
4.2.2	Impact V-6	Jurisdictional Waters	Long-term Indirect	• MM-4 (habitat preservation) • MM-10 (restrictions on operation and maintenance personnel activity) • MM-11 (implementation of a Fire Protection Plan) • MM-12 (regulated weed control treatments)	Less than significant	4.2, B
4.2.4	Impact V-7	Special-Status Upland Vegetation Communities	Short-term Indirect	• MM-1 (biological monitoring) • MM-2 (preparation and implementation of a SWPPP) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.2, D
4.2.4	Impact V-8	Special-Status Upland Vegetation Communities	Long-term Indirect	• MM-4 (habitat preservation) • MM-10 (restrictions on operation and maintenance personnel activity) • MM-11 (implementation of a Fire Protection Plan) • MM-12 (regulated weed control treatments)	Less than significant	4.2, D
Guideline 4.3 *The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*						
5.2.1	See Section 4.2.2	Jurisdictional Wetlands and Waterways	See Section 4.2.2	See Section 4.2.2	See Section 4.2.2	4.3

Table 13
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.4 *The project would interfere substantially with the movement of a native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*						
6.2.1	Impact WM-1	Foraging and Breeding Habitat	Short-term Direct	• MM-1 (biological monitoring) • MM-2 (preparation and implementation of a SWPPP) • MM-3 (preparation of a biological monitoring report)	Less than significant	4.4
Guideline 4.5 *The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.*						
7.2.11	Impact P-1	Migratory Bird Treaty Act	Short-term Direct	• MM-8 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.5

9.0 REFERENCES

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 703 et seq. Migratory Bird Treaty Act of 1918.

16 U.S.C. 1531 et seq. Endangered Species Act of 1973.

73 FR 41007–41022. Notice of 12-Month Petition Finding: "Endangered and Threatened Wildlife and Plants; 12-Month Finding on the Petition to Delist *Astragalus magdalenae* var. *peirsonii* (Peirson's milk-vetch)." July 17, 2008.

ACOE (U.S. Army Corps of Engineers). 1987. *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1).

ACOE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008.

ACOE. 2008b. Regulatory Guidance Letter No. 08-02. June 26, 2008.

ACOE. 2012. "Arid West Final Draft Ratings." *North American Digital Flora: National Wetland Plant List.* Version 2.4.0. Prepared (2009) by R.W. Lichvar and J.T. Kartesz. Hanover, New Hampshire: ACOE, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory; and Chapel Hill, North Carolina: The Biota of North America Program (BONAP). Accessed August 1, 2012. https://wetland_plants.usace.army.mil.

ACOE and EPA (U.S. Environmental Protection Agency). 2007. "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*." June 5, 2007.

Advameg, Inc. 2011. City-Data.com "Borrego Springs, California." Accessed August 1, 2011. http://www.city-data.com/city/Borrego-Springs-California.html.

AOU (American Ornithologists' Union). 1998. *Check-List of North American Birds: The Species of Birds of North America from the Arctic through Panama, including the West Indies and the Hawaiian Islands*. 7th ed., 829 pp.

AOU. 2012. "Check-List of North American Birds: List of the 2,078 Bird Species Known from the AOU Check-list Area." Accessed August 2012. http://www.aou.org/checklist/north/full.php.

Arizona Game and Fish Department. 2003. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Arizona. 7 pp.

Barrows, C., and M. F. Allen. 2009. *Identifying Habitat Corridors for Palm Springs Pocket Mouse Populations*. March 2009.

BLM (Bureau of Land Management). 2002. Environmental Assessment and Draft Plan Amendment for Western Colorado Desert Routes of Travel Designation. Environmental Assessment Number CA-670-EA2002-2. October 2002.

BLM. 2008. Eastern San Diego County Resource Management Plan and Record of Decision. October 2008. Accessed September 2012. http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/elcentro/planning/2007/fesdrmp.Par.29969.File.dat/ESDC_RMP26ROD.pdf.

Bond, S.I. 1977. "Annotated List of the Mammals of San Diego County, California." Trans. San Diego Soc. Nat. Hist. 18:229–248.

Bossard, C.C., J.M. Randall, and M.C. Hoshovsky. 2000. *Invasive Plants of California's Wildlands*. Berkeley, California: University of California Press, 360 pp.

Bowman, R.H. 1973. *Soil Survey, San Diego Area, California, Part 1*. United States Department of the Agriculture. 104 pp. + appendices.

Calflora. 2012. "Baja California bur-comb (*Pectocarya peninsularis*)." The Calflora Database. Berkeley, California: Calflora. Accessed August 2012. http://www.calflora.org/.

California Department of Parks and Recreation. 2012. "Anza-Borrego Desert SP: State Park." Accessed March 2012. http://www.parks.ca.gov/?page_id=638.

CDFG (California Department of Fish and Game). 1984. California Endangered Species Act, California Fish and Game Code 2050–2098.

CDFG. 2011a. *RareFind*, Version 4. Sacramento, California: California Natural Diversity Database. Accessed August 2011. http://www.dfg.ca.gov/ biogeodata/cnddb/mapsanddata.asp.

CDFG. 2011b. "Special Animals (898 taxa)." California Natural Diversity Database (CNDDB), Biogeographic Data Branch. January 2011. 60 pp.

CDFG. 2012a. *RareFind*, Version 4. Sacramento, California: California Natural Diversity Database. Accessed June 2012. http://www.dfg.ca.gov/ biogeodata/cnddb/mapsanddata.asp.

CDFG. 2012b. *Special Vascular Plants, Bryophytes, and Lichens List*. California Natural Diversity Database (CNDDB). January 2012. 85 pp.

CNPS (California Native Plant Society). 2011. *Inventory of Rare and Endangered Plants* Online ed. Version 8-01a. Sacramento, California: CNPS. Accessed August 3, 2011. http://www.rareplants.cnps.org/
detail/1599.html.

CNPS. 2012. *Inventory of Rare and Endangered Plants*. Online ed. Version 8-01a. Sacramento, California: CNPS. Accessed July 2012. http://www.rareplants.cnps.org/.

County of San Diego. 2007. *An Ordinance Codifying and Amending the Resource Protection Ordinance, Relating to Wetlands, Prehistoric and Historic Sites, Agricultural Operations, Enforcement, and Other Matters*. Ordinance No. 9842. March 21.

County of San Diego. 2008. Planning Agreement by and Among the County of San Diego, the California Department of Fish and Game, and the United States Fish and Wildlife Service regarding the North and East County Multiple Species Conservation Program Plans: Natural Community Conservation Program Plans and Habitat Conservation Plans. October 29, 2008.

County of San Diego. 2010a. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources*. Fourth Revision. Land Use and Environment Group, Department of Land Use and Planning, Department of Public Works. September 15, 2010.

County of San Diego. 2010b. *County of San Diego Report Format and Content Requirements: Biological Resources*. Fourth Revision. September 15, 2010.

County of San Diego. 2011. Slovick, M. "3992 11-003(MPA); Gildred Solar MPA." Letter from M. Slovick (County of San Diego) to J. Whalen (J. Whalen Associates, Inc.). February 15, 2011.

Crother, B.I. 2008. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding. 6th ed. Herpetological Circular No. 37.* Ed. J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.

Cull, R.L., and F. Hall. 2007. "Status of Burrowing Owls in Northeastern California" in *Proceedings of the California Burrowing Owl Symposium, November 2003*, edited by J.H. Barclay, K.W. Hunting, J.L. Lincer, J. Linthicum, and T.A. Roberts, pp. 42–51 Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc. Point Reyes Station, California, vii + 197 pp.

CVMC (Coachella Valley Mountains Conservancy). 2007. *Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan*. September 2007. Prepared for the Coachella Valley Association of Governments.

Emmel, T.C., and J.F. Emmel. 1973. *The Butterflies of Southern California*. Natural History Museum of Los Angeles County, Science Series 26:1–148.

England, A. S., and W. F. Laudenslayer, Jr. 1993. Bendire's Thrasher (Toxostoma bendirei), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/071.

Executive Order (EO) 13186. Responsibilities of Federal Agencies to Protect Migratory Birds. January 10, 2001.

Flat-tailed Horned Lizard Interagency Coordinating Committee. 2003. *Flat-tailed Horned Lizard Rangewide Management Strategy, 2003 Revision*. 80 pp. plus appendices.

Gervais, J.A., D.K. Rosenberg, and L.A. Comrack. 2008. "Burrowing Owl *(Athene cunicularia)" in California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*, edited by W.D. Shuford and T. Gardali, pp. 218–226. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Grinnell, J., and A.H. Miller. 1944. "The Distribution of the Birds of California." *Pacific Coast Avifauna* Number 27. Berkeley, California: Copper Ornithological Club. Reprinted in Lee Vining, California: Artemisia Press. April 1986.

Hall, E.R. 1981. *The Mammals of North America*. 2 Vol. New York, New York: John Wiley and Sons, Inc.

Holland, R.F. 1986. *Preliminary descriptions of the terrestrial natural communities of California*. Nongame-Heritage Program, California Department of Fish and Game. 156 pp.

Humple, D. 2008. "Loggerhead Shrike (Lanius ludovicianus)." In *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California,* ed. W.D. Shuford and T. Gardali, 271–277. *In Studies of Western Birds 1*. Camarillo, California: Western Field Ornithologists and Sacramento, California: California Department of Fish and Game.

Jepson Flora Project. 2012a. "Key to Families," by D.J. Keil. *Jepson eFlora.* Version 1.0. Berkeley, California: University of California. Accessed June 2012. http://ucjeps.berkeley.edu/IJM_fam_key.html.

Jepson Flora Project. 2012b. *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California*. Berkeley, California: University of California. Accessed June 2012. http://ucjeps.berkeley.edu/interchange/I_status_1+2.html.

Jones, L.C., and R. E. Lovich. 2009. *Lizards of the American Southwest*. Tucson, Arizona: Rio Nuevo Publishers.

Keeley, J.E. 1987. "Role of Fire in Seed Germination of Woody Taxa in California Chaparral." *Ecology* 68:434–442..

Kirk, D.A., and M.J. Mossman. 1998. "Turkey Vulture." *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed February 8, 2008. http://bna.birds.cornell.edu/bna/species/339.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman. 2003. *Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States*. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C: 108 pp.

Lemm, J.M. 2006. *Field Guide to Amphibians and Reptiles of the San Diego Region*. Berkley, California: University of California Press.

Long, C.A. 1972. "Taxonomic Revision of the North American Badger, *Taxidea taxus.*" *Journal of Mammalogy* 53:725–759.

Long, C.A. 1973. "*Taxidea taxus*." American Society of Mammalogists. *Mammalian Species* 26:1–4.

Lovich , J.E., and J.R. Ennen. 2011. "Wildlife Conservation and Solar Energy Development in the Desert Southwest, United States." B*ioScience* 61(12):982–992.

Malanson , G.P., and J.F. O'Leary. 1982. "Post-Fire Regeneration Strategies in California Coastal Sage Shrubs." *Oecologia* 53:355–358.

Marti, Carl D., Alan F. Poole and L. R. Bevier. 2005. "Barn Owl (T*yto alba*)." In *The Birds of North America Online,* edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed August 2012. http://bna.birds.cornell.edu/bna/species/001.

McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. *Birds of Northern California: An Annotated Field List.* 2nd ed. Berkeley, California: Golden Gate Audubon Society.

NABA (North American Butterfly Association). 2001. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from *North American Butterfly Association (NABA) Checklist & English Names of North American Butterflies*. Edited by B. Cassie, J. Glassberg, A. Swengel, and G. Tudor. 2nd ed. Morristown, New Jersey: NABA. http://www.naba.org/pubs/enames2.html.

Nafis. 2012. *A Guide to the Reptiles and Amphibians of California*. Accessed August 2012. http://www.californiaherps.com.

NatureServe. 2007. NatureServe Explorer: An Online Encyclopedia of Life. Version 6.2. Arlington, Virginia: NatureServe. Accessed October 28, 2007 http://www.natureserve.org/explorer.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* Prepared by Robert F. Holland, PhD., for the State of California, The Resources Agency, Department of Fish and Game (October 1986). March 2008.

O'Leary, J.F., D. Murphy, and P. Brussard. 1992. *The Coastal* Sage *Scrub Community Conservation Planning Region: An NCCP Special Report.* Natural Community Conservation Planning/Coastal Sage Scrub Special Report 2.

RBF Consulting. 2012a. Fire Protection Plan – Letter Report Gildred Building Co, LLC – Ocotillo Wells Solar Farm APN's: 253-390-57 & 253-390-58. Letter report prepared for County of San Diego and Ocotillo Wells Volunteer Fire Department. February 6, 2012.

RBF Consulting. 2012b. Project Description for Ocotillo Wells Solar. October 2012.

RWQCB (Regional Water Quality Control Plan). 2006. *Water Quality Control Plan. Colorado River Basin–Region 7*. Accessed August 14, 2011 at http://www.waterboards.ca.gov/coloradoriver/publications_forms/publications/docs/basinplan_2006.pdf.

SDNHM (San Diego Natural History Museum). 2012a. Data retrieved from Herbarium and Plant Atlas databases for grid squares G26–29, H26–H29, I26–I29, J26–I29, K27–29, L27–29, M27–29, N27–29 and O27–29. *San Diego County Plant Atlas Project*. Online ed. Accessed June 2012. http://www.sdplantatlas.org/publicsearch.aspx.

SDNHM (San Diego Natural History Museum). 2012b. *Butterflies of San Diego County*. Accessed April 2012. http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html#Metalmarks.

Sheppard, J.M. 1996. Le Conte's Thrasher (Toxostoma lecontei), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/230.

Shuford, W.D., and T. Gardali, eds. 2008. "California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California." In *Studies of Western Birds 1*. Camarillo, California: Western Field Ornithologists and Sacramento, California: California Department of Fish and Game.

Sierra Club and Center for Biological Diversity. 2006. Petition to List Palm Springs Pocket Mouse as a Federal Endangered Species under the ESA. May 19, 2006.

Stebbins, R.C. 2003. *Western Reptiles and Amphibians.* Peterson Field Guide, 3rd ed. New York, New York: Houghton Mifflin Company.

Taylor, I.R. 1994. *Barn Owls*. Cambridge, United Kingdom: Cambridge Univ. Press.

Turner, R.M., and D.E. Brown. 1982. "Sonoran Desert Scrub." In Biotic Communities of the American Southwest-United States and Mexico. *Desert Plants* 4 (1–4):181–221.

USDA (U.S. Department of Agriculture). 2012. "California." *State PLANTS Checklist*. Accessed June 2012. http://plants.usda.gov/dl_state.html.

USFWS (U.S. Fish and Wildlife Service). 2008. *Birds of Conservation Concern 2008*. Arlington, Virginia: USFWS, Division of Migratory Bird Management. December 2008. Accessed July 26, 2010. http://www.fws.gov/migratorybirds.

USFWS. 2011. National Wetlands Inventory website. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service. Accessed August 2011. http://www.fws.gov/wetlands/Data/Mapper.html.

USFWS. 2012. "Critical Habitat and Occurrence Data" [map]. Accessed July 2012. http://www.fws.gov/data.

Unitt, P. 2004. *San Diego County Bird Atlas*. San Diego, California: San Diego Natural History Museum.

Whalen, J. 2012. Site visit observation.

Wiedlin & Associates, Inc. 2012~~2~~3. ~~*Revised*~~ *Preliminary Hydrogeologic Assessment Ocotillo Wells Solar Project Major Pre-Application Case Number 3992 11-003 (MPA).* Prepared for J. Whalen Associates, Inc. ~~September 20, 2012~~March 19, 2013.

