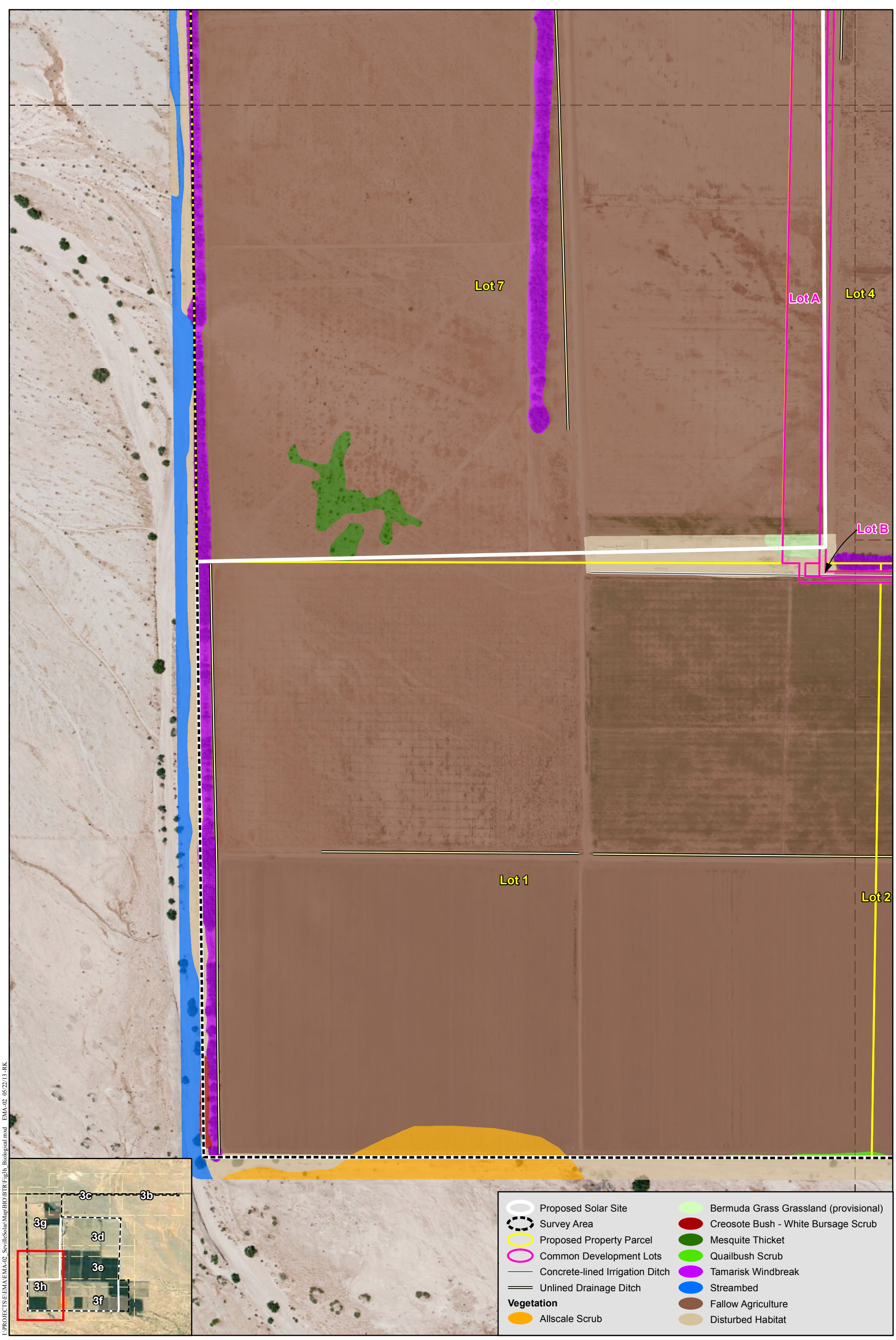

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Biological Resources/Land Cover Types

SEVILLE SOLAR PROJECT

HELIX Environmental Planning

Figure 3h

3.1.7 Quailbush Scrub

Quail saltbush (*Atriplex lentiformis*) is the dominant species in this community.

3.1.8 Mesquite Thicket

Honey mesquite (*Prosopis glandulosa* var. *torreyana*) is dominant in the tree canopy of this vegetation community. Quail saltbush, mistletoe (*Phoradendron* sp.), and apricot mallow (*Sphaeralcea ambigua*) are also present.

3.1.9 Bulrush Marsh

Alkali bulrush (*Bolboschoenus maritimus* ssp. *paludosus*) is the dominant plant in this community that occurs in the reservoir in the southeastern portion of the proposed solar site. During the general biological survey, the reservoir was dry, and over 90 percent of the bulrushes appeared to be dead or dormant. Vigorous growth of this vegetation in the study area is dependent upon artificial hydrology, which is no longer present because agricultural operations have been suspended and the reservoir remains dry except for natural rainfall.

3.1.10 Desert Saltbush Scrub

Desert saltbush scrub consists of usually low, grayish, microphyllous shrubs, up to 1 meter tall, with some succulent species. Stands are typically dominated by various species of saltbush, including shad scale (*Atriplex canescens*), quail brush (*Atriplex lentiformes*), and allscale (*Atriplex polycarpa*), with total cover often low and much bare ground between the widely spaced shrubs. This vegetation community is found in fine-textured, poorly drained soils with high alkalinity and/or salinity, usually surrounding playas on slightly higher ground. Desert saltbush scrub is widely scattered on margins of dry lake bed in the Mojave and Sonoran deserts. The dominant species in this vegetation community within the study area is allscale, although patches of quail brush and shad scale are also present.

3.1.11 Tamarisk Thickets

Tamarisk thicket is a monotypic stand of saltcedar (*Tamarix ramosissima*), an invasive, non-native tree species that is known to invade desert wetland and riparian habitats.

3.1.12 Tamarisk Windbreak

Tamarisk windbreak is present as narrow bands of athel (*Tamarix aphylla*). This species was intentionally planted to create windbreaks.

3.1.13 Bermuda Grass Grassland

Bermuda grass is a non-native, invasive species that thrives in warm, moist conditions. It often grows in open areas where there are frequent disturbances such as grazing, flooding, and fire. In Imperial County, it is often grown for migratory waterfowl forage.

3.1.14 Naturalized Mediterranean Grassland

Naturalized Mediterranean grassland supports non-native species such as Mediterranean canary grass (*Phalaris minor*) and knotweed (*Polygonum* sp.), the former of which is dominant in the community. Naturalized Mediterranean grassland occurs in the southeastern corner of the survey area.

3.1.15 Upland Mustards

The upland mustards community is dominated by Saharan mustard, a highly invasive, non-native species.

3.1.16 Farmed Land

Farmed land supports an agricultural crop (sorghum; *Sorghum* sp.) that was planted to attract wildlife for the landowner to hunt. Farmed land occurs in the southeastern portion of the proposed solar site.

3.1.17 Fallow Agriculture

Fallow agriculture consists of areas that are not presently being farmed but still retain a corrugated surface from furrows graded into it during active agricultural operations. Fallow agriculture supports a very small amount of non-native plant species.

3.1.18 Disturbed Habitat

Disturbed habitat consists of unpaved roads and fallow agricultural areas that support a preponderance of non-native Russian thistle (*Salsola tragus*), are un-furrowed fallow agricultural land, or are unvegetated.

3.1.19 Streambed

A streambed is a river or stream that flows through a bed or channel. Streambed occurs in several places along the proposed transmission line along the existing IID distribution line: at the northwest corner of the survey area, and just off-site along the western boundary of the survey area.

3.1.20 Basin

Two unlined basins occur in the southeastern portion of the proposed solar site. This western basin receives runoff via unlined drainage ditches from the surrounding agricultural lands. Tamarisk thickets were present in the basin. This basin overflows to the east, into a shallower basin that supports Bermuda grass grassland and mesquite thickets. The basins present comprise approximately 4.5 acres; however, impacts to basins are not reported in the tables below because impacts to these areas are reported as the underlying vegetation type.

3.1.21 Reservoir

A reservoir occurs in the southeastern portion of the proposed solar site. This reservoir is part of the well water based irrigation system. Tamarisk thickets and bulrush marsh were present in the basin; however, the marsh vegetation appeared to be mostly senescent or dead. This marsh vegetation is dependent upon artificial hydrology. This habitat is no longer considered viable because the agricultural operation and associated artificial hydrology that sustained it in the past have been suspended. The reservoir amounts to approximately 3.1 acres; however, it is not reported in the tables below because its area is reported as the underlying vegetation type.

3.1.22 Unlined Drainage Ditch

Unlined drainage ditch is an earthen-bottomed channel created to convey excess irrigation water from farmed land. The full extent of drainage ditches on site may have been more extensive when active agriculture was more widespread on site. It appears that there has been no water in these ditches for an extended period of time. The size of these ditches varies, but is typically 6 feet wide. The ditch that drains into the unlined basin, however, is 10 feet wide.

3.1.23 Concrete-lined Irrigation Ditch

A concrete-lined irrigation ditch is an artificially created concrete-lined channel in upland habitat for the purpose of conveying irrigation water for agriculture. Concrete-lined irrigation ditches occur in the east-central portion of the proposed solar site. The concreted lined irrigation ditches on site are 6 feet wide at the top and 2 feet wide at the bottom.

3.1.24 Developed

Developed land in the survey area consists of a residential development and agricultural loading docks with associated paved areas on the proposed solar site, as well as the IID Anza Substation.

3.2 PLANTS

Thirty-two plant species were observed in the survey area during the biological surveys (Appendix A).

3.3 ANIMALS

Twenty-seven animal species were observed or detected in the survey area during the biological surveys (Appendix B).

3.4 JURISIDICTIONAL AREAS

According to the National Wetland Inventory (USFWS 2012), a wetland (i.e., riverine/intermittent/unconsolidated shore/intermittently flooded; part of San Felipe Creek) occurs immediately west of the survey area. This feature is separated from the proposed solar site by a berm and is at a slightly lower elevation. San Felipe Creek (a wetland classified as

palustrine/scrub-shrub/temporarily flooded according to the NWI) also occurs southeast of the survey area. This creek once flowed through the survey area prior to the agricultural operations. Additionally, Tarantula Wash trends approximately south-north just east of the proposed solar site, and crosses the proposed transmission line (Figure 2).