Wilcove, D.S., C.H. McLellan, and A.P. Dobson. 1986. Habitat fragmentation in the Temperate Zone, pp. 237-256 In *Conservation Biology: The Science of Scarcity and Diversity*. Edited by M.E. Soulé. Sunderland, Massachusetts: Sinauer Associates, Inc.

Wilcox, B., and D. Murphy. 1985. "Conservation Strategy: the Effects of Fragmentation on Extinction." *The American Naturalist* 125:879–887.

Wilson, D.E., and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, ed. 1990a. *California's Wildlife, Volume 2: Birds*. Sacramento, California: California Department of Fish and Game.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, ed. 1990b. *California's Wildlife, Volume 3: Mammals*. Sacramento, California: California Department of Fish and Game.

10.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

This report was prepared by Dudek biologist Katie Dayton, Callie Ford, and Megan Enright. As County-approved biologists, Dudek biologists Brock Ortega and Megan Enright provided review and Brock Ortega coordinated with the client and County. Graphics and GIS mapping and analyses were provided by Andrew Greis. Hannah Westwood formatted the document.

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APPENDIX A

Cumulative List of Plant Species

APPENDIX A
Cumulative List of Plant Species

VASCULAR SPECIES

DICOTS

***ASTERACEAE*—SUNFLOWER FAMILY**

Ambrosia dumosa—burrobush
Ambrosia salsola var. *pentalepis*—burrobrush
Trixis californica var. *californica*—American threefold

***BIGNONIACEAE*—BIGNONIA FAMILY**

Chilopsis linearis ssp. *arcuata*—desert willow

***BORAGINACEAE*—BORAGE FAMILY**

Tiquilia plicata—fanleaf crinklemat

***BRASSICACEAE*—MUSTARD FAMILY**

* *Brassica tournefortii*—Asian mustard

***CACTACEAE*—CACTUS FAMILY**

Cylindropuntia echinocarpa—Wiggins' cholla

***CHENOPODIACEAE*—GOOSEFOOT FAMILY**

Atriplex canescens—fourwing saltbush
Atriplex polycarpa—cattle saltbush
* *Salsola tragus*—prickly Russian thistle

***EUPHORBIACEAE*—SPURGE FAMILY**

Chamaesyce polycarpa—smallseed sandmat
Croton californicus—California croton

***FABACEAE*—LEGUME FAMILY**

Olneya tesota—desert ironwood
Prosopis glandulosa var. *torreyana*—western honey mesquite
Psorothamnus spinosus—smoketree
Senegalia greggii—catclaw acacia

***FOUQUIERIACEAE*—OCOTILLO FAMILY**

Fouquieria splendens ssp. *splendens*—ocotillo

***KRAMERIACEAE*—RHATANY FAMILY**

Krameria bicolor—white ratany

***LAMIACEAE*—MINT FAMILY**

Hyptis emoryi—desert lavender

***LOASACEAE*—LOASA FAMILY**

Petalonyx thurberi—Thurber's sandpaper plant

***MALVACEAE*—MALLOW FAMILY**

Sphaeralcea ambigua—desert globemallow

***PLANTAGINACEAE*—PLANTAIN FAMILY**

Plantago patagonica—woolly plantain

***TAMARICACEAE*—TAMARISK FAMILY**

* *Tamarix aphylla*—Athel tamarisk

* *Tamarix ramosissima*—saltcedar

***ZYGOPHYLLACEAE*—CALTROP FAMILY**

Larrea tridentata—creosote bush

MONOCOTS

***POACEAE*—GRASS FAMILY**

* *Schismus barbatus*—common Mediterranean grass

* Signifies introduced (non-native) species

APPENDIX B

Cumulative List of Wildlife Species

APPENDIX ~~A~~B
Cumulative List of Wildlife Species

BIRD

EMBERIZINES

***EMBERIZIDAE*—EMBERIZIDS**

Amphispiza bilineata—Black-throated sparrow

NEW WORLD VULTURES

***CATHARTIDAE*—CARDINALS AND ALLIES**

* *Cathartes aura*—Turkey vulture

PIGEONS AND DOVES

***COLUMBIDAE*—PIGEONS AND DOVES**

Zenaida macroura—Mourning dove

SHRIKES

***LANIIDAE*—SHRIKES**

* *Lanius ludovicianus*—Loggerhead shrike

MAMMAL

CANIDS

***CANIDAE*—WOLVES AND FOXES**

Canis latrans—Coyote

Vulpes macrotis arsipus—Desert kit fox

HARES AND RABBITS

***LEPORIDAE*—HARES & RABBITS**

Lepus californicus—Black-tailed jackrabbit

KANGAROO RATS

***HETEROMYIDAE*—POCKET MICE AND KANGAROO RATS**

Dipodomys sp.—Kangaroo rat

SQUIRRELS

***SCIURIDAE*—SQUIRRELS**

Ammospermophilus leucurus—White-tailed antelope squirrel

REPTILE

LIZARDS

***PHRYNOSOMATIDAE*—IGUANID LIZARDS**

Callisaurus draconoides—Zebra-tailed lizard

* *Phrynosoma mcallii*—Flat-tailed horned lizard

Phrynosoma platyrhinos—Desert horned lizard

Urosaurus graciosus—Long-tailed brush lizard

***IGUANIDAE*—IGUANID LIZARDS**

Dipsosaurus dorsalis—Desert iguana

***TEIIDAE*—WHIPTAIL LIZARDS**

Aspidoscelis tigris—Tiger whiptail

A. t. tigris—Coastal whiptail

SNAKES

***VIPERIDAE*—VIPERS**

Crotalus cerastes—Sidewinder

~~**Bold** *~~ indicates special-status species.

APPENDIX C

Special-Status Plant Species Documented in the Project Region but Not Observed on the Project Site

Appendix C
Special-Status Plant Species Documented in the Project Region but Not Observed on the Project Site

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Astragalus magdalenae var. *peirsonii* Peirson's milk-vetch	CE/FT/List A/ 1B.2	Desert dunes/perennial herb/December–April/ 197~~ to ~~–738 feet	No	Not Expected	This species is known to occur at elevations above that of the project site, and the vegetation on site is not suitable for this species (i.e., there are no desert dunes on site). Additionally, species is restricted to a narrow 40-mile belt, extending northwest to southeast along the western portion of the Algodones Dunes of eastern Imperial County in the Sonoran Desert (NatureServe 2011; 73 FR 41007–41022). No verified reproducing population exists in Borrego Valley (73 FR 41007–41022).
Ayenia compacta California ayenia	None/None/ List B/2.3	Mojavean desert scrub, Sonoran desert scrub; rocky/ perennial herb/March–April/ 492~~ to ~~–3,593 feet	No	Not Expected	The known occurrence closest to the project site is approximately 11 miles west of the project site (CDFG 2012a). While there is desert scrub on site, this species is known to occur at elevations above (i.e., approximately 400 feet) that of the project site. Therefore, this species is not expected to occur.
Bursera microphylla elephant tree	None/None/ List B, MSCP/2.3	Sonoran desert scrub; rocky/ perennial deciduous tree/ June–July/656~~ to ~~–2,297 feet	No	Not Expected	This easily observable, perennial species is known to occur at elevations above that of the project site. This distinctive species would have been observed during field surveys.
Calliandra eriophylla fairy-duster	None/None/ List B/2.3	Sonoran desert scrub (sandy or rocky)/perennial deciduous shrub/-January–March/394~~ to ~~– 4,921 feet	No	Not Expected	This easily observable perennial species is known to occur at elevations above that of the project site. This perennial shrub would have been observed during field surveys.

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Carlowrightia arizonica Arizona carlowrightia	None/None/ List B, MSCP/2.2	Sonoran desert scrub/ sandy, granitic alluvium/ deciduous shrub/ ~~-~~March ~~–~~May/ ~~-~~935 ~~to –~~ 1,411 feet		Not Expected	The known occurrence closest to the project site is approximately 21 miles northwest of the project site (CDFG 2012a). While there is desert scrub on site, this species is known to occur at elevations above (i.e., approximately 845 feet) that of the project site. Additionally, this species is an easily observable shrub that would have been observed during field surveys. Therefore, this species is not expected to occur.
Chamaesyce arizonica Arizona spurge	None/None/ List B/2.3	Sonoran desert scrub/ sandy/ perennial herb/ March ~~–~~ April/ 164 ~~to –~~ 984 feet		Not Expected	The known occurrence closest to the project site is approximately 18 miles northwest of the project site (SDNHM 2012a). While there is desert scrub on site, this species is known to occur at elevations slightly above that of the project site. Therefore, this species is not expected to occur.
Chamaesyce platysperma Flat-seeded spurge	None/None/ List A/1B.2	Desert dunes, Sonoran desert scrub/sandy/annual herb/ February ~~–~~ September/ 213 ~~to –~~ 328 ~~meters~~feet		Not Expected	The known occurrence closest to the project site is approximately 16 miles from the project site (CDFG 2012a). While there is desert scrub on site, this species is known to occur at elevations slightly above that of the project site. Therefore, this species is not expected to occur.
Cryptantha ganderi Gander's cryptantha	None/None/ List A/1B.1	Desert dunes, Sonoran desert scrub(sandy)/annual herb/February–May/ 525 ~~to –~~ 1,312 feet	No	Not Expected	The known occurrence closest to the project site is approximately 13 miles northwest of the project site near Borrego Springs (CDFG 2012a). While there is desert scrub on site, this species is known to occur at elevations above (i.e., approximately 435 feet) that of the project site. Therefore, this species is not expected to occur.

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Cryptantha holoptera winged cryptantha	None/None/ List D/4.3	Mojavean desert scrub, Sonoran desert scrub/ annual herb/ March–April/ 328 ~~to~~ –5,545 feet	No	Low	Project site is outside of the known elevation range of the species (i.e., approximately 235 feet). However, because the species is known to occur within the vicinity of the project site (SDNHM 2012a) and desert scrub on site, the potential for this species to occur on site is considered low (versus~~.~~ not expected).
Colubrina californica Las Animas colubrina	None/None/ List B/2.3	Mojavean desert scrub, Sonoran desert scrub/ deciduous shrub/April–June/ 32 ~~to~~ –3,281 feet		Not Expected	While the project site is within the known elevation range of the species and there is desert scrub on site, the project site is outside of the known geographic range of the species. The known occurrence closest to the project site is approximately 37 miles northeast, east of the Salton Sea in the Orocopia and Chuckwalla Mountains in Riverside County (CDFG 2012a).
Cylindropuntia x fosbergii Mason Valley cholla	None/None/ MSCP/List 3	Sonoran desert scrub/ stem succulent/March–May /279 ~~to~~ – 2,789 feet	No	Not Expected	This easily observable species is known to occur at elevations above that of the project site. Additionally, it is a conspicuous succulent that, if present on site, would have been easily observed during field surveys.
Delphinium parishii ssp. *subglobosum* Desert larkspur	None/None/ List D/4.3	Chaparral, cismontane woodland, pinyon and juniper woodland, Sonoran desert scrub/perennial herb/ March–June/1,969 ~~to~~ –5,906	No	Not Expected	This species is known to occur at elevations well above (i.e., approximately 1,900 feet) that of the project site and is not known to occur in the vicinity of the project site (SDNHM 2012a). Therefore, this species is not expected to occur on site.
Ditaxis serrata var. *californica* California ditaxis	None/None/ List C/3.2	Sonoran desert scrub/ perennial herb/March ~~-~~ – December/98 ~~to~~ –3,281 feet	No	Not Expected	While the project site is close to the known elevation~~al~~ and there is desert scrub on site, the project site is outside of the known geographic range of the species. The known occurrence closest to the project site is approximately 34 miles north of the project site at the base of the Orocopia Mountains in Riverside County (CDFG 2012a).

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Eucnide rupestris rock nettle	None/None/ List B/2.2	Sonoran desert scrub/annual herb/December–April/1,640 ~~to~~ –1,969 feet	No	Not Expected	This species is known to occur at elevations well above (i.e., approximately 1,550 feet) that of the project site. Additionally, the known occurrence closest to the site is approximately 16 miles southwest of the project site (CDFG 2012a). While there are suitable vegetation communities on site, this species is not expected to occur because the project site is outside of the known elevational and geographic range of the species.
Galium angustifolium ssp. borregoense Borrego bedstraw	None/SR/List A, MSCP/1B.3	Sonoran desert scrub/ rocky/perennial herb/ March/1,148 ~~to~~ – 4,101 feet		Not expected to occur	This species is known to occur at elevations well above (i.e., approximately 1,058 feet) that of the project site. Additionally, the known occurrence closest to the site is approximately 12 miles west of the project site (CDFG 2012a). While there are suitable vegetation communities on site, this species is not expected to occur because the project site is outside of the known elevational and geographic range of the species.
Grusonia parishii Parish's club-cholla	None/None/ None/2.2	Joshua tree "woodland," Mojavean desert scrub, Sonoran desert scrub/sandy, rocky/ perennial stem succulent/May–June (July)/984 ~~to~~ –5,000 feet	No	Not Expected	This easily observable species is known to occur at elevations above that of the project site. Additionally, it is a conspicuous succulent that, if present on site, would have been easily observed during field surveys.
Horsfordia newberryi Newberry's velvet-mallow	None/None/ List D/4.3	Sonoran desert scrub (rocky)/ perennial shrub/ February–December/10 ~~to~~ – 2,625 feet	No	Not Expected	Species known to occur within the vicinity of the project site (SDNHM 2012a). Project site is in the known elevational range of the species, and desert scrub is present on site. However, this species is a perennial shrub that, if present on site, would have been easily observed during field surveys. Therefore, this species is not expected to occur on site.

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Juncus acutus ssp. *leopoldii* southwestern spiny rush	None/None/ List D/4.2	Coastal dunes (mesic), meadows and seeps (alkaline seeps), coastal saltwater marsh/ rhizomatous herb/ May–June/10 ~~to~~ –2,953 feet	No	Not Expected	The project is within the known elevational range of the species. However, the vegetation on site is not suitable for this species (i.e., there are no coastal dunes, meadows and seeps, o~~r~~ coastal saltwater on site). Additionally, the species is easily detectable (i.e., perennial, rigid stem with stiff, sharp, sheath appendages on leaves (Jepson Flora Project 2012a) and was not observed during field surveys; therefore, not expected to occur.
Lupinus excubitus var. *medius* Mountain Springs bush lupine	None/None/ List A, MSCP/1B.3	Pinyon and juniper woodland, Sonoran desert scrub/shrub/ March–May/1,394 ~~to~~ –4,495 feet	No	Not Expected	Species is known to occur at elevations well above that of the project site. This is a shrub that is easily detected, and no *Lupinus excubitus* were observed on site during surveys (see Appendix A). Therefore, this species is not expected to occur.
Lycium parishii Parish's desert-thorn	None/None/ List B, MSCP/2.3	Coastal scrub, Sonoran desert scrub/shrub/March–April/1,001 ~~to~~ – 3,281 feet	No	Not Expected	Species is known to occur at elevations well above that of the project site. Additionally, this shrub is easily detected, and therefore~~,~~ would have been observed during field studies.
Lyrocarpa coulteri Palmer's lyrepod	None/None/ List D/4.3	Sonoran desert scrub/ gravelly or rocky/ perennial herb/December ~~-~~ –April/394 ~~to~~ – 2,608 feet	No	Low	Project site is outside of the known elevation range of the species (i.e., approximately 300 feet). However, because the species is known to occur within the vicinity of the project site (SDNHM 2012a) and desert scrub on site, the potential for this species to occur on site is considered low (versus~~.~~ not expected).
Mentzelia hirsutissima hairy stickleaf	None/None/ List B/2.3	Sonoran desert scrub; rocky/annual herb/March–May/0 ~~to~~ –2,297 feet	No	Low	The project site is not within the known geographic range of the species (SDNHM 2012a). However, because the species is known to occur within the elevational range of the species and there is desert scrub present on site, the potential for this species to occur on site is considered low (versus. not expected).