Federal (USACE) jurisdictional areas associated with the proposed project include 0.05 acre of tamarisk thicket and 0.58 acre of non-wetland waters of the U.S. (WUS; i.e., streambed and drainage ditch), along a total length of 1,043 linear feet (HELIX 2013a).

State (CDFW) jurisdictional areas associated with the proposed project include 0.05 acre of tamarisk thicket and 0.67 acre of streambed (including the drainage ditch) and comprise a total of 0.72 acre along 1,043 linear feet. The small patch of tamarisk thicket occurs along the transmission line where it crosses Tarantula Wash (HELIX 2013a).

3.5 SENSITIVE RESOURCES

3.5.1 Sensitive Vegetation Communities

Sensitive vegetation communities are those that are either rare within the region or considered sensitive by CDFW, have been depleted, are naturally uncommon, or support special status plant or animal species. Mesquite thicket is the only sensitive vegetation community in the survey area. A total of 15.5 acres of mesquite thicket occurs in the survey area. It is considered highly imperiled by the CDFW (2010b). None of the other communities are considered sensitive by the CDFW (2010b) or Conservation and Open Space Element and Land Use Element of the Imperial County General Plan (County of Imperial 1993).

3.5.2 Special Status Plant Species

Special status plant species are those that are: 1) only found in the Imperial Valley region; 2) a local representative of a species or association of species not otherwise found in the region; and/or 3) severely depleted within their ranges or within the region. These plants include those listed by federal or state agencies or by the CNPS. No special status plant species were observed within the survey area, although the biological surveys were conducted in January and July, which is outside the typical blooming period. Because the proposed solar site has been completely disturbed through agricultural operations, no special status plant species are expected to occur there (see Section 3.5.2.1). The potential for special status plant species to occur along the transmission line overbuild and in the northwestern portion of the survey area that has not be impacted by agricultural operations is higher because the extent of ground disturbance there is much less. HELIX conducted a focused survey for special status plant species on March 19, 2013; no special status plant species were found (Appendix A).

3.5.2.1 Special Status Plant Species with Potential to Occur

Two special status plant species have been reported to the searched databases in the vicinity of the survey area. The two species are Peirson's pincushion (*Chaenactis carphoclinia* var. *peirsonii*) and Wiggins' cholla (*Cylindropuntia wigginsii*), and are described below. HELIX

conducted a focused survey for special status plant species, with particular emphasis on Peirson's pincushion, on March 19, 2013; no special status plant species were found (Appendix A).

Peirson's Pincushion

Peirson's pincushion is an annual herb that occurs in sandy areas in Sonoran desert scrub at elevations from sea level up to 1,500 feet. It flowers from March to April.

Status: CNPS Rare Plant Rank 1B.3 (Appendix C)

Peirson's pincushion is not expected to occur on the proposed solar site due to the extensive ground disturbance associated with past and ongoing agricultural operations. It was considered to have some potential to occur, however, along the proposed transmission line overbuild and in the northwestern portion of the survey area that has not been impacted by agricultural operations (where the new 92 kV transmission line and primary access road would be located). A focused special status plant survey, with particular emphasis on Peirson's pincushion, was conducted on March 19, 2013, and the species was not found.

Wiggins' Cholla

Wiggins' cholla is no longer a valid taxon (Baldwin et al. 2012; CNPS 2012). The plants formerly regarded as Wiggins' cholla have been grouped with another much more common and widespread species, silver cholla (*Cylindropuntia echinocarpa*).

3.5.3 Special Status Animal Species

Special status animal species are those that are: 1) threatened, endangered, proposed, or candidates for listing under the federal Endangered Species Act (ESA) or state ESA; 2) considered sensitive by the BLM (on BLM-administered lands; 2010); or 3) considered fully protected or species of special concern by CDFW (2011). One special status animal species, the loggerhead shrike (*Lanius ludovicanus*), was observed during the biological surveys and is described below.

Loggerhead Shrike

In southern California, loggerhead shrikes inhabit grasslands, agricultural fields, chaparral, and desert scrub (Unitt 1984). This species hunts from perches for its prey that includes insects, amphibians, small reptiles, small mammals, and birds.

Status: USFWS Bird of Conservation Concern (USFWS 2008; Appendix C)
CDFW Species of Special Concern (CDFW 2011; Appendix C)

The loggerhead shrike was observed along the proposed transmission line overbuild (Figure 3b) and along the southern border of the proposed solar site (Figure 3f).

3.5.3.1 Special Status Animal Species with Potential to Occur

Three special status animal species have been reported to the searched databases in the vicinity of the survey area, and 5 other species have potential to occur due to the presence of potentially suitable habitat. Each is discussed below. The 3 species reported to the databases include desert pupfish (*Cyprinodon macularius*), flat-tailed horned lizard (*Phrynosoma mcallii*; FTHL), and prairie falcon (*Falco mexicanus*). The 5 other species include Couch's spadefoot (*Scaphiopus couchii*), burrowing owl (*Athene cunicularia*), Mountain plover (*Charadrius montanus*), northern harrier (*Circus cyaneus*), and American badger *(Taxidea taxus*). Based on the list of bat species recorded in Imperial County (San Diego Natural History Museum 2012), cross-referenced with the species' specific habitat requirements and preferences (CDFW 1990), the potential for any bat species to occur in the survey area is none to very low, so bats are not addressed further.

Desert Pupfish

The desert pupfish is found in shallow water of desert springs, small streams, and marshes below 5,000 feet in elevation. The species tolerates high salinities and high water temperatures. In California, it is restricted to 3 natural populations (San Felipe Creek is one) and the non-natural irrigation drains around the Salton Sea. The species has been impacted by the introduction and spread of predatory and competitive fishes, water impoundment and diversion, water pollution, stream channelization, and habitat modification (USFWS 2010). Critical habitat for the desert pupfish has been designated in San Felipe Creek approximately 2 miles southeast of the survey area.

Status: Federally Listed Endangered
State Listed Endangered

There is no appropriate habitat for the desert pupfish in the survey area, so it would not be expected to be present.

Flat-Tailed Horned Lizard

The FTHL is found in the low deserts of southwestern Arizona, southeastern California, and adjacent portions of northwestern Sonora, and northern Baja California, Mexico. In California, the FTHL is restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties. The majority of the habitat for the species is in Imperial County (Turner et al. 1980 as cited in FTHL Interagency Coordinating Committee 2003). It occurs with cobbly, gravelly, or sandy soils and requires the presence of native ant populations, particularly harvester ants (*Pogonomyrmex* sp.).

Status: BLM Sensitive (Appendix C)
CDFW Species of Special Concern (Appendix C).

Much of the survey area has been heavily impacted by agricultural operations. The areas with the greatest potential to support FTHL occur in the northern portion of the survey area that supports some native vegetation communities. The survey area is not within a FTHL

Management Area, although the West Mesa Management Area occurs just east and south of the eastern end of the proposed transmission line (FTHL Interagency Coordinating Committee 2003). The nearest location of FTHL reported to the CNDDB is in the west Tarantula Wash area, 0.8 mile west/northwest of the junction of Tarantula Wash and Highway 78 in the Ocotillo Wells State Vehicular Recreation Area. The observation date is May 2008.

Prairie Falcon

The prairie falcon is a resident species of the desert regions in all seasons except summer. It nests on cliff or bluff ledges or occasionally in old hawk or raven nests and on utility poles and towers. It forages in grassland or desert habitats.

Status: USFWS Bird of Conservation Concern (Appendix C)

There is limited nesting habitat for the prairie falcon in the survey area; however, the prairie falcon has potential to forage there.

Couch's Spadefoot Toad

In California, the Couch's spadefoot toad occurs in scattered populations east of the Algodones sand dunes in Imperial County, north into San Bernardino County. The Couch's spadefoot toad occupies grassland, prairie, mesquite, creosote bush, thorn forest, and sandy washes from sea level to 5,900 feet in elevation. Reproduction is aquatic. Couch's spadefoots breed during times when scarce desert rainfall creates temporary pools from May through September. Temporary pools are often in rocky streambeds, washes, at the edges of agricultural fields, in depressions beside roads and railroad tracks, and cattle tanks. In order for the eggs to hatch and larvae to successfully transform, the water needs to remain for a minimum of 7 to 8 days (CaliforniaHerps.com 2012).

Status: BLM Sensitive (Appendix C)
CDFW Species of Special Concern (Appendix C)

While it is possible that the reservoir or basin on the proposed solar site could provide the temporary pools necessary for reproduction, the fact that the survey area has been so heavily disturbed, and the species only occurs in scattered populations that are east of the Algodones Dunes (which are more than 50 miles east of the proposed solar site), it is highly unlikely that the species would be present.

Burrowing Owl

The burrowing owl is found throughout the length of the State of California. This small owl is a year-long resident of open, dry grassland and desert habitats. It is also found as a resident in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats, as well as agricultural lands. The burrowing owl is migratory over much of its range, even in southern California (Unitt 2004).

"Habitat loss, degradation, and fragmentation are the greatest threats to burrowing owls in California," according to DeSante et al. (2007). "The vast majority of burrowing owls [now] occur in the wide, flat lowland valleys and basins of the Imperial Valley and Great Central Valley [where] for the most part...the highest rates of residential and commercial development in California are occurring" (CDFW 2012).

Status: BLM Sensitive (Appendix C)
USFWS Bird of Conservation Concern (Appendix C)
CDFW Species of Special Concern (Appendix C)

During HELIX's habitat assessment on January 29, 2013, it was determined that 1,100 acres of the proposed project survey area had potential to be burrowing owl habitat. This habitat was comprised primarily of fallow agriculture and disturbed habitats but also included small amounts of sparsely vegetated shrub communities. Burrows with potential to support burrowing owl mainly occurred within three areas totaling 207 acres, along with a number of scattered outlying burrows. Two burrows were noted to have been filled in by some means early on during the burrowing owl survey (HELIX 2013b).

During the habitat assessment, 3 pellets, each deteriorated from time and weather, were observed. These pellets were more than a year old and comprised primarily of beetle carapaces and were believed to be from a burrowing owl. The pellets were not associated with a burrow, however. As no other sign of burrowing owl was observed, it was presumed that the pellets were deposited by a migratory owl and not a resident. No burrowing owl or additional burrowing owl sign was observed on or in the immediate vicinity of the proposed project survey area during the habitat assessment, burrow survey, and focused owl survey, which were conducted from January through June 2013. It was confirmed, however, that the survey area does support burrowing owl habitat and a number of fossorial mammal burrows with potential to support burrowing owl (HELIX 2013b).

Mountain Plover

The mountain plover does not breed, but it does winter, in California where it can be found in extremely dry shrublands, shortgrass prairies, barren agricultural fields, and other sparsely vegetated areas including grazed alfalfa fields and burned Bermuda grass fields. Its reported current winter range in Imperial County is primarily in the agricultural lands south of the Salton Sea (Shuford and Gardali 2008).

Status: BLM Sensitive (Appendix C)
CDFW Species of Special Concern (Appendix C)

While the survey area does have potentially suitable wintering habitat, due to the species' current wintering distribution in Imperial County (i.e., primarily south of the Salton Sea), and the fact that it has not been documented in this part of Imperial Valley, the potential for the mountain plover to occur in the survey area is low.

Northern Harrier

The northern harrier is a raptor that is distributed in patches across California with a highly fragmented distribution in southern California. Sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands provide habitat for this species. It nests on the ground, usually near water, or in tall grass, open fields, clearings, or on the water (Snyder 1993). Abundant prey including rodents and small mammals is also required (Imperial County Planning and Development Services Department 2012).

Status: CDFW Species of Special Concern (Appendix C)

There is no suitable nesting habitat within or near the survey area. The harrier could forage in the survey area, however, and has low to moderate potential to do so.

American Badger

The American badger is a carnivorous member of the weasel family that consumes fossorial rodents such as rats, mice, ground squirrels, and pocket gophers. It is an uncommon but permanent resident in dry open stages of shrub, forest, and herbaceous habitats with friable soils where it digs burrows.

Status: CDFW Species of Special Concern (Appendix C)

Since this species is typically uncommon, the potential for the badger to be present is low.

4.0 REGULATORY CONTEXT

4.1 FEDERAL REGULATIONS

4.1.1 Clean Water Act

The Clean Water Act (CWA [33 U.S.C. 1251 *et seq*]) is intended to restore and maintain the quality and biological integrity of the nation's waters. It prohibits the discharge of pollutants into WUS without a National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Agency (EPA). By issuing NPDES permits, the EPA can regulate the discharge of pollutants to protect water quality.

Section 404 of the CWA provides that whenever any person discharges dredged or fill material into WUS (e.g., streams, wetlands, lakes, bays), a permit is required from the USACE. The USACE has issued 50 separate Nationwide Permits (NWPs) for different types of projects with impacts to wetlands (as of March 19, 2007). Depending on the level of impact, projects qualifying for an NWP may be required to provide the USACE with Pre-Construction Notification of the impacts and meet other restrictions. Projects with greater wetland impacts than those allowed under one of the NWPs require an Individual Permit. The process of obtaining an Individual Permit includes public notice and response to all comments received; the

permit decision document includes a discussion of the environmental impacts of the project, the public and private needs, alternatives to achieve project purposes if needed, and beneficial and/or detrimental effects of the project on public and private uses. In *SWANCC vs. USACE*, the Supreme Court ruled that the jurisdiction of the USACE does not extend to isolated, intrastate, non-navigable waters and wetlands such as vernal pools, ephemeral streams, and wetlands not associated with a stream channel. HELIX has conducted a formal jurisdictional delineation for the proposed project to determine USACE jurisdictional boundaries (HELIX 2013a). However, only the USACE can make a final determination on the jurisdictional boundaries.

Section 401 of the CWA requires that an applicant for a federal license or permit to discharge into navigable waters must provide the federal agency with a water quality certification, declaring that the discharge would comply with water quality standards requirements of the CWA. USACE issuance of a Section 404 permit triggers the requirement that a Section 401 certification also be obtained. In California, the Regional Water Quality Control Boards (RWQCBs) issue this certification.

4.1.2 Executive Order 13112 – Invasive Species

Executive Order 13112 was signed in February 1999 and established the National Invasive Species Council. This Order requires agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health impacts that invasive species cause to the extent practicable and permitted by law.

4.1.3 Executive Order 11990 – Protection of Wetlands

This order establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative.

4.1.4 Federal Endangered Species Act

The ESA designates threatened and endangered animals and plants and provides measures for their protection and recovery. "Take" of listed animal species and of listed plant species is prohibited without obtaining a federal permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage the habitat of (i.e., harm) listed wildlife species require approval from the USFWS for terrestrial species. ESA Section 7 and Section 10 provide 2 pathways for obtaining authority to take listed species. The ESA also generally requires determination of critical habitat for listed species. If critical habitat has been designated, impacts to areas that contain the primary constituent elements identified for the species, whether or not the species is currently present, is also prohibited. No critical habitat occurs in the survey area, and no federally listed species were observed or are expected to occur there.

4.1.5 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations that protect migratory birds, (including their parts, eggs, and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted. Generally, the list of species protected under the MBTA includes those where evidence of natural occurrence in the United States or its territories exists, and the documentation of such records has been recognized by the American Ornithologists Union or other competent scientific authorities. Species not protected under the MBTA include those whose occurrences in the United States are strictly the result of intentional human introduction (e.g., Eurasian collared-dove [*Streptopelia decaocto*] observed in the survey area).

4.1.6 California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) Plan covers approximately 25 million acres of land in southern and southeastern California, approximately 10 million of which are administered by the BLM, as mandated by the Federal Land Policy and Management Act of 1976. The CDCA Plan is a comprehensive, long-range plan with goals and specific actions for the management, use, development, and protection of the resources and public lands within the CDCA, and is based on the concepts of multiple use, sustained yield, and maintenance of environmental quality. The survey area is entirely within the CDCA. The proposed transmission line that would be overbuilt along the existing IID distribution line is on public land administered by the BLM. The proposed solar site is situated on private property.

4.1.7 BLM Right-of-Way Grant to Imperial Irrigation District

In November 2002, the BLM granted a ROW to the Imperial Irrigation District to construct, operate, and terminate a 92 kV transmission line with an underbuilt 12.5 kV distribution line along an 18,740-foot long, 50-foot wide path from the Anza Substation to the San Felipe Substation. The ROW Grant contains terms and conditions that IID must follow to construct, operate, and terminate the lines. The proposed project requires an electrical interconnection with the IID electrical transmission system. Therefore, a new 92 kV transmission line is proposed to be built in conformance with this ROW on BLM-managed lands outside the proposed solar site over the existing IID distribution line to the Anza Substation. The new line construction would comply with the terms and conditions of the ROW Grant.

4.2 STATE LAW AND REGULATIONS

4.2.1 California Endangered Species Act

The California ESA provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike the federal ESA, state listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to the federal ESA and is prohibited for both listed and candidate species. Take authorization may be obtained from CDFW under California ESA Sections 2091 and 2081. Section 2091, like federal ESA Section 7, provides for consultation between a state lead agency

under CEQA and CDFW, with issuance of take authorization if the project does not jeopardize the listed species. Section 2081 allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures. No state listed species were observed or are expected to occur in the survey area.

4.2.2 California Environmental Quality Act

CEQA was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a permit by state and local public agencies. In addition to federal or state listed species, "sensitive" plants and animals receive consideration under CEQA. Sensitive species include, but are not limited to, wildlife Species of Special Concern listed by CDFW, and plant species on the CNPS's List 1A, List 1B, or List 2 (Appendix C). One sensitive (or special status) species was observed in the survey area. Several others have been reported in the vicinity of the survey area, and yet a few others have some potential to occur based on the presence of potentially suitable habitat (see Sections 3.5.2 and 3.5.3).

4.2.3 California Fish and Game Code

Sections 3511, 4700, 5050, and 5515 of California Fish and Game Code outline protection for "fully protected" (Appendix C) species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of the CDFW to maintain viable populations of all native species. To that end, the CDFW has designated certain vertebrate species as Species of Special Concern (Appendix C) because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. No fully protected species were observed or have potential to occur in the survey area.

4.2.4 California Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 directed the CDFW to carry out the Legislature's intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. The California ESA of 1984 expanded on the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the Fish and Game Code. To align with federal regulations, the California ESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the ESA as threatened species but did not do so for rare plants. Thus, there are 3 listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the California ESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent. No rare, threatened, or endangered plant species were observed or have potential to occur in the survey area.

4.2.5 Lake and Streambed Alteration Program

Prior to commencement of any activity that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank (which may include associated riparian resources) of a river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, the project proponent shall submit a complete Lake or Streambed Alteration Program notification package and fee to the CDFW. The Lake and Streambed Alteration Program is a California law that requires that any person, state, local government agency, or public utility notify the CDFW prior to beginning of the activities listed above. The CDFW has 30 days to review the proposed actions and propose measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the project proponent becomes the Lake or Streambed Alteration Agreement. The conditions of agreement and a CWA Section 404 permit often overlap. HELIX has conducted a formal jurisdictional delineation for the proposed project to determine CDFW jurisdictional boundaries (HELIX 2013a).

4.2.6 Porter-Cologne Act

The intent of the Porter-Cologne Act is to protect water quality and the beneficial uses of water, and applies to both surface and groundwater. Under this law, the California State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne include isolated waters that are no longer regulated by the USACE. Developments which impact jurisdictional waters must demonstrate compliance with the goals of the Act by developing Storm Water Pollution Prevention Plans, Standard Urban Storm Water Mitigation Plans, and other measures in order to obtain a CWA Section 401 Water Quality certification.

4.3 REGIONAL AND LOCAL PLANS, POLICIES, AND REGULATIONS

4.3.1 Imperial County General Plan

The Conservation and Open Space Element and Land Use Element of the Imperial County General Plan (County of Imperial 1993) directs the county to evaluate the compatibility of proposed development projects with the preservation of biological resources and open space.