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Mirabilis tenuiloba slender-lobed four o'clock	None/None/ List D/4.3	Sonoran desert scrub/ perennial herb/(Feb)–March–May/984 to 3,593 feet	No	Low	This species is known to occur at elevations well above (i.e., approximately 895 feet) that of the project site. However, because the species is known to occur within the vicinity of the project site (SDNHM 2012a) and there is desert scrub present on site, the potential for this species to occur on site is considered low (versus not expected).
Nemacaulis denudata var. *gracilis* Slender cottonheads	None/None/ List B/2.2	Coastal dunes, desert dunes, Sonoran desert scrub/ annual herb/April–May/ -164 to 1,312 feet	No	Not Expected	The known occurrence closest to the project site is approximately 44 miles east of the project site in the Algodones Dunes in eastern Imperial County (CDFG 2012a). While there is desert scrub on site and the project site is within the elevational range of the species, this species is not expected to occur because the project site is outside of the species' known geographic range.
Opuntia wigginsii Wiggins cholla	None/None/ List C/3.3	Sonoran desert scrub(sandy)/ perennial stem succulent/ March/98 to 2,904 feet	No	Not Expected	The project site is close to the known elevational and geographic range of the species, and there is desert scrub on site. However, this easily observable succulent would have been observed, if present, during field surveys. Therefore, this species is not expected to occur.
Penstemon thurberi Thurber's beardtongue	None/None/ List D/4.2	Chaparral, Joshua tree "woodland," pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/-May–July/1,640 to 4,003 feet	No	Not Expected	This species is known to occur at elevations well above (i.e., approximately 1,550 feet) that of the project site and the project site is not within the known geographic range of the species (SDNHM 2012a). Therefore, this species is not expected to occur.

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Proboscidea althaeifolia desert unicorn-plant	None/None/List D/ 4.3	Sonoran desert scrub(sandy)/ perennial herb/-May–August (Oct)/492 ~~to~~ – 3,281	No	Low	Project site is outside of the known elevational range of the species (i.e., approximately 400 feet). However, because the species is known to occur within the vicinity of the project site (SDNHM 2012a) and there is desert scrub present on site, the potential for this species to occur on site is considered low (versus not expected).
Rhus trilobata var. *simplicifolia* single-leaved basketbrush	None/None/ List B/2.3	Chaparral, pinyon-juniper woodland-/perennial deciduous shrub/April–July/4,003 ~~to~~ – 4,495	No	Not Expected	This easily observable, perennial species is known to occur at elevations above that of the project site, and the vegetation on site is not suitable for this species (i.e., there is no chaparral or pinyon-juniper woodland on site). Additionally, this distinctive species would have been observed during field surveys.
Selaginella eremophila desert spike-moss	None/None/ List B/2.2	Chaparral, Sonoran desert scrub (gravelly or rocky)/ perennial rhizomatous herb/ (May)~~,~~ June (July)/ 656 ~~to~~ – 2,953 feet	No	Low	While known locations are relatively close to the project site (approximately 8 miles west) (~~CNDDB~~ CDFG 2012a) and there is desert scrub on site, this species has a low potential to occur on site because it is known to occur at elevations well above (i.e., approximately 565 feet) that of the project site.
Senna covesii Cove's cassia	None/None/ List B/2.2	Sonoran desert scrub (sandy), desert valley edges/perennial herb/March–June/1,001 ~~to~~ – 3,510	No	Not Expected~~.~~	While there is desert scrub on site, this species is not expected occur because it is known to occur at elevations well above ((i.e., approximately 910 feet) that of the project site, and the closest known occurrence is over 15 miles east of the project site.

Table C-1
Special-Status Plant Species with a Low Potential Not Expected to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/ County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Sidalcea neomexicana salt spring checkerbloom	None/None/None/ 2.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, Playas/alkaline, mesic/ perennial herb/March–June/49 ~~to~~ –5,020	No	Not Expected	This species is not known to occur in the Sonoran Desert (Jepson Flora Project 2012a; CDFG 2012a). The known occurrence closest to the site is in the Laguna Mountains, approximately 26 miles west of the project site (CDFG 2012a). Therefore, this species is not expected to occur on the project site.

[1] Status:

CE: Candidate for federally listed as endangered.
FT: Federally listed as threatened.
SR: State-listed as rare.
MSCP: Draft Covered Species under the ECMSCP.

CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants About Which We Need More Information—A Review List
4 (formerly List 4): Plants of Limited Distribution—A Watch List

- 0.1: Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- 0.2: Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
- 0.3: Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Table C-2
Special-Status Plant Species with a Moderate to High Potential to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Astragalus crotalariae Salton milkvetch	None/None/List D/4.3	Sonoran desert scrub(sandy or gravelly)/perennial herb/ January–April/--197 to –820 feet	No	High	Species known to occur within the vicinity of the project site (SDNHM 2012a). Project site is in the known elevational range of the species, and desert scrub is present on site. Therefore, there is a high potential for this species to occur on site.
Astragalus insularis var. *harwoodii* Harwood's milkvetch	None/None/List B, MSCP/2.2	Desert dunes, Mojavean desert scrub; sandy or gravelly/annual herb/January–May/0 to –2,329 feet	No	High	The project is within the known geopgraphic range of this species; there is a known occurrence less than 2 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub present on site. Therefore, there is a high potential for this species to occur on site.
Astragalus lentiginosus var. *borreganus* Borrego milkvetch	None/None/List D/4.3	Desert dunes, Mojavean desert scrub, Sonoran desert scrub/sandy/annual herb/ February–May/98 to –1,050 feet	No	Moderate	Species known to occur within the vicinity of the project site (SDNHM 2012a). Project site is close to the known elevational range of the species, and desert scrub is present on site. Therefore, there is a moderate potential for this species to occur on site.

Table C-2
Special-Status Plant Species with a Moderate to High Potential to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Astragalus sabulonum gravel milk-vetch	None/None/None/2.2	Desert dunes, Mojavean desert scrub, Sonoran desert scrub/ u~~U~~sually sandy, sometimes gravelly; flats, washes, and roadsides/annual/perennial herb/ February–June/-197 ~~to~~ –3,051 feet	No	High	The project is within the known geo~~p~~graphic range of this species; there is a known occurrence approximately 7 miles east of the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.
Chaenactis carphoclinia var. *peirsonii* Peirson's pincushion flower	None/None/List A/1B.3	Sonoran desert scrub (sandy), desert slopes near Santa Rosa Mountains/annual herb/March–April/10 ~~to~~ –1,640 feet	No	High	The project is within the known geo~~p~~graphic range of this species; there is a known occurrence less than 2 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species and there is desert scrub on site.
Cryptantha costata ribbed cryptantha	None/None/List D/4.3	Desert dunes, Mojavean desert scrub, Sonoran desert scrub/sandy/annual herb/ February–May/-197 ~~to~~ –1,640 feet	No	High	Species known to occur within the vicinity of the project site (SDNHM 2012a). Project site is within the known elevational range of the species, and desert scrub is present on site. Therefore, there is a high potential for this species to occur on site.

Table C-2
Special-Status Plant Species with a Moderate to High Potential to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Malperia tenuis brown turbans	None/None/List B/2.3	Sonoran desert scrub; sandy, gravelly/annual herb/March–April/49 ~~to~~ –1,099 feet	No	High	The project is within the known geo~~p~~graphic range of this species; there is a known occurrence approximately 3 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species, and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.
Pectocarya peninsularis Baja California bur-comb	None/None/List D/None	Sonoran desert scrub/washes, roadsides, clearings/annual herb/0 ~~to~~ –984 feet	No	Moderate	Species known to occur within the vicinity of the project site, less than 5 miles (SDNHM 2012a). Project site is in the known elevational range of the species and desert scrub is present on site. Therefore, there is a moderate potential for this species to occur on site.
Pilostyles thurberi Thurber's pilostyles	None/None/List D/4.3	Sonoran desert scrub/perennial herb parasitic/January/0 ~~to~~ – 1,198 feet	No	High	Species known to occur within the vicinity of the project site (SDNHM 2012a). Project site is in the known elevational range of the species, and desert scrub is present on site. Therefore, there is a high potential for this species to occur on site.

Table C-2
Special-Status Plant Species with a Moderate to High Potential to Occur On Site

Scientific Name Common Name	Sensitivity Code & Status (Federal/State/County/CRPR)[1]	Habitat Requirements/Life Form/Blooming Period/Elevational Range	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Xylorhiza orcuttii Orcutt's woody aster	None/None/List A, MSCP/1B.2	Sonoran desert scrub/perennial herb/March–April/0~~ to ~~–1,198 feet	No	High	The project is within the known geo~~p~~graphic range of this species; there is a known occurrence less than 5 miles from the project site (CDFG 2012a). Additionally, the project site is within the known elevational range of the species and there is desert scrub on site. Therefore, there is a high potential for this species to occur on site.

[1] Status:

MSCP: Draft Covered Species under the ECMSCP

CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants About Which We Need More Information—A Review List
4 (formerly List 4): Plants of Limited Distribution—A Watch List

- 0.1: Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- 0.2: Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
- 0.3: Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Bold species indicate species that were identified in the County's Pre-Application Summary Letter (County of San Diego 2011~~a~~).

APPENDIX D

Special-Status Wildlife Species Occurring or Potentially Occurring on Site

APPENDIX D1
Special-Status Wildlife Species Occurring or Potentially Occurring on Site

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis f-For Determination of Occurrence Potential
		Amphibians			
Batrachoseps major aridus Desert slender salamander	FE/ SE/ MSCP, Group 1	Known only from hidden palm canyon and ~~Gaudalupe~~Guadalupe Cr., Riverside Co., in barren, palm oasis, desert wash, and desert scrub. Occurs under limestone sheets, rocks, and talus, usually at the base of damp, shaded, north- and west-facing walls.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Anaxyrus californicus Arroyo toad	FE/ ~~CSC~~SSC/Group 1, MSCP	Stream channels for breeding (typically 3rd order); adjacent stream terraces and uplands for foraging and wintering	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Bufo punctatus Red spotted toad	None/ None/ MSCP	Rocky desert streams, oases, pools in rocky arroyos, cattle tanks, grassland, oak woodland, scrubland, river floodplains.	No	Low potential to occur.	Poor habitat resources available—not recorded in vicinity
Ensatina klauberi Large-blotched salamander	None/ ~~CSC~~SSC/ Group 1, MSCP	Oak woodland, chaparral, coastal sage scrub, coastal dunes, conifer forest	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Lithobates yavapaiensis Lowland (=Yavapai, San Sebastian and~~&~~ San Felipe) leopard frog	None/ ~~CSC~~SSC/ None	Found along the Colorado River and in streams near the Salton Sea.	No	No potential to occur.	Lack of suitable habitat but was recorded in vicinity.[2]
Rana draytonii California red-legged frog	FT/ ~~CSC~~SSC/ Group 1, MSCP	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby, or emergent vegetation associated with deep, still, or slow-moving water; uses adjacent uplands	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Rana muscosa Sierra Madre yellow-legged frog	FE / SC and CSCSSC/ Group 1, MSCP	Meadow streams, isolated pools, lake borders, rocky stream courses within ponderosa pine, montane hardwood-conifer and montane riparian habitat types	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Spea hammondi Western spadefoot	None/ CSCSSC/ Group 2, MSCP	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitat	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Taricha torosa Coast Range newt (Monterey Co. south only)	None/ CSCSSC/ Group 2, MSCP	Coastal drainages from Mendocino Co. to San Diego Co.; Llives in terrestrial habitats and will migrate over 1 kilometer (.6 mile) to breed in ponds, reservoirs and slow moving streams.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Reptiles					
Anniella pulchra pulchra Silvery legless lizard	None/ SSC/ MSCP, Group 2	Loose soils (sand, loam, humus) in coastal dune, coastal sage scrub, woodlands, and riparian habitats	No	High Low potential to occur.	Not recorded in the vicinity,[2], but suitable habitat exists on site.
Aspidoscelis hyperythra Orangethroat whiptail	None/ CSCSSC/ Group 2, MSCP	Coastal sage scrub, chaparral, grassland, juniper and oak woodland; sandy soils, washes	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Aspidoscelis tigris stejnegeri Coastal whiptail	None/ None/ Group 2	Coastal sage scrub, chaparral; sandy areas, gravelly arroyos, or washes	No	Low potential to occur. Present	Observed on site. This species is typically found in the coastal region of sSouthern California. *A. t. tigris* is the subspecies expected to occur in the project

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
					area.
Charina trivirgata Rosy boa	None/ None/ Group 2	Rocky chaparral, coastal sage scrub, oak woodlands, desert and semi-desert scrub	No	No potential to occur.	Outside this species' range. Not recorded in vicinity.[2]
Coleonyx switaki Barefoot gecko	None/ ST/ Group 2, MSCP	Rocky areas at the heads of canyons	No	No potential to occur.	Outside this species' range. Not recorded in vicinity.[2]
Coleonyx variegatus abbotti San Diego banded gecko	None/ None/ Group 1	Cismontane chaparral, coastal sage scrub, desert scrub; granite outcrops	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Diadophis punctatus similis San Diego ringneck snake	None/ None/ Group 2	Open, rocky areas in moist habitats near intermittent streams: marsh, riparian woodland, sage scrub	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Emys marmorata Western pond turtle	None/ ~~CSC~~SSC/ Group 1, MSCP	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Plestiodon skiltonianus interparietalis Coronado Island skink	None/ ~~CSC~~SSC/ Group 2, MSCP	Grassland, riparian and oak woodland; found in litter, rotting logs, under flat stones	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Gambelia copeii Cope's leopard lizard	None/ None/ MSCP	Coastal sage scrub, chaparral, oak woodland~~.~~; prefers flat areas with open space and avoids densely vegetated areas~~.~~	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Lampropeltis zonata (Pulchra) (San Diego population) San Diego mountain kingsnake	None/ CSCSSC/ Group 2, MSCP	Valley-foothill hardwood, hardwood-conifer, chaparral, coniferous forest, wet meadow	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Phrynosoma blainvillii Blaineville's horned lizard	None/ CSCSSC/ Group 2, MSCP	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest, sandy areas, washes, flood plains	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Salvadora hexalepis virgultea Coast patch-nosed snake	None/ CSCSSC/ Group 2, MSCP	Chaparral, washes, sandy flats, rocky areas	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Sauromalus obesus Chuckwalla	None/ None/ Group 2, MSCP	Rock-dwelling, sheltering in rock crevices or under rocks.; inhabits rocky flats and hillsides in the Mojave and Colorado deserts; found in creosote bush habitats.; sea level to 1,800 meters (5,906 feet).	No	Low potential to occur.	There are no rocky outcrops on the project site. Not recorded in the vicinity.[2]
Sceloporus graciosus vanderburgianuis Southern sagebrush lizard	None/ None/ Group 2	Montane chaparral, hardwood and conifer forest, juniper, coastal sage scrub	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Taricha torosa Coast Range newt (Monterey Co. south only)	None/ CSCSSC/ Group 2	Coastal drainages from Mendocino Co. to San Diego Co.; lives in terrestrial habitats and will migrate over 1 kilometer (.6 mile) to breed in ponds, reservoirs and slow moving streams.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Thamnophis hammondii Two-striped garter snake	None/ CSCSSC/ Group 1, MSCP	Marshes, meadows, sloughs, ponds, slow-moving water courses	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Thamnophis sirtalis ssp. South Coast garter snake	None/ CSCSSC/ Group 2	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Birds					
Accipiter cooperii Cooper's hawk (nesting)	None/ WL/ Group 1	Riparian and oak woodlands, montane canyons	No	NoLow potential to occur.	Lack of suitable habitat and outside of breeding range (Unitt 2004). Not recorded in vicinity.[2].
Accipiter striatus (nesting) Sharp-shinned hawk	None/ CSCSSC/ Group 1	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	Direct observation	No potential to nest on site. Low potential to occur during the winter.Observed once during winter raptor surveys in January 2012. This species has potential to	Lack of preferred habitat of oases, developed areas, and mesquite thickets (Unitt 2004); this species does not nest in San Diego County. Not recorded in vicinity[2].