4.3.2 Imperial County Land Use Ordinance

The Imperial County Land Use Ordinance provides grading regulations for proposed development projects throughout the unincorporated areas of the County (County of Imperial 2009).

5.0 SIGNIFICANCE CRITERIA

In accordance with CEQA, a proposed project would have a significant impact if it would:

1. Have a substantial adverse effect, either directly, or through habitat modifications on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the CDFW or the USFWS;
2. Interfere substantially with the movement of native resident or migratory fish or wildlife species, wildlife corridors, or wildlife nursery sites;
3. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
4. Have a substantial adverse effect on federally protected water quality or wetlands as defined by Section 404 of the CWA;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

In general, any impact to a plant or animal species or its habitat(s) is considered adverse, although not all impacts are significant. For certain highly sensitive resources (e.g., threatened or endangered species and their habitats), mitigation is typically required for any impact. Resources having a low sensitivity (e.g., species with a locally stable population but declining elsewhere) could be impacted with minor adverse effects and not require mitigation.

6.0 PROPOSED PROJECT IMPACTS

6.1 DIRECT IMPACTS

A specific site plan has not yet been prepared for the Seville Solar project. For this report, it has been conservatively assumed that all surface disturbance impacts associated with the proposed project would be permanent. However, where the proposed transmission line would be overbuilt on the existing IID distribution line, it is assumed that there would be no additional surface disturbance other than use of the ROW by vehicles for its construction.

The actual impacts from the proposed project may need to be re-analyzed following preparation of a specific site plan.

6.1.1 Vegetation Communities/Land Cover Types

Construction of the proposed project would result in permanent impacts to approximately 1,238 acres of vegetation communities/land cover types (Table 1) as a result of vegetation removal, grading, and installation of proposed project components.

Table 1 PERMANENT IMPACTS TO VEGETATION COMMUNITIES/LAND COVER TYPES FROM THE PROPOSED SOLAR PROJECT	
VEGETATION COMMUNITY/LAND COVER TYPE	**ACREAGE IMPACTED**
White Bursage Scrub	4.5
Creosote Bush Scrub	1.1
Creosote Bush – White Bursage Scrub	0.3
Allscale Scrub	31.6
White Dalea Scrub (provisional)	19.8
Quailbush Scrub	0.4
Mesquite Thicket	13.2
Bulrush Marsh	0.3
Naturalized Mediterranean Grassland	2.3
Tamarisk Thickets	16.3
Tamarisk Windbreak	28.8
Bermuda Grass Grassland (provisional)	3.9
Upland Mustards	67.2
Farmed Land	13.2
Fallow Agriculture	834.3
Disturbed Habitat	195.5
Developed	5.6
TOTAL	**1,238**[1]

[1]Total reflects rounding.

There is only one sensitive vegetation community present and impacted by the proposed solar project. This community is mesquite thicket. Since mesquite thicket is a sensitive community, impacts to it would be significant, and mitigation would be required. Impacts to the other communities/land cover types from the proposed project that are not sensitive would be less than significant, and no mitigation would be required.

6.1.2 Jurisdictional Areas

Impacts to jurisdictional areas are regulated by the USACE and CDFW, are potentially significant, and may require agency permitting with associated mitigation. HELIX has conducted a formal jurisdictional delineation for the proposed project to determine the jurisdictional boundaries (see Section 3.4; HELIX 2013a).

6.1.3 Special Status Plant Species

No special status plant species were observed. One special status species, Peirson's pincushion, was determined to have potential to occur along the proposed transmission line, particularly where it would be overbuilt with the existing IID distribution line, and in the northwest portion

of the survey area that has not been impacted by agricultural operations (where the new 92 kV transmission line and primary access road would be located).

HELIX conducted a focused survey for special status plant species, with particular emphasis on Peirson's pincushion, on March 19, 2013; no special status plant species were found (Appendix A).

6.1.4 Special Status Animal Species

One special status animal species, loggerhead shrike, was observed in the survey area along the existing IID distribution line (Figure 3b) and along the southern border of the proposed solar site (Figure 3f). There would be no change in loggerhead shrike habitat in the IID ROW from the overbuild of the new 92 kV transmission line. Potential shrike habitat on the proposed solar site is not high quality, and the surrounding desert habitat is more typical of loggerhead shrike habitat. Potential impacts to the loggerhead shrike from the proposed project, therefore, may be adverse but would not be significant because of the species' lower level of sensitivity and the fact that superior habitat occurs adjacent to the proposed solar site and elsewhere in the region. No mitigation would be required.

Some other special status animal species have low potential to occur in the survey area or have low to moderate potential to forage in the survey area (e.g., northern harrier). None of these species is state or federally listed, and for the same reasons as the loggerhead shrike (i.e., low level of sensitivity and habitat occurring adjacent to the solar site and elsewhere in the region), impacts to these species, should they be present, would be adverse but less than significant, and no mitigation would be required.

While the FTHL is a State species of special concern (like the loggerhead shrike and northern harrier), the anticipated impacts to this species are considered to be limited due to the majority of the survey area being heavily impacted by agricultural operations and the temporary nature of the transmission line overbuild impacts. Should the FTHL be present, the impacts would be adverse but less than significant, and no mitigation would be required for proposed project impacts on private lands. For the new 92 kV transmission line to be overbuilt in the IID ROW, however, potential impacts to the FTHL (from crushing by vehicle use) require mitigation in accordance with the terms and conditions of IID's ROW Grant.

A focused burrowing owl survey was conducted by HELIX in accordance with CDFW guidelines in 2013 (HELIX 2013b). While no burrowing owl or additional burrowing owl sign (other than 3 old pellets) was observed on or in the immediate vicinity of the proposed project survey area, it was determined that the survey area does support burrowing owl habitat and a number of fossorial mammal burrows with potential to support burrowing owl (HELIX 2013b).

Direct effects to the burrowing owl from construction could include destruction of burrows/burrow entrances, mortality, and loss of habitat surrounding occupied burrows. "Occupied" is defined as a burrow that shows sign of burrowing owl occupancy (e.g., an owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance) within the last 3 years (CDFW 2012; California Burrowing Owl Consortium 1993). Construction activities such as grading, movement of construction vehicles or heavy equipment,

and installation of the proposed project components would constitute a significant impact if they resulted in, for example: 1) the direct mortality of burrowing owls through crushing of adults, young, or eggs within burrows; 2) entrapment of/injury to owls within burrows if burrow entrances become blocked; or 3) the loss of nesting burrows, satellite burrows, foraging habitat, or wintering habitat (CDFW 2012). While avoidance of burrowing owl impacts is preferred, mitigation methods are available (CDFW 2012) to reduce the level of impact to less than significant. This is discussed further in Section 7.0.

The desert pupfish does not occur in the survey area, but critical habitat for the species occurs approximately 2 miles southeast of the survey area. Runoff and reduced water quality impacts to the desert pupfish critical habitat are not anticipated from the proposed project for the following reasons. The proposed project includes on-site retention basins that will fully retain the 100-year, 24-hour peak flood volume resulting from on-site precipitation. Additionally, the existing berms on the west and north sides of the proposed solar site that currently divert off-site flow around the property will be maintained; however, any flows which breach the berms will be allowed to flow unimpeded across the solar site and under the solar panels. To minimize flood hazards and risk under this scenario, all habitable structures would be placed outside the 100-year flood zone, and all habitable structures and inverters, transformers, and switch gear would be placed on foundations raised above the projected maximum flood levels. Finally, the proposed project would be required to conform to Policy 4 of the Water Element in the Imperial County General Plan (County of Imperial 1993) regarding the protection of water resources, and produce and comply with a Storm Water Pollution Prevention Plan (SWPPP).

6.1.4.1 Avian and Bat Collision and Electrocution Risk

Above-ground electrical transmission lines pose a risk to bird and bat species due to collision and/or electrocution (bats have very low potential to occur; see Section 3.5.3.1). While there would be an increase in potential risk for avian (and bat) collision or electrocution, the risk would be incrementally small for the overbuilt 92 kV transmission line and the new proposed 92 kV transmission line and would, therefore, be less than significant. No mitigation would be required.

Still, to minimize the incremental risk, it is recommended that the transmission line and components conform to Avian Power Line Interaction Committee (APLIC) standards for collision-reducing techniques (APLIC 2012).

6.1.4.2 Nesting Birds and Wildlife Movement

The proposed project could result in direct impacts to avian nesting protected under California Fish and Game Code sections 3503.5 and 3511 and the MBTA. Violation of the California Fish and Game Code and the MBTA is not allowed. Construction activities, primarily though removal of vegetation, could cause destruction or abandonment of nests or the mortality of adults, young, or eggs (impacts to burrowing owl, specifically, were addressed in Section 6.1.4).

Vegetation clearing during the general avian nesting season (February 1 through August 31), therefore, has the potential to cause a significant impact to nesting birds. To avoid the impact

and to comply with California Fish and Game Code and the MBTA, mitigation that includes clearing vegetation outside the avian breeding season would be required, unless a pre-vegetation clearing survey is conducted for nesting species, and nests are avoided. This is addressed further in Section 7.0.

The proposed project would not constitute a barrier to the movement of animals through the vicinity. It is already likely that animals do not move regularly through the proposed solar site (i.e., use it as a wildlife movement corridor) since it is essentially an island of disturbed agricultural land within otherwise relatively undisturbed desert habitat. Therefore, if the proposed solar site is fenced during construction and/or operation, this may have a minor adverse effect on some wildlife movement, but the impact would be less than significant, and no mitigation would be required.

6.2 INDIRECT IMPACTS

While there is no specific site plan for the Seville Solar project, and no specific project description, indirect impacts from development projects often include those from dust, noise, night-time lighting, runoff/decreased water quality, and colonization/spread of invasive, non-native plant species. These potential indirect impacts are addressed below.

6.2.1 Dust

Activities such as grading and driving equipment on unpaved roadways have the potential to result in indirect impacts to surrounding vegetation communities from increased levels of dust that may settle on the plants. Increased levels of dust on plants can adversely affect plants' photosynthetic capabilities, adversely affect their productivity and nutritional qualities, and degrade the overall health of the vegetation communities, which may also adversely affect wildlife dependent on them. These impacts have the potential to be significant but are mitigable to less than significant levels.

6.2.2 Noise

Breeding birds and mammals may temporarily or permanently leave their territories to avoid noisy activities, which could lead to reduced reproductive success and increased mortality. These impacts would be adverse but less than significant for animal species that are not of special status. Construction noise, on the other hand, could adversely affect burrowing owl breeding behavior and reproductive success, which would be a significant impact. In accordance with the CDFW (2012), avoidance is the preferred method for dealing with potential impacts to burrowing owls. If avoidance is not feasible, mitigation methods are available (CDFW 2012) to reduce the level of impact to less than significant. This is discussed further in Section 7.0.

6.2.3 Night Lighting

Artificial night lighting that spills into adjacent desert habitat could provide nocturnal predators with an unnatural advantage over their prey. This could cause an increased loss of native wildlife that would be potentially significant, particularly for special status species like the

burrowing owl. Night lighting also has the potential to disrupt breeding/nesting behavior of the burrowing owl if it would be placed in proximity to occupied burrows, which would be a significant impact. These impacts are mitigable to less than significant levels.

6.2.4 Runoff/Decreased Water Quality

Runoff from the proposed solar site has the potential to significantly impact native species if it resulted in decreased water quality, particularly in San Felipe Creek or Tarantula Wash. Runoff and decreased water quality impacts are not anticipated from the proposed project for the following reasons. The proposed project includes on-site retention basins that will fully retain the 100-year, 24-hour peak flood volume resulting from on-site precipitation. Additionally, the existing berms on the west and north sides of the proposed solar site that currently divert off-site flow around the property will be maintained; however, any flows which breach the berms will be allowed to flow unimpeded across the solar site and under the solar panels. To minimize flood hazards and risk under this scenario, all habitable structures would be placed outside the 100-year flood zone, and all habitable structures and inverters, transformers, and switch gear would be placed on foundations raised above the projected maximum flood levels. Finally, the proposed project would be required to conform to Policy 4 of the Water Element in the Imperial County General Plan (County of Imperial 1993) regarding the protection of water resources, and produce and comply with a Storm Water Pollution Prevention Plan (SWPPP).

6.2.5 Invasive Species

Non-native, invasive plant species can colonize sites disturbed by construction and can spread into adjacent native habitats. Some of these species (e.g., Saharan mustard and Russian thistle) are already present in the survey area. Non-native, invasive plant species can reduce native species diversity, change ground and surface water levels, and cause adverse effects on native wildlife that depend on the native plants. The potential spread of these species caused by the proposed project into adjacent desert habitat would be considered a significant impact requiring mitigation.

7.0 MITIGATION MEASURES

A specific site plan has not yet been prepared for the Seville Solar project. For this report, it has been conservatively assumed that all surface disturbance impacts associated with the proposed solar project would be permanent. However, where the proposed transmission line would be overbuilt on the existing IID distribution line, it is assumed that there would be no additional surface disturbance other than use of the ROW by vehicles for its construction.

The mitigation measures described below are based on these assumptions. The required mitigation may need to be re-analyzed following preparation of a specific site plan and project description and determination of actual proposed project impacts.

Impact 1: Construction of the proposed project would result in significant impacts to 13.2 acres of mesquite thicket, a sensitive vegetation community.

Mitigation Measure 1:

The loss of mesquite thicket shall be mitigated through a combination of compensation and/or restoration at a minimum 1:1 ratio, or as required by permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or through mitigation fee payment for land supporting comparable habitat to that impacted by the proposed project. Restoration may be appropriate as mitigation for permanent impacts provided that restoration is demonstrated to be feasible, and the restoration effort is implemented pursuant to a Habitat Restoration/Revegetation Plan.

Impact 2: Construction of the proposed project may result in impacts to potential federal and state jurisdictional areas.

Mitigation Measure 2:

Impacts to federal and state jurisdiction require agency permitting and associated mitigation. Such mitigation could include creation, restoration, and/or enhancement of jurisdictional areas. It is anticipated that a 2:1 ratio would be required for any wetland habitat with at least 1:1 of the mitigation including creation of wetland habitat (so there would be no net loss of jurisdictional habitat) and the other 1:1 consisting of acquisition and preservation of already-existing jurisdictional habitat acceptable to the permitting agencies. It is also anticipated that a 1:1 ratio would be required for impacts to non-wetland jurisdiction in the form of wetland enhancement, restoration, or creation as determined in consultation with the permitting agencies. Permits shall be obtained from the USACE, RWQCB, State Water Resources Control Board, and CDFW, as appropriate, prior to initiating construction in jurisdictional areas.

Impact 3: For the new 92 kV transmission line to be overbuilt in the IID ROW (there would be no additional ground disturbance other than use of the ROW by vehicles), potential impacts to the FTHL require mitigation in accordance with the terms and conditions of IID's ROW Grant, as follows.

Mitigation Measure 3:

- A worker education program shall be developed and implemented for all construction personnel.

- A field contact representative (FCR) shall be designated prior to project initiation to ensure compliance with the protective measures, to serve as the primary agency contact, and have authority and responsibility to stop any activities that violate these measures. The FCR shall be authorized by CDFW to handle the FTHL.

- All project work areas shall be clearly flagged or similarly marked at the outer boundaries to define the limit of work activities. All construction workers shall restrict their activities and vehicles to areas which have been flagged to avoid impacts to the FTHL.

- While not specifically included in the ROW Grant, the FCR shall conduct a FTHL clearance survey of the work area prior to work getting underway each day. If FTHL is found, it shall be relocated per the terms of the ROW Grant as described in the next paragraph.

- FTHL that are relocated by the FCR shall be placed in the shade of a large shrub a short distance from the construction in the direction of undisturbed habitat. Captured FTHL shall be kept in a dry container. FTHL shall be held at temperatures between 25°C and 35°C and shall not be exposed to any direct sunlight. Release shall occur as soon as possible during daylight hours (32°C to 40°C). The FCR shall use judgment and discretion to ensure the survival of the FTHL.

- Existing roads shall be used for travel and equipment storage whenever possible.

- The area of disturbance of vegetation and soils shall be the minimum required for the project. Clearing of vegetation and grading shall be minimized.

- Construction holes left open over night shall be covered. Covers shall be secured in place and shall be strong enough to prevent wildlife from falling through and into a hole.

Impact 4: Construction would constitute a significant impact to burrowing owl if it resulted in the following types of impacts: 1) the direct mortality of burrowing owls through crushing of adults, young, or eggs within burrows; 2) entrapment of/injury to owls within burrows if burrow entrances become blocked; or 3) the loss of nesting burrows, satellite burrows, foraging habitat, or wintering habitat (CDFW 2012).

Mitigation Measure 4:

In accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012), a pre-construction take avoidance survey shall be conducted (CDFW 2012). If the burrowing owl is absent, then no mitigation is required. If present, the following mitigation shall be implemented.

If burrowing owls and their habitat can be protected in place on or adjacent to a project site, then disturbance impacts shall be minimized through the use of buffer zones, visual screens, or other measures in accordance with CDFW (2012).

Occupied burrows shall be avoided during the breeding period from February 1 through August 31 (CDFW 2012). "Occupied" is defined as a burrow that shows sign of burrowing owl occupancy within the last 3 years.

Occupied burrows shall also be avoided during the non-breeding season. Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls, or permanently exclude burrowing owls and close burrows after verifying burrows are empty by site monitoring and scoping. Eviction of burrowing owls is a potentially significant impact under CEQA, however, which would require CDFW approval of a Burrowing Owl Exclusion Plan (CDFW 2012).

Mitigation for permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat is required such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the burrowing owl life history information provided in Staff Report on Burrowing Owl Mitigation (CDFW 2012).

Coordination with CDFW may be necessary for the development of site-specific avoidance and mitigation measures.

Impact 5: The proposed project could result in direct impacts to avian nesting protected under California Fish and Game Code and the MBTA.

Mitigation Measure 5:

Vegetation clearing shall take place outside of the general avian breeding season (February 1 through August 31). If vegetation clearing cannot occur outside the avian breeding season, a qualified avian biologist will conduct a pre-vegetation clearing survey for nesting birds no more than 7 days prior to vegetation clearing. If no active nests are found, clearing can proceed. "Active" shall be defined as from nest construction through fledging of young. If active nests are found, no clearing shall be allowed within 100 feet of the active nests of non-listed species, within 300 feet of the active nests of listed species, and within 500 feet of active raptor nests until the biologist determines the nest is no longer active or the nest is abandoned or fails. The biologist will submit the results of the survey to the CDFW and USFWS. Any requests for reductions to these prescribed buffers shall be made to the USFWS and CDFW.

Impact 6: Increased levels of dust on plants can adversely affect plants' photosynthetic capabilities, adversely affect their productivity and nutritional qualities, and degrade the overall health of the vegetation communities, which may also adversely affect wildlife dependent on them resulting in a potentially significant impact.

Mitigation Measure 6:

A Fugitive Dust Control Plan shall be developed and implemented during construction in compliance with Imperial County Air Pollution Control Regulation VIII.

Impact 7: Construction noise could adversely affect burrowing owl breeding behavior and reproductive success, which would be a significant impact.

Mitigation Measure 7:

Please refer to Mitigation Measure 5 regarding the use of buffer zones and coordination with CDFW.

Impact 8: Artificial night lighting could cause an increased loss of native wildlife that would be potentially significant. Night lighting also has the potential to disrupt breeding/nesting behavior of the burrowing owl, which would be a significant impact.

Mitigation Measure 8:

Minimize night lighting during construction by using shielded, directional lighting that is pointed downward thereby avoiding illumination of adjacent natural areas and the night sky. During operation, night lighting shall only be used when necessary for worker safety, and if used for security purposes, shall be motion or heat activated and also shielded and directed downward.

Impact 9: Non-native, invasive plant species can reduce native species diversity, change ground and surface water levels, and cause adverse effects on native wildlife that depend on the native plants. The potential spread of these species from the proposed project into adjacent desert habitat is a significant impact.