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
				occur during the winter, but the project site is located outside of its nesting range.	
Aechmophorus occidentalis Western grebe	None/ None/ Group 1	Along coast in marine subtidal and estuarine waters;- uncommon to fairly common on large lakes near coast and inland at low elevations-; breed on large, marshy lakes, normally deeper than required by eared grebe-	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]-
Agelaius tricolor Tricolored blackbird (nesting colony)	None/ CSCSSC/ Group 1, MSCP	Nests near fresh water, emergent wetland with cattails or tules; forages in grasslands, woodland, agriculture	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]-
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	None/ WL/ Group 1, MSCP	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]-
Anser caerulescens Snow goose	None/ None/ Group 2	Fresh emergent wetlands, adjacent lacustrine waters, and nearby wet croplands, pastures, meadows, and grasslands-; occasionally found in saline (brackish) emergent wetlands and adjacent estuarine waters-	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]-
Anas strepera Gadwall	None/ None/ Group 2	Interior valleys, wetlands, ponds, and streams-; feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent, estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats-	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]-

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Amphispiza belli belli Bell's sage sparrow	None/ WL/ Group 1, MSCP	Coastal sage scrub and dry chaparral along coastal lowlands and inland valleys	No	No potential to occur.	Lack of suitable habitat and outside of range. Not recorded in the vicinity.[2].
Ammodramus savannarum Grasshopper sparrow (nesting)	None/ CSCSSC/ Group 1, MSCP	Restricted to native grassland	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Ardea herodias Great blue heron (nesting Colony)	None/ None/ Group 2	Variety of habitats, but primarily wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, riparian habitats	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Asio flammeus Short-eared owl (nesting)	None/ CSCSSC/ Group 2	Grassland, prairies, dunes, meadows, irrigated lands, saline and freshwater emergent wetlands	No	No potential to occur.	This species is a winter visitor to San Diego County and there are no records of this species in eastern San Diego County (Unitt 2004). Not recorded in vicinity.[2].
Asio otus Long-eared owl (nesting)	None/ SSC/ Group 1, MSCP	Riparian, live oak thickets, other dense stands of trees, edges of coniferous forest	No	No potential to nest on site. High potential to occur during winter or migration.	The project site does not provide suitable nesting habitat due to the lack of dense stands of trees. This species was recorded in the winter near the project site (Unitt

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
					2004).
Aythya Americana Redhead (nesting)	None/ CSCSSC/ Group 2	Lacustrine waters, foothills and coastal lowlands, and along the coast and Colorado river.; nests in fresh emergent wetland bordering open water.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Branta Canadensis Canada goose	None/ None/ Group 2	Lakes, fresh emergent wetlands, moist grasslands, croplands, pastures, and meadows.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Bucephala islandica Barrow's goldeneye (None)	None/ CSCSSC/ Group 2	Estuarine (lagoons and bays) and brackish lacustrine waters.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Buteo lineatus Red-shouldered hawk	None/ None/ Group 1	Riparian and woodland habitats, eucalyptus	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Buteo regalis Ferruginous hawk (Wintering)	None/ WL/ Group 1, MSCP	Open, dry country, grasslands, open fields, agriculture	No	No potential to nest on site. Low potential to forage on site.	This species is a winter visitor to San Diego County. It has not been recorded near the project (Unitt 2004) or in the vicinity.[2].

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Buteo swainsoni Swainson's hawk (nesting)	None/ ST/ Group 1, MSCP	Open grassland, shrublands, croplands	No	Low potential to nest on site. High potential to occur during migration.	Swainson's hawk no longer nests in San Diego County (Unitt 2004); however, it has migrated through the ABDSP[3] (Unitt 2004). Not recorded in the vicinity.[2].
Butorides virescens Green heron	None/ None/ Group 2	Lakes, marshes, streams	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Campylorhynchus brunneicapillus sandiegensis Coastal cactus wren (San Diego & Orange Counties Only)	None / CSCSSC/ Group 1, MSCP	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub	No	No potential to occur.	The subspecies *C.b. sandiegensis* does not occur in eastern San Diego County. *C.b. anthonyi* occurs in eastern San Diego County (Unitt 2004), but is not considered sensitive.
Cerorhinca monocerata Rhinoceros auklet (nesting Colony)	None/ WL/ Group 2	Marine pelagic waters.; nests in a burrow on undisturbed, forested or unforested islands, and probably in cliff caves	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Charadrius alexandrinus nivosus Western snowy plover (nesting)	FT, / CSCSSC/ Group 1	Nests primarily on coastal beaches, in flat open areas, with sandy or saline substrates; less commonly in salt pans, dredged spoil disposal sites, dry salt ponds, and levees	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis For Determination of Occurrence Potential
Charadrius montanus Mountain plover (Wintering)	FPT/ CSCSSC/ Group 2	Nests in open, shortgrass prairies or grasslands; winters in shortgrass plains, plowed fields, open sagebrush, and sandy deserts	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Chlidonias niger Black tern (nesting Colony)	None/ CSCSSC/ Group 2	Freshwater lakes, marshes, ponds, coastal lagoons	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Circus cyaneus Northern harrier (nesting)	None/ CSCSSC/ Group 1, MSCP	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Coccyzus americanus occidentalis Western yellow-billed cuckoo (nesting)	FC/ SE/ Group 1	Dense, wide riparian woodlands and forest with well-developed understories	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Contopus cooperi Olive-sided flycatcher (nesting)	None/ None/ Group 2	Summer resident in a wide variety of forest and woodland habitats; preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Cypseloides niger Black swift (nesting)	None/ CSCSSC/ Group 2	Nests in moist crevices or caves on sea cliffs or near waterfalls in deep canyons; forages over many habitats	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Dendrocygna bicolor Fulvous whistling-duck (nesting)	None/ CSCSSC/ Group 2	Fresh emergent wetlands, shallow lacustrine and quiet riverine waters; feeds in wet croplands and pastures; nests in dense wetlands of cattails	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Egretta rufescens Reddish egret	None/ None/ Group 2	Saltmarsh, mudflats, coastal lagoons	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Elanus leucurus White-tailed kite (nesting)	None/ P/ Group 1, MSCP	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian	No	No potential to occur.	This species is not recorded in the far eastern portion of San Diego County (Unitt 2004) and it is not recorded in vicinity.[2].
Empidonax traillii extimus Southwestern willow flycatcher (nesting)	FE/ SE/ Group 1, MSCP	Riparian woodlands along streams and rivers with mature, dense stands of willows or alders; may nest in thickets dominated by tamarisk	No	No potential to nest on site.	Lack of suitable nesting habitat or outside of range. Could use scrub during migration. Not recorded in vicinity.[2].
Synthliboramphus hypoleucus Xantus' murrelet	FC/ ST/ Group 2, ABC	At sea in daylight hours.; may light on offshore rocks and roost in cliff crevices at night.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Falco columbarius Merlin (Wintering)	None/ WL/ Group 2	Nests in open country, open coniferous forest, prairie; winters in open woodlands, grasslands, cultivated fields, marshes, estuaries and sea coasts	No	No potential to nest on site. Low potential to occur during the winter.	This species is a winter visitor to San Diego County. There is some suitable winter habitat in the open habitat on site, but this species has not been recorded

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis f~~F~~or Determination of Occurrence Potential
					close to the project area (Unitt 2004) and is not recorded in the vicinity.[2]~~,~~
Falco mexicanus Prairie falcon (nesting)	BCC/ WL/ Group 1	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	No	Low potential to nest. High potential to forage.	The project site does not provide suitable nesting habitat due to the lack of cliffs or bluffs, but they could use the project area for foraging and nest in the nearby Vallecito Mountains to the west. This species was mapped near the project site as possibly nesting (Unitt 2004) and recorded in the vicinity.[2]~~,~~
Falco peregrinus anatum American peregrine falcon (nesting)	BCC, (FD)/ SE, P/ Group 1	Nests on cliffs, buildings, bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	No	Low potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]~~,~~
Fratercula cirrhata Tufted puffin (nesting colony)	None/ ~~CSC~~SSC/ Group 2	Rocky outcroppings on islands, not necessarily near the nest, and on the ocean~~.~~; common at nesting colonies, and on nearby marine pelagic and subtidal waters~~.~~; nests on islands and, less commonly, on coastal cliffs~~.~~	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]~~,~~

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Gavia immer Common loon (nesting)	None/ CSCSSC/ Group 2	Estuarine and subtidal marine habitats along entire coast (Sept – May); uncommon on large, deep lakes in valleys and foothills; common migrant along coast, including offshore, in November and May.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Grus canadensis canadensis Lesser sandhill crane	None/ CSCSSC/ Group 2	Wet meadow, shallow lacustrine, and fresh emergent wetland habitats (summer); annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands; It prefers relatively treeless plains (winter).	No	NoLow potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Grus canadensis tabida Greater sandhill crane	None/ST, P/ None			NoLow potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Haliaeetus leucocephalus Bald eagle (nesting and Wintering)	FD/ SE, P/ Group 1	Seacoasts, rivers, swamps, large lakes; winters at large bodies of water in lowlands and mountains	No	NoLow potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Icteria virens Yellow-breasted chat (nesting)	None/ CSCSSC/ Group 1	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Ixobrychus exilis Least bittern (nesting)	None/ CSCSSC/ Group 2, MSCP	Dense emergent wetland vegetation, sometimes interspersed with woody vegetation and open water	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Junco hyemalis caniceps Gray-headed junco (nesting)	None/ WL/ Group 2	Summer resident of Clark Mountain (Eastern San Bernardino Co.) and Grape Vine Mtns. (Inyo Co.); inhabits white fir association at 7,300 feet (Clark Mtn.); also, from dense pinyons above 6,700 feet (Grapevine Mtns)	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

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Leucophaeus atricilla Laughing gull (nesting colony)	None/ WL/ Group 2	Once a regular nester at the south end of the Salton Sea.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Larus californicus California gull (nesting Colony)	None/ WL/ Group 2	Along the coast: sandy beaches, mudflats, rocky intertidal, and pelagic areas of marine and estuarine habitats, fresh and saline emergent wetlands. Inland: lacustrine, riverine, and cropland habitats, landfill dumps, and open lawns in cities. Nests in alkali and freshwater lacustrine habitats; adults roost along shorelines, landfills, pastures, and on islands.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Laterallus jamaicensis coturniculus California black rail	None/ST, P/ Group 2	Saline, brackish, and fresh emergent wetlands	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Melanerpes lewis Lewis' woodpecker (nesting)	None/ None/ Group 1	Open oak savannahs, broken deciduous, and coniferous habitats.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Mycteria americana Wood stock	None/ CSCSSC/ Group 2	Shallow, relatively warm waters with fish for prey.; nests colonially.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Numenius americanus Long-billed curlew (nesting)	None/ WL/ Group 2	Nests in upland shortgrass prairies and wet meadows in northeast California; winters in coastal estuaries, open grasslands and croplands	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

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Oceanodroma furcata Fork-tailed storm petrel (nesting colony)	None/ CSCSSC/ Group 2	Occasionally in bays and harbors, particularly after storms; tied to land only to nest; otherwise remains over open sea; nests in burrows and rock cavities.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Oceanodroma homochroa Ashy storm petrel (nesting Colony)	None/ CSCSSC/ Group 2	Open sea; nests in natural cavities and sea caves, mainly talus but also larger rock.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Oceanodroma melania Black storm-petrel (nesting colony)	None/ CSCSSC/ Group 2	Open sea; nests in burrows and rock cavities.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Oreortyx pictus eremophila Mountain quail	None/ None/ Group 2	Dense montane chaparral and brushy areas within coniferous forest, pinyon-juniper-yucca associations; uses shrubs, brush stands and trees on steep slopes for cover	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Pandion haliaetus Osprey (nesting)	None/ WL/ Group 1	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/ SE/ Group 1	Saltmarsh, pickleweed	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Passerculus sandwichensis rostratus Large-billed savannah sparrow (Wintering)	None/ CSCSSC/ Group 2	Saltmarsh, pickleweed	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

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Pelecanus erythrorhynchos American white pelican (nesting colony)	None/ CSCSSC/ Group 2	Open water, coastal bays, large inland lakes	No	No potential to nest on site.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Pelecanus occidentalis californicus California brown pelican (nesting colony & and communal roosts)	FD/ SD, P/ Group 2	Open sea, large water bodies, coastal bays and harbors	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Phalacrocorax auritus Double-crested cormorant (nesting Colony)	None/ WL/ Group 2	Lakes, rivers, reservoirs, estuaries, ocean; nests in tall trees, rock ledges on cliffs, rugged slopes	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Piranga rubra (nesting) Summer tanager	None/ CSCSSC/ Group 2	Nests in riparian woodland; winter habitats include parks and residential areas	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Plegadis chihi White-faced ibis (nesting colony)	None/ WL/ Group 1	Nests in marsh; winter foraging in shallow lacustrine waters, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields and estuaries	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Polioptila californica californica Coastal California gnatcatcher	FT/ CSCSSC/ Group 1, MSCP	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].

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Progne subis (nesting) Purple martin	None/ CSCSSC/ Group 1, MSCP	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest, and woodland	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity[2].
Pyrocephalus rubinus Vermillion flycatcher (nesting)	None/ SSC/ Group 1, MSCP	Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other open, mesic areas in isolated patches.	No	Moderate potential to occur, but low potential to nest on site.	Lack of suitable nesting habitat or outside of range. Not recorded in vicinity.[2]
Rallus longirostris levipes Light-footed clapper rail	FE / SE, P/ Group 1	Coastal saltmarsh	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Riparia riparia Bank swallow (nesting)	None/ ST/ Group 1	Nests in lowland country with soft banks or bluffs; open country and water during migration	No	Low potential to occur.	Marginal habitat present.
Rynchops niger (nesting colony) Black skimmer	BCC / CSCSSC/ Group 1	Roosting takes place on sandy beaches or gravel bars. Rarely alights on water. Visitor to coastal estuaries and river mouths.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Setophaga (Dendroica) petechia Yellow warbler (nesting)	None/ SSC/ Group 2, MSCP	Nests in lowland and foothill riparian woodlands dominated by cottonwoods, alders and willows; winters in a variety of habitats	No	No potential to nest on site. Moderate potential to occur as a migrant.	There is no suitable nesting habitat and the site is outside of its nesting range. This species has been recorded in the area as a migrant (Unitt 2004). Not recorded in the vicinity.[2]

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Siala mexicana Western bluebird	None/None/ Group 2	Open forests of deciduous, coniferous or mixed trees, savanna, edges of riparian woodland	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in the vicinity.[2].
Sternnula antillarum browni California least tern (nesting colony)	FE / SE, P/ Group 1	Nests along the coast from San Francisco Bay south to northern Baja California	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Thalasseus elegans Elegant tern (nesting colony)	BCC / WL/ Group 1	Coastal waters, estuaries, large bays and harbors, mudflats	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Strix occidentalis occidentalis California spotted owl	BCC / CSCSSC/ Group 1, MSCP	Forests and woodlands dominated by hardwoods, oak and oak-conifer woodlands, and conifers at high elevations	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Toxostoma crissale Crissal thrasher	BCC/ CSCSSC/ Group 1, MSCP	Dense thickets of shrubs or low trees in desert riparian and desert wash habitats.; also, dense sagebrush and other shrubs in washes within juniper and pinyon-juniper habitats.	No	Low potential to occur.	The project site lacks suitable habitat and is outside of the range for this species. It is recorded only in the Borrego Valley in San Diego County (Unitt 2004). Not recorded in the vicinity.[2].