Mitigation Measure 9:

All vegetation and soil removed for the proposed project shall be disposed of in a safe and legal manner such that the plant material and soil (which contains seeds) are not released into the surroundings (e.g., trucks hauling such material shall be tightly covered).

8.0 REFERENCES

Avian Power Line Interaction Committee (APLIC). 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC. Washington, D.C.

Baldwin, B.G., Goldman, D.H., Keil D.J., Patterson R., Rosatti, T.J. and Wilken, D.H. (eds.). 2012. The Jepson Manual: Vascular Plants of California. Second edition. Berkeley, CA: University of California Press. 1,568 pp.

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game [CDFG]). 2012. Staff Report on Burrowing Owl Mitigation. March 7.

2011. Special Animals (883 taxa). State of California, The Resources Agency, Department of Fish and Game, Biogeographic Data Branch, California Natural Diversity Database. URL: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf. January.

2010a. California Natural Diversity Data Base (CNDDB). RareFind Database Program. http://www.dfg.ca.gov/biogeodata/cnddb/

2010b. Hierarchical List of Natural Communities with Holland Types. September.

2009. Vegetation Classification and Mapping Program List of California Vegetation Alliances. December 28.

1990. California's Wildlife. Volume III (Mammals). Edited by David C. Zeiner, William F. Laudenslayer, Jr., Kenneth Mayer, and Marshall White. State of California, Resources Agency, Sacramento, CA.

CaliforniaHerps.com. 2012. A Guide to the Amphibians and Reptiles of California. Scaphiopus couchii - Couch's Spadefoot. http://www.californiaherps.com/frogs/pages/s.couchii.html

California Native Plant Society (CNPS). 2012. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA.

County of Imperial. 2009. Land Use Ordinance, Title 9, Division 10. Last amendment October 27.

1993. Imperial County General Plan. http://www.icpds.com/?pid=571

DeSante, D.F., E.D. Ruhlen, and R. Scalf. 2007. The distribution and relative abundance of burrowing owls in California during 1991-1993: Evidence for a declining population and thoughts on its conservation. Pages 1-41 in J. H. Barclay, K.W. Hunting, J.L. Lincer, J. Linthicum, and T.A. Roberts, editors. Proceedings of the California Burrowing Owl Symposium, 11-12 November 2003 Sacramento, California, USA. Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc., Point Reyes Station, CA.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. with Appendices.

Flat-tailed Horned Lizard Interagency Coordinating Committee. 2003. Flat-tailed Horned Lizard Rangewide Management Strategy 2003 Revision.

HELIX Environmental Planning, Inc. 2013a. Seville Solar Project Jurisdictional Delineation Report. May 17.

2013b. Results of Burrowing Owl Surveys for the Seville Solar Project in Imperial County, California. Letter to Mr. Dwight Carey, Environmental Management Associates, Inc. November 4.

Imperial County Planning and Development Services Department. 2012. Solar Gen 2 Solar Power Project Draft Environmental Impact Report. February.

San Diego Natural History Museum. 2012. Checklist of Mammal Species Recorded in Imperial County. http://www.sdnhm.org/archive/research/birds/impmamm.html.

Sawyer, John O., Todd Keeler-Wolf, and Julie Evens. 2009. A Manual of California Vegetation. California Native Plant Society Press, June 30; 1,300 pp.

Shuford, W.D. and T. Gardali, editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Snyder, S.A. 1993. Circus cyaneus. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). http://www.fs.fed.us/database/feis/ [2011, January 31].

U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Eds. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center. September.

U.S. Bureau of Land Management (BLM). 2010. Special Status Animals in California, Including BLM Designated Sensitive Species. February 8. http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/wildlife.Par.13499.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2006.pdf

U.S. Fish and Wildlife Service (USFWS). 2012. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31.

2010. Desert Pupfish General Species Information from Arizona Ecological Services Field Office. March. http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Desert%20Pupfish%20RB.pdf

2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. Online version available at http://www.fws.gov/migratorybirds/

Unitt, P. 1984. The Birds of San Diego County. San Diego Society of Natural History. Memoir 13. San Diego, California. 276 pp.

Appendix A

PLANT SPECIES OBSERVED

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Appendix A
PLANT SPECIES OBSERVED
SEVILLE SOLAR

FAMILY	SCIENTIFIC NAME	COMMON NAME
Amaranthaceae	*Tidestromia oblongifolia*	honey sweet
Asteraceae	*Ambrosia dumosa*	white bursage
	Encelia frutescens	rayless encelia
	Hymenoclea salsola	burrobush
	Palafoxia arida	Spanish-needle
	Pluchea sericea	arrow weed
	Stephanomeria pauciflora	wire-lettuce
Boraginaceae	*Tiquilia plicata*	fanleaf crinklemat
Brassicaceae	*Brassica tournefortii**	Saharan mustard
Chenopodiaceae	*Atriplex canescens*	shad-scale
	Atriplex lentiformis	quail saltbush
	Atriplex polycarpa	allscale
	*Chenopodiumalbum**	lamb's quarters
	*Salsola tragus**	Russian thistle
Cyperaceae	*Bolboschoenus maritimus* ssp. *paludosus*	alkali bulrush
Euphorbiaceae	*Chamaesyce polycarpa*	desert sand mat
Fabaceae	*Prosopis glandulosa*	mesquite
	Psorothamnus emoryi	Emory's indigo bush, white dalea
Malvaceae	*Sphaeralcea ambigua*	apricot mallow
Onagraceae	*Camissonia* sp.	sun cup
Poaceae	*Avena fatua*	wild oat
	*Cynodon dactylon**	Bermuda grass
	Leptochloa fusca ssp. *uninervia*	Mexican sprangle-top
	*Phalaris minor**	Mediterranean canary grass
	*Schismus barbatus**	Mediterranean grass
Polygonaceae	*Polygonum* sp.*	knotweed

Appendix A (cont.)
PLANT SPECIES OBSERVED
SEVILLE SOLAR

FAMILY	SCIENTIFIC NAME	COMMON NAME
Solanaceae	*Datura discolor*	desert thornapple
Tamaricaceae	*Tamarix aphylla**	athel
	*Tamarix ramosissima**	saltcedar
Typhaceae	*Typha domingensis*	southern cattail
Viscaceae	*Phoradendron* sp.	mistletoe
Zygophyllaceae	*Larrea tridentata*	creosote bush

*Non-native species

Appendix B

ANIMAL SPECIES OBSERVED

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Appendix B
ANIMAL SPECIES OBSERVED
SEVILLE SOLAR

FAMILY	SCIENTIFIC NAME	COMMON NAME
Invertebrates		
Alaudidae	*Eremophila alpestris*	horned lark
Apidae	*Apis mellifera*	honey bee
Formicidae	*Messor* and *Pogonomyrmex* spp.	harvester ant
Nymphalidae	*Vanessa cardui*	painted lady
(Order) Odonata	Undetermined	dragonfly
Tenebrionidae	Undetermined	darkling beetle
Birds		
Alaudidae	*Eremophila alpestris*	horned lark
Columbidae	*Streptopelia decaocto* *Zenaida asiatica* *Zenaida macroura*	Eurasian collared-dove white-winged dove mourning dove
Corvidae	*Corvus corax*	common raven
Cuculidae	*Geococcyx californianus*	greater roadrunner
Emberizidae	*Amphispiza belli* *Amphispiza bilineata*	sage sparrow black-throated sparrow
Fringillidae	*Carpodacus mexicanus*	house finch
Hirundinidae	*Stelgidopteryx serripennis*	northern rough-winged swallow
Icteridae	*Sturnella neglecta*	western meadowlark
Laniidae	*Lanius ludovicianus*	loggerhead shrike
Odontophoridae	*Callipepla gambelii*	Gambel's quail

Appendix B (cont.)
ANIMAL SPECIES OBSERVED
SEVILLE SOLAR

FAMILY	SCIENTIFIC NAME	COMMON NAME
Birds (cont.)		
Parulidae	*Dendroica coronata*	yellow-rumped warbler
Ptilogonatidae	*Phainopepla nitens*	phainopepla
Tyrannidae	*Sayornis saya*	Say's phoebe
Mammals		
Canidae	*Canis lupus familiaris*	domestic dog
Felidae	*Felis domesticus*	domestic cat
	Lynx rufus	bobcat
Leporidae	*Sylvilagus audubonii*	desert cottontail
	Lepus californicus	black-tailed jackrabbit

Appendix C

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

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Appendix C
EXPLANATION OF STATUS CODES FOR
PLANT AND ANIMAL SPECIES

U.S. Fish and Wildlife Service

FE	Federally listed endangered
FT	Federally listed threatened
PT	Federally proposed threatened
Delisted	No longer federally listed due to recovery
BCC	Birds of Conservation Concern Species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.

U.S. Bureau of Land Management

BLM Sensitive = Species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Federal Endangered Species Act.

California Department of Fish and Wildlife

SE	State listed endangered
ST	State listed threatened
SSC	State species of special concern

Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

Appendix C (cont.)
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

California Native Plant Society Rare Plant Rank Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

.2 = Fairly endangered in California (20 to 80 percent occurrences threatened).

.3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known).

A CA endemic entry corresponds to those taxa that only occur in California.

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

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November 4, 2013 EMA-02

Environmental Management Associates, Inc.
Attn: Dr. Dwight L. Carey, Principal
588 Explorer Street
Brea, CA 92821-3108

Subject: Results of Burrowing Owl Survey for the Seville Solar Project in Imperial County, California

Dear Dr. Carey:

HELIX Environmental Planning, Inc. (HELIX) has completed the required focused burrowing owl (*Athene cunicularia*) survey for the proposed Seville Solar Project (proposed project). The survey was conducted in accordance with the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game [CDFG]) Staff Report on Burrowing Owl Mitigation (CDFG 2012). This letter presents the results of the protocol burrowing owl survey conducted in 2013.