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Vireo bellii pusillus Least Bell's vireo (nesting)	FE, BCC / SE/ Group 1, MSCP	Nests in southern willow scrub with dense cover within 1–2 meters (3–7 feet) of the ground; habitat includes willows, cottonwoods, baccharis, wild blackberry or mesquite on desert areas	No	No potential to nest on site.	Suitable habitat is limited due to sparse vegetation in the washes that could be used during migration, but not suitable for nesting. Recorded in the vicinity.[2]
Vireo vicinior Gray vireo (nesting)	BCC / SSC/ Group 1, MSCP	Summer resident in arid pinyon-juniper, juniper, and chamise-redshank chaparral habitats	No	No potential to breed on site; moderate potential to occur in the winter.	Lack of suitable habitat in the project site. Not recorded in vicinity,[2] but has been recorded in the winter south of the project site in the ABDSP[3] (Unitt 2004).
Xanthocephalus xanthocephalus (nesting) Yellow-headed blackbird	None/ CSCSSC, MSCP	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along the borders of lakes or ponds.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Mammals					
Bassariscus astutus Ringtail	None/ P/ Group 2, MSCP	Mixed forests and shrublands near rocky areas or riparian habitats.	No	Low No potential to occur.	There is no suitable dense forest or shrubland on site. Not recorded in the vicinity.[2]

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Chaetodipus californicus femoralis Dulzura (California) pocket mouse	None/ CSCSSC/ Group 2	Coastal sage scrub, chaparral, riparian-scrub ecotone; more mesic areas	No	Low potential to occur.	There is some suitable habitat on site and the site near the eastern border of this species' range; however, this species typically occurs closer to the eastern side of the mountains and not in the valleys. Not recorded in the vicinity.[2].
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	None/ CSCSSC/ Group 2	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse chaparral; rocky substrates, loams and sandy loams	No	No potential to occur.	Outside of this species' range. Not recorded in the vicinity.[2].
Chaetodipus fallax pallidus Pallid San Diego pocket mouse	None/ CSCSSC/ Group 2	Coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	No	Low potential to occur.	There is some suitable habitat on site and the site near the eastern border of this species' range; however, this species typically occurs closer to the eastern side of the mountains and not in the valleys. Not recorded in the vicinity.[2].

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Corynorhinus townsendii Townsend's big-eared bat	None/ CSCSSC/ Group 2, MSCP	Primarily roosts in caves and mines, but also abandoned buildings.; forages in mesic habitats, gleaning insects from brush or trees or feeds along habitat edges.	No	No potential to roost on site. Low potential to forage on site.	Limited suitable foraging habitat on site. However, there are no caves, mines, and or buildings suitable for roosting. Recorded in the vicinity.[2].
Dipodomys merriami collinus Earthquake Merriam's kangaroo rat	None/ None/ MSCP	Riversidean alluvial fan sage scrub, flood plains, sandy and sandy loam soils	No	No potential to occur.	Outside of this species' range. Not recorded in the vicinity.[2].
Dipodomys merriami trinidadensis Merriam's kangaroo rat	None/ None/ MSCP	Occurs in the Jacumba and Mountain Springs area	No	No potential to occur.	The project site is outside of this species' range. Not recorded in vicinity.[2].
Dipodomys stephensi Stephens' kangaroo rat	FE/ ST/ Group 1, MSCP	Open habitat, grassland, sparse coastal sage scrub, sandy loam and loamy soils with low clay content; gentle slopes (<30%)	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Euderma maculatum Spotted bat	None/ CSCSSC/ Group 2	Roosts in rock crevices on cliffs and sometimes caves and buildings.; forages in riparian forest, woodland, and scrub, ponds, lakes, grasslands.	No	No potential to roost on site. Low potential to forage on site.	Suitable foraging habitat on site. However, there are no, cliffs, crevices, caves, or buildings suitable for roosting. Not recorded in the vicinity.[2].

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Lasiurus blossevillii Western red bat	None/ None/ Group 2	Prefers edges with trees for roosting and open areas for foraging. Roosts in woodlands and forests. Forages over grasslands, shrublands, woodlands, forests, and croplands.	No	No potential to roost on site. Low potential to forage on site.	Suitable foraging habitat on site. However, there are no trees with foliage suitable for roosting on site. Not recorded in the vicinity.[2]
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/ ~~CSC~~SSC/ Group 2, MSCP	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands	No	Low potential to occur.	Black-tailed jackrabbit was observed on site, but is expected to be *L. c. deserticola* based on the range. *L. c. bennettii* is known to occur in the coastal regions with marginal records as far east as Jacumba (Hall 1981), which is located approximately 100 miles southeast of the project area.

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Myotis ciliolabrum Western Small-footed myotis	None/ None/ Group 2	Roosts in caves, old mines, abandoned buildings.; forages in arid wooded and brushy uplands near water.	No	No potential to roost on site. Low potential to forage on site.	Suitable foraging habitat on site. However, there are no caves, mines, and or buildings suitable for roosting. Not recorded in the vicinity.[2].
Myotis thysanodes Fringed myotis	None/ None/ Group 2	Maternity colonies in caves, mines, buildings, or crevices.; forages over open habitats, early successional stages, streams, lakes, and ponds.	No	No potential to roost on site. Low potential to forage on site.	A lack of suitable foraging habitat on site. There are no caves, mines, buildings, or crevices suitable for roosting. Not recorded in the vicinity.[2].
Myotis volans Long-legged myotis	None/ None/ Group 2	Roosts in buildings, crevices, under bark, and snags.; forages over open water and over open habitats, using denser woodlands and forests for cover and reproduction.	No	No potential to roost on site. Low potential to forage on site.	A lack of suitable foraging habitat on site. There are no buildings, crevices, snags, bark, or caves suitable for roosting. Not recorded in the vicinity.[2].

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Myotis yumanensis Yuma myotis	None/ None/ Group 2	Roosts in buildings, mines, caves, or crevices. Closely tied to open water, which is used for foraging; open forests and woodlands are optimal habitat	No	No potential to roost on site. Low potential to forage on site.	A lack of suitable foraging habitat on site. There are no buildings, mines, caves, or crevices suitable for roosting. Not recorded in the vicinity.[2]
Neotoma lepida intermedia San Diego desert woodrat	None/ CSCSSC/ Group 2	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	No	Low potential to occur.	The project area is located outside of its known range (Hall 1981). Not recorded in the vicinity.[2]
Onychomys torridus Ramona Southern grasshopper mouse	None/ CSCSSC/ Group 2, MSCP	Grassland, sparse coastal sage scrub	No	Low potential to occur.	Some suitable habitat occurs on site; recorded in the vicinity.
Ovis canadensis nelsoni DPS Peninsular bighorn sheep	FE/ ST, P/ Group 1, MSCP	Alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian.	No	Low potential to occur.	Not recorded in the vicinity.[2]
Perognathus longimembris brevinasus Los Angeles pocket mouse	None/ CSCSSC/ Group 2, MSCP	Grassland, coastal sage scrub, disturbed habitats; fine, sandy soils	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

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Perognathus longimembris internationalis Jacumba pocket mouse	None/ CSCSSC/ Group 2, MSCP	Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush.	No	Low potential to occur.	Outside of this species' range. Not recorded in the vicinity.[2]
Perognathus longimembris pacificus Pacific pocket mouse	FE/ CSCSSC/ Group 1	Grassland, coastal sage scrub with sandy soils; along immediate coast	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Spermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	None/ CSCSSC/ MSCP	Desert succulent shrub, desert wash, desert scrub, alkali desert scrub, and levees in cropland habitat.; also found in urban habitat.; found from -60 to 900 meters (-180 to 2900 feet) elevation.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Invertebrates					
Apodemia mormo peninsularis Peninsular metalmark	None/ None/ Group 1	Various arid lands.; host plant: various wild buckwheats (*Eriogonum*)	No	Low potential to occur.	No *Eriogonum* was observed during reconnaissance surveys. Not recorded in the vicinity.[2]
Ariolimax columbianus stramineas Palomar banana slug	None/ None/ Group 2, MSCP	Coastal California south and west of Salinas Valley from Monterey Peninsula to at least Ventura County, Santa Cruz Island, and Santa Rosa Island	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Branchinecta sandiegonensis San Diego fairy shrimp	FE/ None/ Group 1	Small, shallow vernal pools, occasionally ditches and road ruts	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

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Brennania belkini Belkin's dune tabanid fly	None/ None/ Group 2	Coastal sand dunes of Sothern California.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Callophyrs (=Mitoura) thornei Thorne's hairstreak butterfly	None/ None/ Group 1	Tecate cypress	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Cicindela gabbii western tidal-flat tiger beetle	None/ None/ Group 2	Estuaries and mudflats; generally on dark-colored mud; occasional on dry saline flats of estuaries.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Cicindela hirticollis gravida Sandy beach tiger beetle	None/ None/ Group 2	Sandy areas adjacent to non-brackish water along California coast; found in dry sand in upper zone	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity[2].
Cicindela latesignata latesignata western beach tiger beetle	None/ None/ Group 2	Mudflats and beaches in coastal Southern California.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Cicindela latesignata obliviosa Oblivious tiger beetle	None/ None/ Group 2	Inhabited the Southern California coastline, from La Jolla north to the Orange Co. line.; occupied mudflats in the lower zone.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Cicindela senilis frosti Senile Tiger beetle	None/ None/ Group 2	Salt marshes	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]

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Cicindela trifasciata sigmoidia Mudflat tiger beetle	None/ None/ Group 2	Has been identified along the fringe of a mudflat and low marsh habitat (www.fws.gov/sandiegorefuges/new/ccp/ final/Volume%20I/Volume%20I%20Chapter%203.pdf).	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Coelus globosus Globose dune beetle	None/ None/ Group 1	Coastal dunes	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Danaus plexippus Monarch butterfly (wintering sites)	None/ None/ Group 2	Overwinters in eucalyptus groves	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Euphydryas editha quino Quino checkerspot butterfly	FE/None/Group 1, MSCP	Sparsely vegetated hilltops, ridgelines, occasionally rocky outcrops; host plant *Plantago erecta* and nectar plants must be present.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Euphyes vestris harbisoni dun skipper	None/ None/ Group 1, MSCP	Restricted to wetland, riparian, oak woodlands, and chaparral habitats supporting host plan *Carex spissa*	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Helminthoglypta coelata Mesa shoulderband	None/ None/ Group 2	Coastal San Diego County: found in rock slides, beneath bark, and among coastal vegetation.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Helminthoglypta traski coelata Peninsular Range shoulderband snail	None/None/ MSCP	Wet habitats	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in the vicinity.[2]
Linderiella occidentalis	None/ None/	Seasonal pools in unplowed grasslands with old alluvial soils	No	No potential	Lack of suitable

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
California linderiella	Group 1	underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and TDS.		to occur.	habitat or outside of range. Not recorded in vicinity.[2].
Lycaena hermes Hermes copper butterfly	None/ None/ Group 1, MSCP	Coastal sage scrub, southern mixed chaparral supporting at least 5% cover of host plant *Rhamnus crocea*	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Megathymus yuccae harbisoni Coastal giant skipper	None/ None/ Group 2	Coastal dunes, open yucca flats, desert canyons, open woodland, grassland, and old fields.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Panoquina errans Wandering (= saltmarsh) skipper	None/None/ Group 1	Salt marsh from Los Angeles to Baja, Mexico	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Papilio multicauldata Two-tailed swallowtail	None/ None/ Group 1	Foothill slopes and canyons, moist valleys, streamsides, woodlands, parks, roadsides, suburbs, and cities	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Phobetus robinsoni Robinson's rain beetle	None/ None/ Group 2		No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Plebejus saepiolis Hilda Hilda blue	None/ None/ Group 1	Bogs, roadsides, stream edges, open fields, meadows, open forests	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Pseudocopaeodes eunus eunus	None/ None/ Group 1, MSCP	Alkali river bottoms of Kern River, near Bakersfeield, Kern Co. Host plant grass: *Distichilis spicata* var-. *stricta*.	No	No potential to occur.	Lack of suitable habitat or outside of

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
Alkali skipper					rangeNo host plants (*Distichilis spicata*) for this species were observed on site. Not recorded in vicinity.[2]
Pyrgus ruralis lagunae Laguna Mountains skipper	FE/ None/ Group 1, MSCP	Only in a few open meadows in yellow pine forest between 5,000 and 6,000 feet in the vicinity of Mt. Laguna and Palomar Mtn. Eggs laid on leaves of *Horkelia bolanderi clevelandii*. Larvae feed on leaves and overwinter on the host plant.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Streptocephalus woottoni Riverside fairy shrimp	FE/ None/ Group 1	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Trigonoscuta blaisdelli Blaisdell trigonoscuta weevil	None/ None/ Group 2	(for trigonoscuta sp.) Restricted to one dune in the Los Medanos area, south of Kettleman Station in Kings Co. Found on an open slip-face covering about 200 square meters (2,153 square feet) of a modified, vegetated relict dune.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Tryonia imitator Mimic tryonia, (=California brackishwater snail)	None/ None/ Group 2	Coastal lagoons, estuaries and salt marshes	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Fish					
Cyprinodon macularius Desert pupfish	FE/ SE/ Group 2	Desert ponds, springs, marshes, and streams in Southern California. Can live in salinities from fresh water to 68 ppt., ; can withstand temperatures from 9ºC –-45º-C and DO levels down to 0.1 ppm.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2]
Eucyclogobius newberryi Tidewater goby	FE/ CSCSSC/ Group 1	Low-salinity waters in coastal wetlands	No	No potential to occur.	Lack of suitable habitat or outside of

Table D-1
Special-Status Wildlife Species Not Expected to Occur or Low Potential to Occur

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/-Requirements	Verified on Site (direct/ indirect evidence)	Potential to Occur on Site	Factual Basis fFor Determination of Occurrence Potential
					range. Not recorded in vicinity.[2].
Gasterosteus aculeatus williamsoni Unarmored threespine stickleback	FE, FS/ SE, P/ Group 2	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (<24º C), clear water with abundant vegetation.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Gila orcutti Arroyo chub	None/ CSCSSC/ Group 1	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths > 40 centimeters; substrates of sand or mud	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].
Oncorhynchus mykiss irideus southern steelhead – Southern California DPS (Rainbow trout)	FE/ CSCSSC/ Group 1	(for ssp. *irideus*) Fed listing refers to pops. from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.); southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	No	No potential to occur.	Lack of suitable habitat or outside of range. Not recorded in vicinity.[2].

NOTE: Species in boldface were included in the County's *Comprehensive List of Sensitive Species* (County 2011).

1 The federal and state status of species primarily is based on the Special Animals List (January 2011) (CDFG 2011).

2 Vicinity" refers to species observed in the USGS 7.5-minute Borrego Spring SE (CDFG 2012a).

3 ABDSP = Anza-Borrego Desert State Park

Federal Designations (August 2012):
- BCC Fish and Wildlife Service: Birds of Conservation Concern
- (FD) Federally delisted; monitored for 5 years.
- FE Federally listed as Endangered.
- FT Federally listed as Threatened.