PROPERTY LOCATION AND DESCRIPTION

The proposed 120-megawatt solar project generally occurs within portions of the approximately 2,440-acre Allegretti Farms property located roughly eight miles west of Highway 86 and south of Highway 78 in west-central Imperial County, California (Figure 1). More specifically, the proposed project encompasses an approximately 1,236-acre area within the Allegretti Farms property immediately south of Highway 78, east of the southern terminus of Cahuilla Trail, and west of the southern terminus of Pole Line Road (Figure 2). This 1,236-acre area is herein referred to as the project site or site. The project site is depicted within portions of Sections 15, 22, 23, 25, 26, and 27; Township 12 South; Range 9 East; San Bernardino Baseline and Meridian. In addition, an existing access road to the project site is located on public lands managed by the U.S. Bureau of Land Management (BLM) in Section 14.

The proposed project would consist of the construction, operation, and reclamation of up to 5 solar energy subprojects at the 1,236-acre project site including: (1) a new access road from Highway 78 and internal access roads; (2) an Imperial Irrigation District (IID) electrical switch

station; (3) electrical substations for each of the 5 subprojects; and (4) internal solar development transmission lines to the substations and switch station. Also included as part of the proposed project is a major subdivision/tract map and construction for approximately 0.75 mile of new 92 kV transmission line on the Allegretti Farms property, which would be operated by IID. Lastly, the proposed project includes one off-site element: 2.25 miles of new 92 kV transmission lines for interconnection to the existing IID Anza Substation. This would be placed along an existing line. Construction of the proposed project is expected to start when all required permits are obtained.

METHODS

The focused burrowing owl survey was conducted in accordance with the CDFW guidelines outlined in Appendix D of the Staff Report for Burrowing Owl Mitigation (CDFG 2012). The habitat assessment, burrow survey, and focused owl surveys were conducted between January and June 2013 (Table 1). The burrowing owl survey area consisted of portions of the Allegretti Farms property and the proposed transmission line alignment (Figure 3).

Table 1
SURVEY TIMES AND CONDITIONS

DATE	TIME	SURVEYOR	CONDITIONS	SURVEY
1/29/13	0820-1330	Rob Hogenauer Larry Sward	Partly cloudy, 50°F-62°F, wind 5-10 mph	Habitat Assessment and Burrow Survey
3/19/13	0705-0945	Rob Hogenauer	Partly cloudy, 68°F-79°F, wind 3-6 mph	Survey 1
3/19/13	1000-1400	Rob Hogenauer Larry Sward	Partly cloudy, 80°F-88°F, wind 1-5 mph	Burrow Survey
4/2/13	0645-1000	Rob Hogenauer Jesse Miller	Clear, 69°F-81°F, wind 1-4 mph	Survey 1
4/2/13	1705-1815	Rob Hogenauer Jesse Miller	Partly Cloudy, 86°F-91°F, wind 0-3 mph	
4/3/13	0615-1000	Rob Hogenauer Jesse Miller	Clear, 68°F-84°F, wind 0-2 mph	
4/30/13	0530-1110	Rob Hogenauer Jesse Miller	Clear, 77°F-96°F, wind 2-6 mph	Survey 2
5/29/13	1751-2000	Rob Hogenauer	Clear, 87°F-92°F, wind 3-12 mph	Survey 3
5/30/13	0510-0940	Rob Hogenauer Jesse Miller	Clear, 68°F-81°F, wind 1-3 mph	
6/25/13	1800-1950	Rob Hogenauer	Clear, 95°F-100°F, wind 0-3 mph	Survey 4
6/26/13	0520-0930	Rob Hogenauer Jesse Miller	Clear, 85°-F-94°F, wind 1-3 mph	

F = Fahrenheit, mph = miles per hour

Survey 1 and the burrow survey consisted of walking transects throughout the entire 1,100 acres of potential burrowing owl habitat within the survey area. Surveys 2, 3 and 4 concentrated on the 207 acres of Areas 1, 2 and 3 (Figure 3), along with surveying the outlying burrows. A 150-meter buffer around the survey area was visually inspected via binoculars and spotting scope during all surveys. A radius of approximately 50 meters was surveyed around each outlying burrow or cluster of burrows.

The biologists surveyed transects in the burrowing owl habitat no greater than 20 meters wide. They walked slowly and methodically, closely checking the areas that met the basic requirements of owl habitat, which include:

- Open expanses of sparsely vegetated areas (less than 30 percent canopy cover for trees and shrubs);
- Gently rolling or level terrain;
- An abundance of small mammal burrows, especially those of the California ground squirrel (*Spermophilus beecheyi*); and
- Fence posts, rocks, or other low perching locations.

All potential owl burrows were checked for signs of recent owl occupation. Burrows that have potential to support burrowing owl or that showed signs of burrowing owl use were mapped. Signs of occupied burrows include:

- Pellets/castings (regurgitated fur, bones, and/or insect parts);
- White wash (excrement); and/or
- Feathers.

RESULTS

The initial habitat assessment indicated that approximately 1,100 acres of the project site had potential to be burrowing owl habitat. This habitat was comprised of primarily fallow agriculture and disturbed habitats but also included small amounts of sparsely-vegetated shrub communities. The burrows with potential to support owls mainly occurred within three areas (Areas 1, 2, and 3) totaling 207 acres, along with a number of scattered outlying burrows (Figure 3). Each point on Figure 3 represents a single burrow or a cluster of burrows. Two burrows with potential to support burrowing owl were observed within the proposed transmission line alignment during the habitat assessment. These burrows were noted to have been filled in by windblown debris, off-highway vehicles, or some other incidental method between Surveys 1 and 2. The burrows remained closed for the subsequent surveys and are shown on the map showing potential burrowing owl burrows (Figure 3).

During the habitat assessment on January 29, 2013, a group of three pellets, all deteriorated from time and weather, were observed adjacent to the agricultural basin on the south-central portion of

the site. These pellets were more than a year old and comprised primarily of beetle carapaces and are believed to be from a burrowing owl. The pellets were not associated with a burrow. As no other sign of burrowing owl was observed in the survey area, it is presumed that the pellets were deposited by a migratory owl and not a resident. No burrowing owl or additional burrowing owl sign was observed on or in the immediate vicinity of the survey area. The project site does support burrowing owl habitat and a number of fossorial mammal burrows with potential to support burrowing owl. A pre-construction survey is required to be conducted within 14 days prior to any ground disturbance activities.

Please contact Larry Sward or me if you have any questions.

Sincerely,

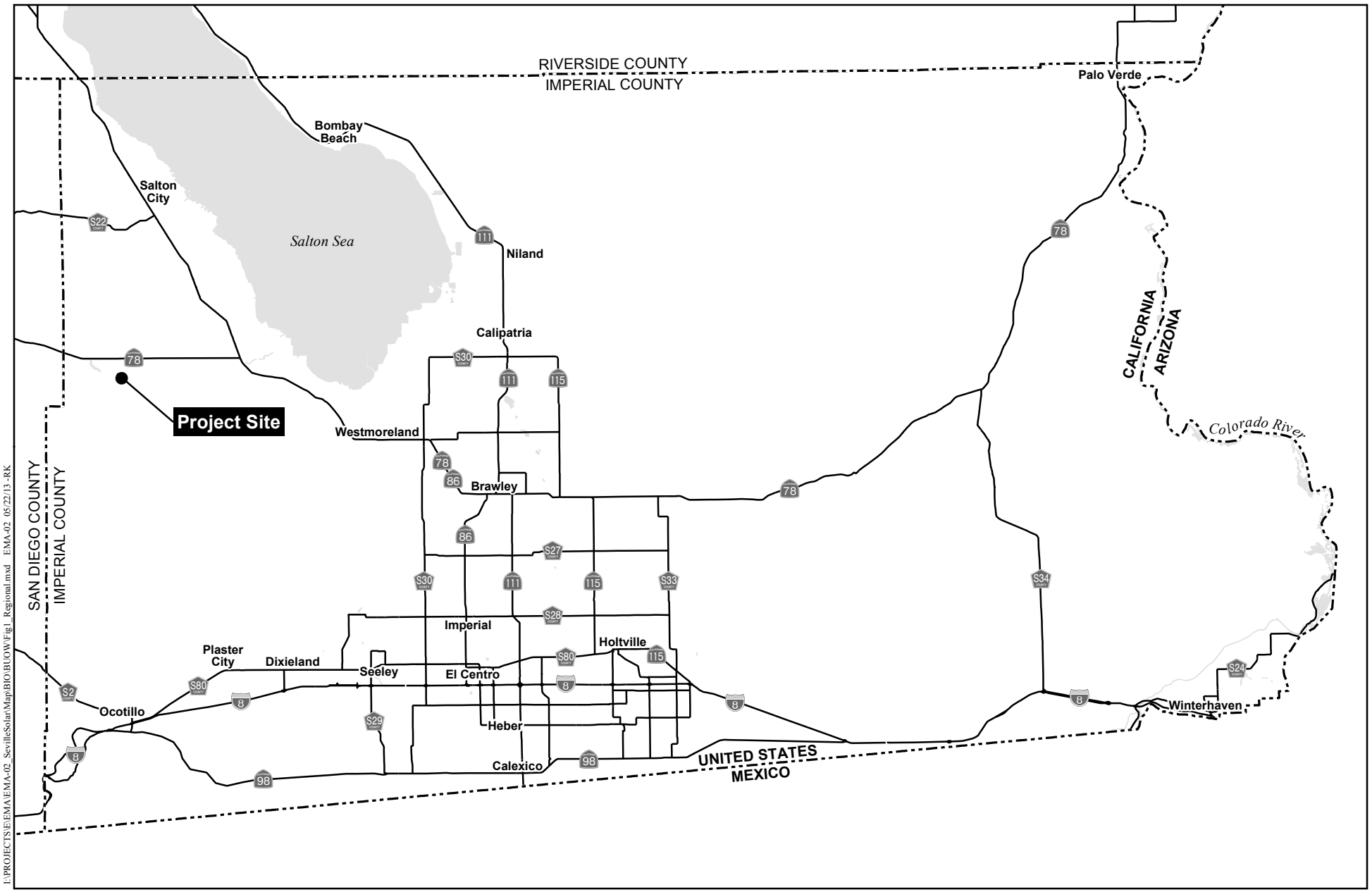
Rob Hogenauer
Wildlife Biologist

Attachments:

Figure 1 Regional Location Map
Figure 2 Project Location Map
Figure 3 Survey Details and Results

LITERATURE CITED

California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resource Agency. March 7.