State Designations (August 2012):
- SSC California Species of Special Concern
- P California Department of Fish and Game Protected and Fully Protected Species
- (SD) State-delisted.
- SE State-listed as Endangered.
- ST State-listed as Threatened.
- WL California Department of Fish and Game Watch List

County Designations:
- MSCP Proposed for Coverage under the Draft East County MSCP

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Reptiles					
Crotalus ruber Red-diamond rattlesnake	None/ SSC/ Group 2, MSCP	Variety of shrub habitats where there is heavy brush, large rocks, or boulders	No	Moderate potential to occur.	Suitable habitat on site and at eastern edge of range. Not recorded in vicinity.[2]
Phrynosoma mcallii Flat-tailed horned lizard	None/ SSC/ Group 1, MSCP	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.	Direct observation	Present	This species was observed on site during focused reptile surveys.
Uma notata Colorado Desert fringe-toed lizard	None/ SSC/ Group 1, MSCP	Fine, loose, wind-blown sand dunes, dry lakebeds, sandy beaches or riverbanks, desert washes, and sparse desert scrub	No	Moderate potential to occur.	This species is not recorded in vicinity.[2] There is suitable habitat on site, and it is within this species' range; however, this species was not observed during the focused reptile surveys in June 2012.

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Birds					
Aquila chrysaetos Golden eagle (nesting and wintering)	None/ WL, P/ Group 1, MSCP	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest	No	No potential to nest on site. Moderate potential to forage.	This species has limited distribution in the eastern portion of the County, and there are no records near the project site (Unitt 2004). Not recorded in the vicinity.[2]
Athene cunicularia Burrowing owl (Burrow Sites and some Wintering sites)	None/SSC/ Group 1, MSCP	Grassland, lowland scrub, agriculture, coastal dunes, and other artificial open areas	Direct observation	Present	This species was observed on site. It is also known to occur in the vicinity[2] and has been observed nearby as a migrant or winter visitor (Unitt 2004).
Cathartes aura Turkey vulture	None/ None/ Group 1, MSCP	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting	Direct observation	Observed foraging over the project area. No potential to nest or roost on site.	This species uses a variety of habitats and was observed foraging over the project area. Not recorded in the vicinity,[2] but does occur in the area (Unitt 2004).

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Eremophila alpestris actia California horned lark	None/ SSC/ Group 2, MSCP	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields	No	High potential to occur.	The project site lacks grassland, but could provide nesting habitat near small shrubs or clumps of grass. Not recorded in the vicinity,[2] but has been documented as probably breeding in low numbers in the area (Unitt 2004).
Lanius ludovicianus Loggerhead shrike (nesting)	None/ SSC/ Group 1, MSCP	Open ground including grassland, coastal sage scrub, broken chaparral, agriculture, riparian, open woodland	Direct observation	Present.	This species was observed on site during 2010 and 2012 surveys.
Toxostoma bendirei Bendire's thrasher	BCC / SSC/ Group 2	Flat areas of desert succulent shrub and Joshua tree habitats.	No	Low potential to breed; moderate potential to occur during the winter or migration.	This species is rare in California. It has been observed in small numbers during migration and winter (Unitt 2004); there is one record of breeding in San Diego County near Ocotillo Wells from the 1990s (Unitt 2004). There is some suitable habitat on site. It is not recorded in the vicinity.[2]

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Toxostoma lecontei Le Conte's thrasher	BCC / SSC/ Group 2, MSCP	Open desert wash, creosote scrub, alkali desert scrub, desert succulent scrub	No	High potential to occur.	There is suitable habitat in the Sonoran desert scrub and Sonoran creosote bush scrub on site. Known to occur in the vicinity[2] and has been observed nearby as a migrant or winter visitor (Unitt 2004). Occurs primarily in ABDSP.[3]
Oreothlypis luciae (nesting) Lucy's warbler	None/ SSC/ Group 1, MSCP	Mesquite thickets, riparian scrub, and even stands of tamarisk in lower Colorado River Valley and washes and arroyos that empty into it	No	Moderate potential to occur.	Suitable habitat is limited due to sparse vegetation in the washes, but there are a few palo verde trees on site. Not recorded in the vicinity.[2]
Tyto alba Common barn owl	None/ None/ Group 2	Open habitats including grassland, chaparral, riparian, and other wetlands.	No	Low potential to nest on site. Moderate potential to forage.	There are very limited trees suitable for roosting or nesting on site. There is suitable foraging habitat. Not recorded in the vicinity.[2]

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Mammals					
Antrozous pallidus Pallid bat	None/ SSC/ Group 2, MSCP	Roosts in rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Forages in grasslands, shrublands, woodlands, and forests.	No	No potential to roost on site. Moderate potential to forage on site.	Suitable foraging habitat on site. However, there are no rocky outcrops, cliffs, or crevices suitable for roosting. Recorded in the vicinity.[2]
Choeronycteris mexicana Mexican long-tongued bat	None/ SSC/ Group 2	Roosts in caves, mines, and buildings. Forages in desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland.	No	No potential to roost on site. Moderate potential to forage on site.	Suitable foraging habitat on site. However, there are no caves, mines, or buildings suitable for roosting. Not recorded in the vicinity.[2]
Eumops perotis californicus western mastiff bat	None/ SSC/ Group 2, MSCP	Roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, as well as in trees and tunnels. Forages in chaparral, coastal scrub, grasslands, floodplains, oak woodland, ponderosa pine forest, dry desert wash, meadow areas, and agriculture.	No	No potential to roost on site. Moderate potential to forage on site.	Suitable foraging habitat on site. However, there are no rocky cliffs, crevices, trees or tunnels suitable for roosting. Recorded in the vicinity.[2]

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Macrotus californicus California leaf-nosed bat	None/ SSC/ Group 2	Primarily roosts in caves and mines, but also abandoned buildings. Forages in desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis.	No	No potential to roost on site. High potential to forage on site.	Suitable foraging habitat on site. However, there are no caves, mines, or buildings suitable for roosting. Not recorded in the vicinity.[2]
Myotis evotis Long-eared myotis	None/ None/ Group 2	Roosts in buildings, crevices, under bark, and snags. Caves used as night roosts. Forages along habitat edges, in open habitats, and over water.	No	No potential to roost on site. Moderate potential to forage on site.	Suitable foraging habitat on site. However, there are no buildings, crevices, snags, bark, or caves suitable for roosting. Not recorded in the vicinity.[2]
Neotoma albigula venusta Colorado Valley woodrat	None/ SA/None	Desert scrub with cacti or mesquite, with or without rocky outcrops. Feeds on cacti, mesquite, and yucca.	No	Moderate potential to occur.	Suitable habitat on site and recorded in the vicinity.[2]
Nyctinomops femorosaccus Pocketed free-tailed bat	None/ SSC/ Group 2	Roosts in rock crevices on cliffs. Forages in pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis.	No	No potential to roost on site. High potential to forage on site.	Suitable foraging habitat on site. However, there are cliffs and crevices suitable for roosting. Recorded in the vicinity.[2]

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Nyctinomops macrotis Big free-tailed bat	None/ SSC/ Group 2	Roosts in crevices in high cliffs or rock outcrops, buildings, caves, and occasionally in holes in trees. Forages over rocky terrain and often water.	No	No potential to roost on site. Moderate potential to forage on site.	Suitable foraging habitat on site. However, there are no high cliffs or rock outcrops, buildings, caves, and/or large trees suitable for roosting. Not recorded in the vicinity.[2]
Odocoileus hemionus Mule deer	None/ None/ Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open areas adjacent to cover	No	High potential to occur.	This species is widespread and occurs in a variety of habitats, including those on site. Not recorded in the vicinity.[2]
Perognathus longimembris bangsi Palm Springs pocket mouse	None/ SSC/ MSCP	Desert riparian, desert scrub, desert wash, and sagebrush. Most common in creosote-dominated desert scrub; rarely on rocky sites.	No	Moderate potential to occur.	The project site is near this species' range and there is some suitable habitat on site. Not recorded in vicinity.[2]

Table D-2
Special-Status Wildlife Species Observed or Moderate to High Potential to Occur

Scientific Name/ Common Name[A1]	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Verified on Site (direct/ indirect evidence)	Potential to occur on site	Factual Basis for Determination of Occurrence Potential
Puma concolor Mountain lion	None/ None/ Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; rests in rocky areas, and on cliffs and ledges that provide cover	No	Moderate potential to occur.	Not recorded in the vicinity.[2]
Taxidea taxus American badger	None/ SSC/ Group 2, MSCP	Dry, open treeless areas, grasslands, coastal sage scrub	No	High potential to occur.	There is some suitable habitat on site. Not recorded in the vicinity.[2]
Vulpes macrotis arsipus Desert kit fox	None/None/None	Open desert scrub and creosote habitats and sand dunes where they build dens and den "colonies." They are primarily nocturnal animals.	Direct observation	Present	An active kit fox burrow was detected, and scat was observed in numerous locations.

NOTE: Species in boldface were included in the County's *Comprehensive List of Sensitive Species* (County of San Diego 2011).

1 The federal and state status of species primarily is based on the Special Animals List (January 2011) (CDFG 2011).

2" Vicinity" refers to species observed in the USGS 7.5-minute Borrego Spring SE (CDFG 2012a).

3 ABDSP = Anza-Borrego Desert State Park

Federal Designations (August 2012):

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FE Federally listed as Endangered.
FT Federally listed as Threatened.

State Designations (August 2012):

SSC California Species of Special Concern
P California Department of Fish and Game Protected and Fully Protected Species
(SD) State-delisted.
SE State-listed as Endangered.
ST State-listed as Threatened.
WL California Department of Fish and Game Watch List

APPENDIX E

Memo – Off-Site Mitigation for Ocotillo Wells Solar

DUDEK

MAIN OFFICE
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MEMORANDUM

To: Rich Geisler, J. Whalen Associates, Inc.

From: Callie Ford, Dudek

Subject: Evaluation of Off-Site Mitigation Parcels for the Ocotillo Wells Solar Project

Date: ~~April 15~~September 18, 2013

Attachment(s): Figures 1–5

This memorandum (memo) provides an overview of the two off-site mitigation options proposed to mitigate for impacts associated with the Ocotillo Wells Solar Project ("proposed project"). The purpose of this memo is to provide an evaluation of the proposed off-site mitigation options, and includes a comparison of the elevation, soils, and vegetation communities, as well as an assessment of the potential to occur for the special-status plant and wildlife species associated with the proposed project.

To meet the mitigation requirements provided in the County of San Diego's *Guidelines for Determining Significance and Report Format and Content Requirements* (County of San Diego 2010), the proposed project must provide 1:1 mitigation for impacts to approximately 331.2 acres of Sonoran creosote bush scrub and 0.1 acre of Sonoran wash scrub. On site, 109.3 acres will be conserved as open space, which leaves a deficit of 221 acres that must be provided in off-site open space.

The project applicant proposed two mitigation options in order to meet their mitigation requirements (Figures 1 and 2). Option 1 includes the conservation of an applicant-owned property located adjacent to the project site in Imperial County (APNs 018-170-021, 018-170-033, and 018-170-034) (Figure 3). The property is approximately 241.9 acres which exceeds the mitigation requirement. Option 2 includes the conservation of two properties: one parcel is owned by the applicant (APN 201-150-06) and is located northwest of the project site in San Diego County; it is approximately 36 acres. As part of Option 2, the project applicant has also secured additional parcels (APNs 200-140-05, 200-140-07, and a portion of 200-140-08) in San Diego County to serve as off-site mitigation for this project if necessary. These parcels total approximately 203 acres and are located off of Yaqui Pass in Borrego Springs. The project applicant is "optioning" these parcels and currently has a 2-year agreement with the option to buy the property.

METHODS

To determine whether the off-site mitigation areas would provide commensurate biological function and value for each significantly impacted biological resource, an evaluation of the biological resources for each site were compared and a determination was made about whether the off-site mitigation options have potential to support special-status species.

The elevation, soils, and vegetation communities were compared for the proposed project site and for both of the off-site mitigation options.

Soils were determined from the Natural Resource Conservation Service (USDA 2012). Vegetation communities were determined through project-specific mapping for the proposed project (Dudek 2012), the Imperial County property, and the Ranch at Yaqui Pass – Viking Ranch Project (Dudek 2008); where project-specific mapping was unavailable, the County-wide vegetation mapping for the Multiple Species Conservation Program was used (SANDAG 1995). In addition, the following sources were reviewed:

- U.S. Fish and Wildlife Service (USFWS) Critical Habitat and Occurrence Data (USFWS 2012)
- California Department of Fish and Game (CDFG) (2012) Natural Diversity Database occurrence data
- U.S. Geological Survey (USGS) National Hydrographic Data (USGS 2012).

The special-status species that were observed at the proposed project site or that were determined to have moderate or high potential to occur[1] were compared to the biological resources on each of the mitigation sites. Species that were observed during wildlife surveys for the Ranch at Yaqui Pass – Viking Ranch Project (Dudek, unpublished data) are also listed and used to determine potential to occur.

RESULTS

The elevation, soils, and vegetation communities compared for the proposed project site and both of the off-site mitigation options are provided in Table 1 (Figures 3–5).

[1] These species are listed in Tables C-2 and D-2 in the *Biological Resources Report* (Dudek 2012).

Table 1
Comparison of Biological Resources

Site Characteristics	Ocotillo Wells Solar Project Site	Option 1	Option 2	
		Off-Site Mitigation (Imperial County)	*Off-Site Mitigation 1 (San Diego)*	*Off-Site Mitigation 2 (Yaqui Pass)*
Site Information	221 acres of required off-site mitigation of Sonoran creosote bush scrub	APNs 018-170-021, 018-170-033, and 018-170-034 (241.9 acres)	APN 201-150-06 (36 acres)	APNs 200-140-05, 200-140-07, and a portion of 200-140-08 (203 acres)
Elevation Range	50–90 feet above mean sea level (amsl)	25–76 feet amsl	580–610 feet amsl	500–870 feet amsl
Soils	• Sloping gullied land • Rositas fine sand, 0%–2% slopes • Rositas fine sand, hummocky, 5% to 9% slopes	• Sloping gullied land • Rositas fine sand, 0%–2% slopes • Indio silt loam saline, 0%–2% slopes • Mecca coarse sandy loam, 0%–2% slopes	• Sloping gullied land • Rositas loamy coarse sand, 2% to 9% slopes	• Sloping gullied land • Carrizo very gravelly sand, 0% to 9% slopes
Vegetation Communities	• Sonoran creosote bush scrub[1] • Sonoran wash scrub[1] • Developed[1] • Disturbed Habitat	• Sonoran creosote bush scrub[1] • Desert saltbush scrub[1] • Unvegetated playa[1]	• Sonoran mixed woody scrub[2]	• Sonoran creosote bush scrub[1]

[1] Project-specific vegetation mapping
[2] 1995 MSCP vegetation mapping (SANDAG 1995)

Table 2 includes the evaluation for special-status plant and wildlife species for the proposed project site and the potential for those species to occur in the proposed mitigation options properties.

Table 2
Potential to Occur for Special-Status Plant and Wildlife Species

	Special-Status Species	Status (Federal/State/ County/CRPR[1])	Potential to Occur on Ocotillo Wells Solar Site[2]	Option 1	Option 2	
				Off-Site Mitigation (Imperial County)	*Off-Site Mitigation 1 (San Diego)*	*Off-Site Mitigation 2 (Yaqui Pass)*
Plants						
County List A or B	*Astragalus insularis* var. *harwoodii* Harwood's milkvetch	None/None/ List B, MSCP/2.2	High	High	Moderate; suitable habitat and soils, but slightly outside of elevation range	Moderate; suitable habitat and soils, but slightly outside of elevation range
	Chaenactis carphoclinia var. *peirsonii*	None/None/ List A/1B.3	High	High	High	Moderate

Table 2
Potential to Occur for Special-Status Plant and Wildlife Species

	Special-Status Species	Status (Federal/State/ County/CRPR[1])	Potential to Occur on Ocotillo Wells Solar Site[2]	Option 1	Option 2	
				Off-Site Mitigation (Imperial County)	*Off-Site Mitigation 1 (San Diego)*	*Off-Site Mitigation 2 (Yaqui Pass)*
	Peirson's pincushion flower					
	Malperia tenuis brown turbans	None/None/ List B/2.3	High	High	High	Moderate
	Xylorhiza orcuttii Orcutt's woody aster	None/None/ List A, MSCP/ 1B.2	High	High	High	Moderate
County List C or D, Other	*Astragalus crotalariae* Salton milkvetch	None/None/ List D/4.3	High	High	High	Moderate
	Astragalus lentiginosus var. *borreganus* Borrego milkvetch	None/None/ List D/4.3	Moderate	Moderate	High	Moderate
	Astragalus sabulonum gravel milk-vetch	None/None/ None/2.2	High	High	High	High
	Cryptantha costata ribbed cryptantha	None/None/ List D/4.3	High	High	High	Moderate
	Pectocarya peninsularis Baja California bur-comb	None/None/ List D/None	Moderate	Moderate	Moderate-High	Moderate-High
	Pilostyles thurberi Thurber's pilostyles	None/None/ List D/4.3	High	High	High	Moderate
Wildlife						
County Group 1	*Phrynosoma mcallii* Flat-tailed horned lizard	None/SSC/ Group 1, MSCP	Observed	High	High	Moderate. Fine sand habitat limited on site and not detected during 2007 surveys, but within range and habitat for species.
	Uma notata Colorado Desert fringe-toed lizard	None/SSC/ Group 1, MSCP	Moderate	Moderate	High	Low. Fine sand habitat limited on site and not detected during 2007 surveys.
	Aquila chrysaetos Golden eagle (nesting and wintering)	None/WL, P/ Group 1, MSCP	Moderate (forage only)	Moderate (forage only)	High potential to forage; no potential to nest	Moderate potential to forage; no potential to nest
	Athene cunicularia Burrowing owl (Burrow Sites and some Wintering sites)	None/SSC/ Group 1, MSCP	Observed	High	Moderate	Observed
	Cathartes aura Turkey vulture	None/ None/ Group 1, MSCP	Observed (flyover); no potential to	High (forage); no potential to nest	High potential to forage; no potential to roost	Observed

Table 2
Potential to Occur for Special-Status Plant and Wildlife Species

	Special-Status Species	Status (Federal/State/ County/CRPR[1])	Potential to Occur on Ocotillo Wells Solar Site[2]	Option 1	Option 2	
				Off-Site Mitigation (Imperial County)	*Off-Site Mitigation 1 (San Diego)*	*Off-Site Mitigation 2 (Yaqui Pass)*
			nest			
	Lanius ludovicianus Loggerhead shrike (nesting)	None/ SSC/ Group 1, MSCP	Observed	High	High	Observed
	Oreothlypis luciae Lucy's warbler (nesting)	None/SSC/ Group 1, MSCP	Moderate	Moderate	Low	Low to Moderate
County Group 2, Other	*Crotalus ruber* Red-diamond rattlesnake	None/ SSC/ Group 2, MSCP	Moderate	Moderate	Moderate	CNDDB record near site (CDFG 2012a)
	Eremophila alpestris actia California horned lark	None/SSC/ Group 2, MSCP	High	High	High	Moderate
	Toxostoma bendirei Bendire's thrasher	BCC, USBC/ SSC/ Group 2	Moderate (winter/migration only)	Moderate (winter/migration only)	Moderate (winter/migration only)	Low (winter/migration only)
	Toxostoma lecontei Le Conte's thrasher	BCC, USBC/ SSC/ Group 2, MSCP	High	High	High	High
	Tyto alba Common barn owl	None/ None/ Group 2	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)	High (forage only)
	Antrozous pallidus Pallid bat	None/SSC/ Group 2, MSCP	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)	High (forage only)
	Choeronycteris mexicana Mexican long-tongued bat	None/SSC/ Group 2	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)	High (forage only)
	Eumops perotis californicus western mastiff bat	None/ SSC/ Group 2, MSCP	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)	High (forage only)
	Macrotus californicus California leaf-nosed bat	None/ SSC/ Group 2	High (forage only)	High (forage only)	High (forage only)	Moderate (forage only)
	Myotis evotis Long-eared myotis	None/ None/ Group 2	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)
	Neotoma albigula venusta Colorado Valley woodrat	None/SA/None	Moderate	Moderate	Moderate	Moderate
	Nyctinomops femorosaccus Pocketed free-tailed bat	None/SSC/ Group 2	High (forage only)	High (forage only)	High (forage only)	Moderate (forage only)
	Nyctinomops macrotis Big free-tailed bat	None/SSC/ Group 2	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)	Moderate (forage only)
	Odocoileus hemionus	None/None/	High	High	High	High

Table 2
Potential to Occur for Special-Status Plant and Wildlife Species

	Special-Status Species	Status (Federal/State/ County/CRPR[1])	Potential to Occur on Ocotillo Wells Solar Site[2]	Option 1	Option 2	
				Off-Site Mitigation (Imperial County)	*Off-Site Mitigation 1 (San Diego)*	*Off-Site Mitigation 2 (Yaqui Pass)*
	Mule deer	Group 2				
	Perognathus longimembris bangsi Palm Springs pocket mouse	None/SSC/ MSCP	Moderate	Moderate	Moderate to High	Observed
	Puma concolor Mountain lion	None/None/ Group 2	Moderate	Moderate	Moderate to High	High. Mountain lion scat detected during surveys.
	Taxidea taxus American badger	None/SSC/ Group 2, MSCP	High	High	High	Moderate (not detected during 2007 surveys)
	Vulpes macrotis arsipus Desert kit fox	None/None/ None	Observed	High	High	Moderate (not detected during 2007 surveys)

[1] The CRPR (California Rare Plant Rank) applies to plants only.
[2] This is based on Table C-2 (for plants) and Table D-2 for wildlife in the Ocotillo Wells Biological Resources Report (Dudek 2012).

Legend
MSCP: Draft Covered Species under the East County MSCP
P: California Department of Fish and Game Protected and Fully Protected Species
SA: California Department of Fish and Game Special Animals List
SSC: California Species of Special Concern

DISCUSSION

Mitigation Option 1

The mitigation Option 1 parcel is located adjacent to the proposed project site and is similar in topography (including elevation), soils, vegetation, jurisdictional features, and overall habitat suitability compared to the proposed project site (Figure 3). The land use of the proposed mitigation site is similar to the proposed project site, and is surrounded by undeveloped land with very limited access. There are no topographic barriers between the two parcels. The vegetation communities and land covers mapped on the proposed mitigation parcel are slightly more diverse than the proposed project site and include Sonoran creosote scrub bush, desert saltbush scrub, and unvegetated playa. These communities and land covers support similar plant and wildlife species as the proposed project site.

Because the mitigation parcel is so similar to the proposed project site, the mitigation site has the same potential to support the special-status plant and wildlife species that have been observed or have moderate or high potential to occur on the proposed project site.

Mitigation Option 2

The proposed project site is located approximately 12.5 miles southeast of mitigation parcel 1 (APN 201-150-06) and 16 miles southeast of mitigation parcel 2 (APNs 200-140-05, 200-140-07, and a portion of 200-140-08) (Figures 1 and 2). The off-site mitigation parcels are located near the community of Borrego Springs, California, which is located at a higher elevation than the proposed project site. There are no topographic barriers between the proposed project site and proposed mitigation parcels (i.e., mountains), and all of the parcels support relatively similar biological resources. Mitigation parcel 1 is surrounded by undeveloped land and is located near the base of some slopes and washes. Mitigation parcel 2 is surrounded by undeveloped land to the west and south, and residential communities to the north and east.

Mitigation parcel 1 is mapped as Sonoran mixed woody shrub (SANDAG 1995); this vegetation community is described by Oberbauer (Oberbauer et al. 2008) with characteristic species including creosote (*Larrea tridentata*), white bur-sage (*Ambrosia dumosa*), ocotillo (*Fouquieria splendens*), cholla (*Cylindropuntia* spp.), brittlebush (*Encelia farinosa*), and littleleaf ratany (*Krameria erecta*). It is differentiated from Sonoran creosote bush scrub by supporting more woody or succulent plants; however, Sonoran creosote bush scrub supports nearly the same variety of plant species. Mitigation parcel 2 is mapped as Sonoran creosote bush scrub and supports similar species as the proposed project site. Both of the off-site mitigation parcels have similar soils and vegetation communities compared to the proposed project site. The terrain at all of the sites is relatively flat with sparse shrubs and ephemeral stream channels in portions of the areas.

The majority of the plants have the same potential to occur in the off-site mitigation parcels when compared to the proposed project site, except Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*), which is found at a slightly lower elevation range than these off-site parcels.

Similarly, the majority of the wildlife species have the same potential to occur in the off-site mitigation parcels when compared to the project site. Four of the special-status species observed or determined to have potential to occur at the proposed project site were observed within or near mitigation parcel 2, including burrowing owl, loggerhead shrike, red-diamond rattlesnake, and Palm Springs pocket mouse.

Summary

Based on this evaluation, both of the proposed mitigation options are adequate to provide commensurate biological function and value for each significantly impacted biological resource as a result of the proposed project. However, Option 1 is the preferred mitigation option based on its proximity to the proposed project site; nearly equal similarity in overall topography, soils, vegetation, and location; high potential to support the same plant and wildlife species as the proposed project site; and because it is already owned by the applicant.

REFERENCES

CDFG (California Department of Fish and Game). 2012. *RareFind*. Version 3.1.0. California Natural Diversity Database (CNDDB). Accessed September 2012.

County of San Diego. 2010. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources*. Fourth Revision. Land Use and Environment Group, Department of Land Use and Planning, Department of Public Works. September 15, 2010.

Dudek. 2008. *Existing Conditions Biological Resources Report for The Ranch at Yaqui Pass – Viking Ranch Project*.

Dudek. 2012. *Second Draft Biological Resources Report for the Ocotillo Wells Solar Project*. Prepared for J. Whalen Associates, Inc. and the County of San Diego Department of Planning and Land Use. September 2012.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* Prepared by Robert F. Holland, PhD. for the State of California, The Resources Agency, Department of Fish and Game (October 1986). March 2008.

SANDAG (San Diego Association of Governments). 1995. GIS Layer.

USDA (U.S. Department of Agriculture). 2012. "Hydric Rating by Map Unit—Anza-Borrego Area, California, and San Diego County Area, California." National Resource Conservation Service. *Web Soil Survey*. Accessed August-September 2012. http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm.

USGS (U.S. Geological Survey). 2012. National Hydrography Dataset. Department of the Interior, U.S. Geological Survey. Accessed September 2012.