Regional Location Map

SEVILLE SOLAR PROJECT

HELIX Environmental Planning

Figure 1

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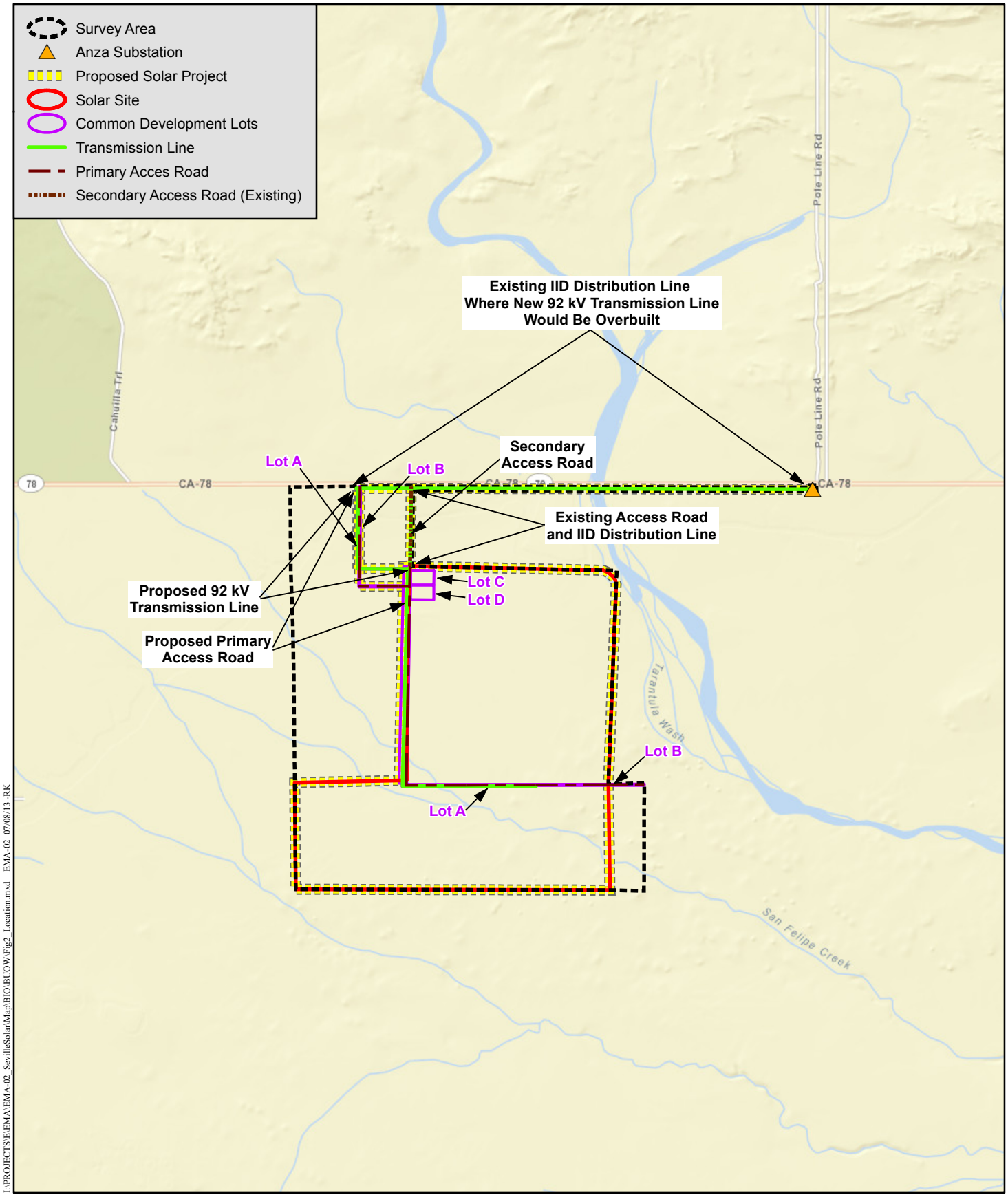

Project Location Map

SEVILLE SOLAR PROJECT

HELIX Environmental Planning

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Figure 2

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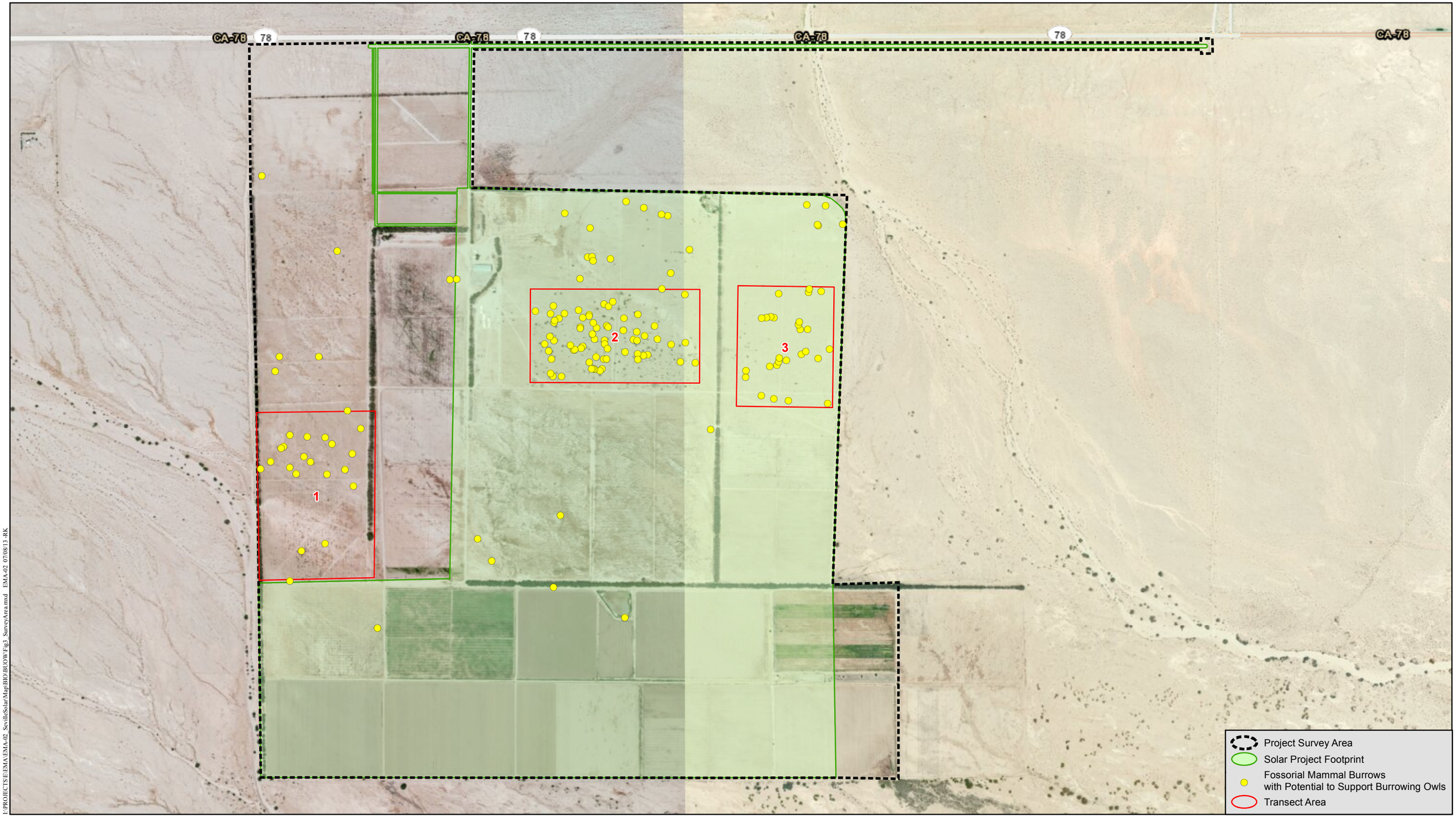

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Survey Details and Results

SEVILLE SOLAR PROJECT

HELIX Environmental Planning

0 1,250 Feet

Figure 3

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Memorandum

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To: Dwight Carey

Date: 21 February 2014 **From:** W. Larry Sward

Subject: Jurisdictional Resources at the Proposed Expansion of the IID Anza Substation

Message:

The IID Anza Substation is currently contained within a fenced area of approximately 0.76 acres (approximately 160 feet east-west by 207 feet north-south) on lands owned by the IID. The proposed modifications to the Anza Substation would include extending the substation western fence line approximately 44 feet to the west, which would create a fenced area of approximately 0.97 acres (approximately 204 feet east-west by 207 feet north-south), which would still be entirely located on lands owned by the IID.

Approximately 25 percent of the expansion area is within the area covered in our January 2014 jurisdictional delineation report. This area overlaps with the 100-foot wide survey area for the transmission line. The proposed substation expansion area outside the transmission line survey limits also was inspected during our jurisdictional delineation on 13 February 2013. At that time we inspected the entire perimeter of the existing substation.

The expansion area consists of relatively flat terrain with scant vegetation. The substation expansion area contains no jurisdictional resources and is well removed from the nearest state or federal waters.

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Memorandum

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Approximately 25 percent of the expansion area is within the area covered in our January 2014 biological technical report. This area overlaps with the 100-foot wide survey area for the transmission line. The proposed substation expansion area outside the transmission line survey limits also was inspected five times including: the general biological resources survey on 11 July 2012, jurisdictional delineation on 13 February 2013, 3 burrowing owl surveys between January through June 2013, and rare plant survey on 19 March 2013. During the general biological surveys, the rare plant survey, and one of the burrowing owl surveys, we inspected the entire perimeter of the existing substation, including the expansion area. During the other burrowing owl surveys only the expansion area was inspected.

The expansion area consists of relatively flat terrain. The vegetation is mapped as creosote bush – white bursage scrub, although it is very sparse due to past and ongoing human related disturbances. No rare plants or burrowing owls were observed in the substation expansion area. Inclusion of this area in the project does not change any of the impact or mitigation conclusions presented in the biological technical report.

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