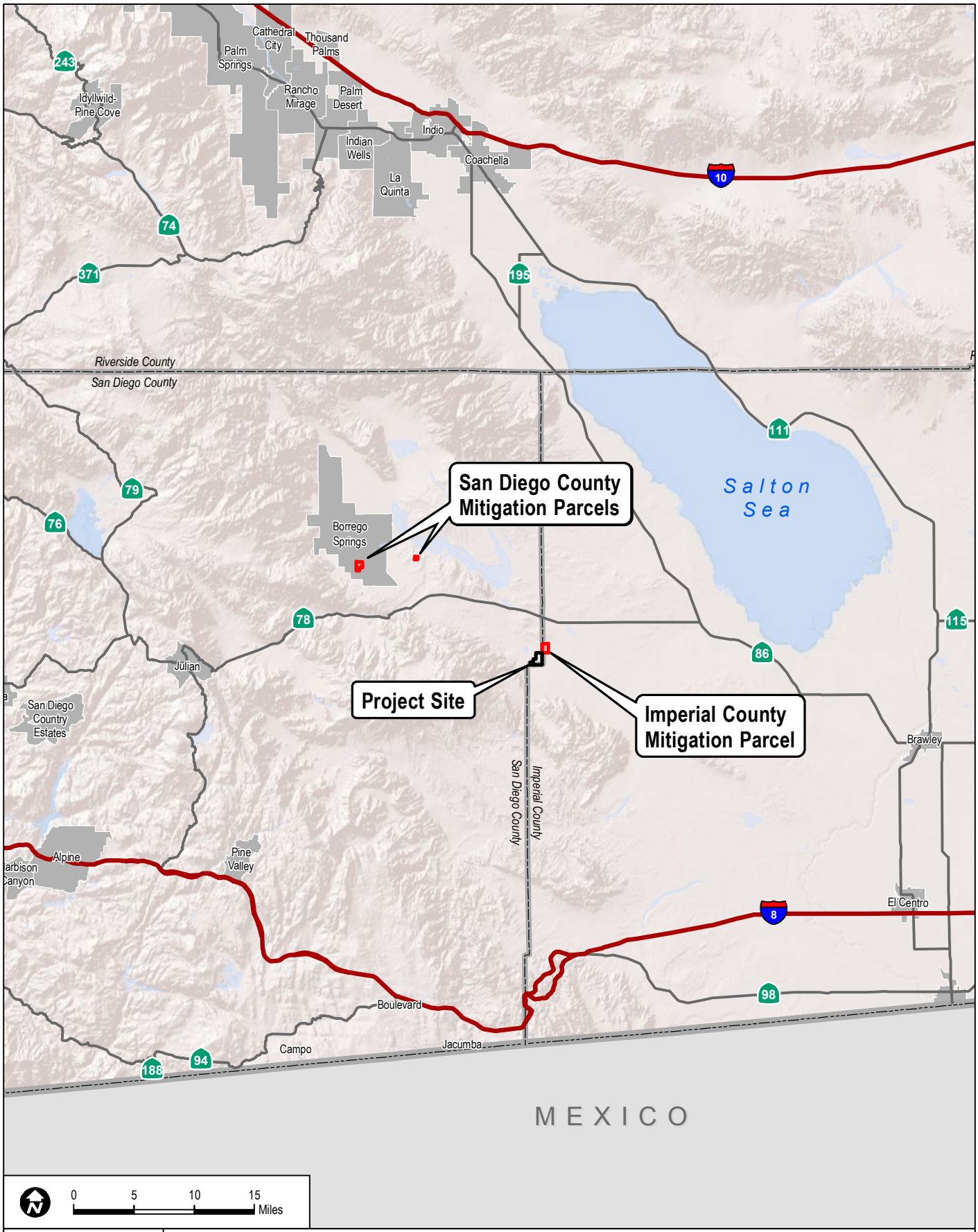

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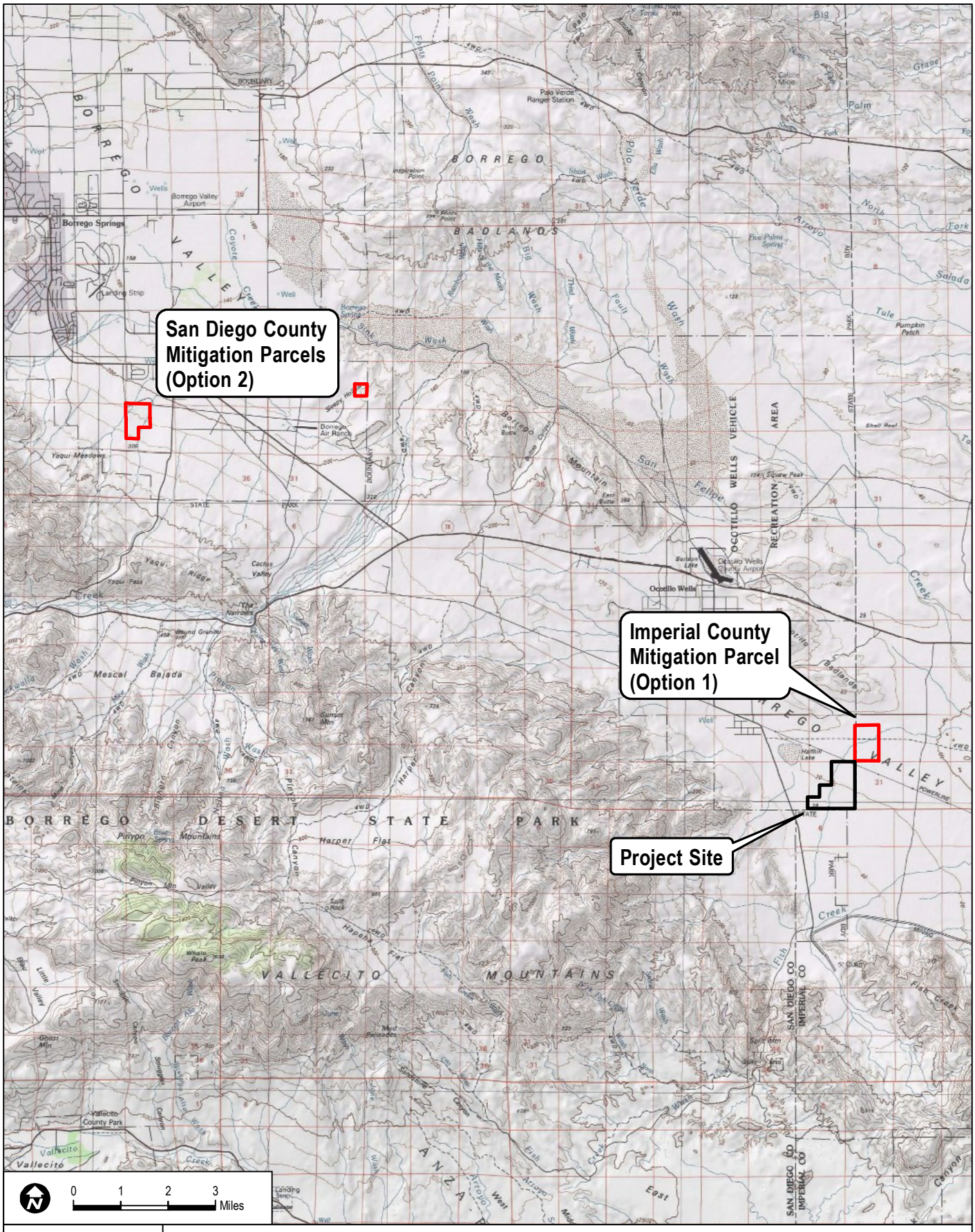
FIGURE 1

Regional Map

MEMORANDUM FOR THE OFF-SITE MITIGATION PARCELS FOR THE OCOTILLO WELLS SOLAR PROJECT



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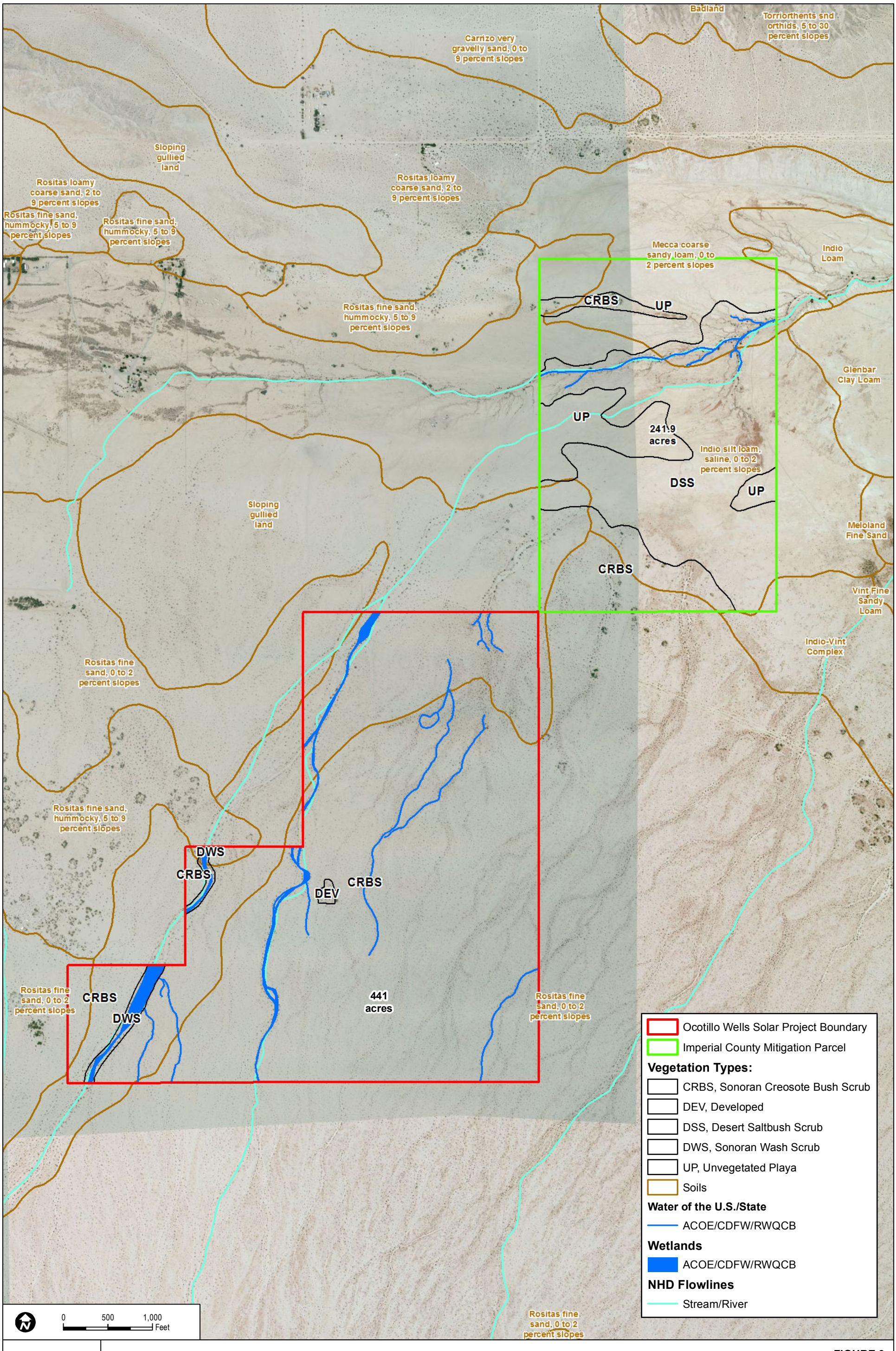
SOURCE: USGS 7.5-Minute Series Borrego Mt., Borrego Mtn. SE, Borrego Sink, Harper Canyon, Shell Reed and Whale Park Quadrangles.

FIGURE 2
Vicinity Map

MEMORANDUM FOR THE OFF-SITE MITIGATION PARCELS FOR THE OCOTILLO WELLS SOLAR PROJECT



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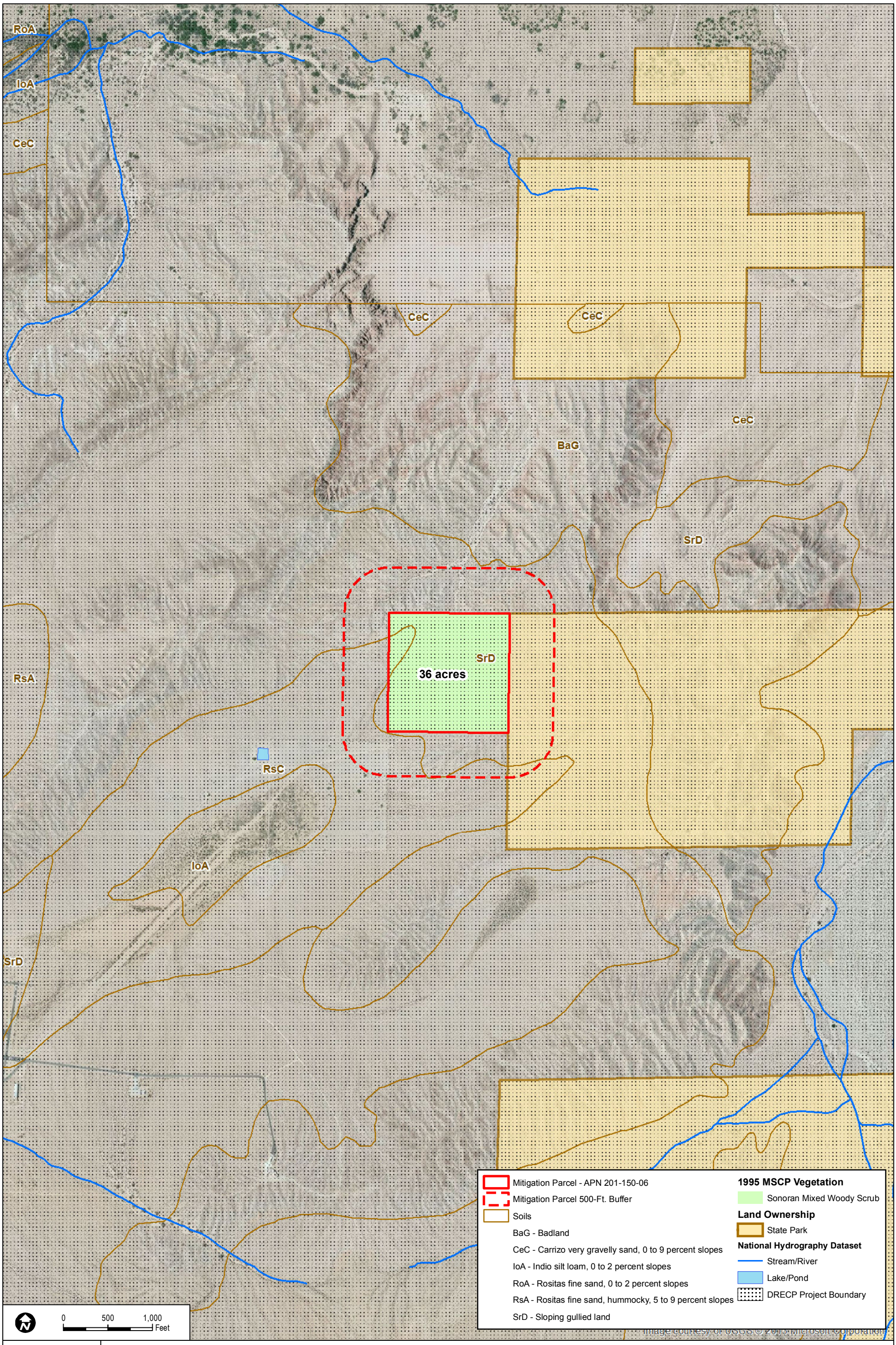
SOURCE: CDFW; NRCS; USGS: Imperial County 2012; Bing Maps

FIGURE 3

Option 1: Off-Site Mitigation Parcel - APNs 018-170-021, 018-170-033, and 018-170-034

MEMORANDUM FOR THE OFF-SITE MITIGATION PARCELS FOR THE OCOTILLO WELLS SOLAR PROJECT



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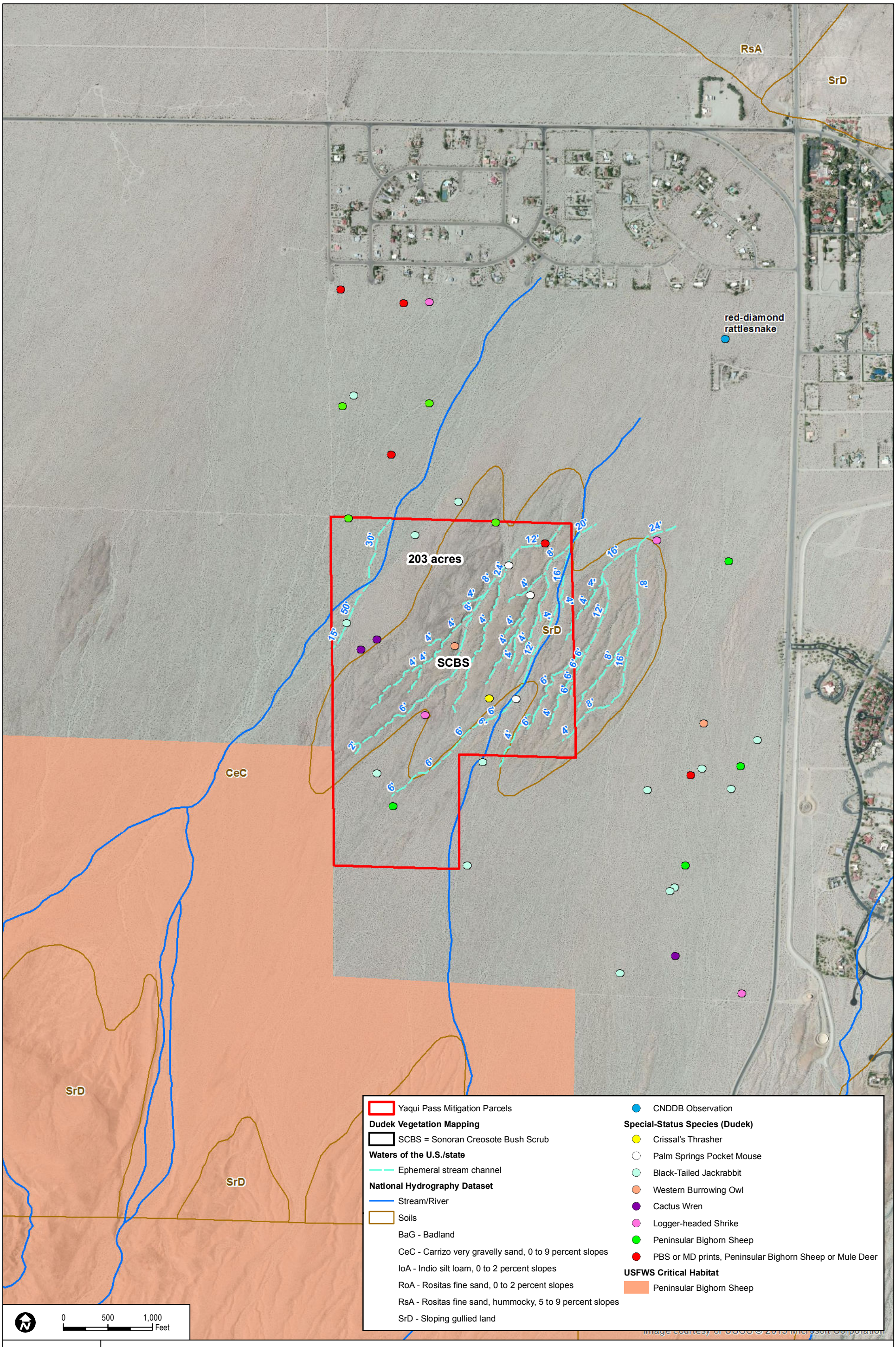
SOURCE: USGS; SanGIS 2012; SANDAG 1995; Bing Maps

FIGURE 4

Option 2: Off-Site Mitigation Parcel - APN 201-150-06



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SOURCE: CDFG/CNDDB 2012; USFWS; USGS; SanGIS 2012; SANDAG 1995; Bing Maps

FIGURE 5

Option 2: Mitigation Pacel - APNs 200-140-05, 200-140-07, and a portion of 200-140-08

MEMORANDUM FOR THE OFF-SITE MITIGATION PARCELS FOR THE OCOTILLO WELLS SOLAR PROJECT