

Appendix D
Biological Resources Technical Report

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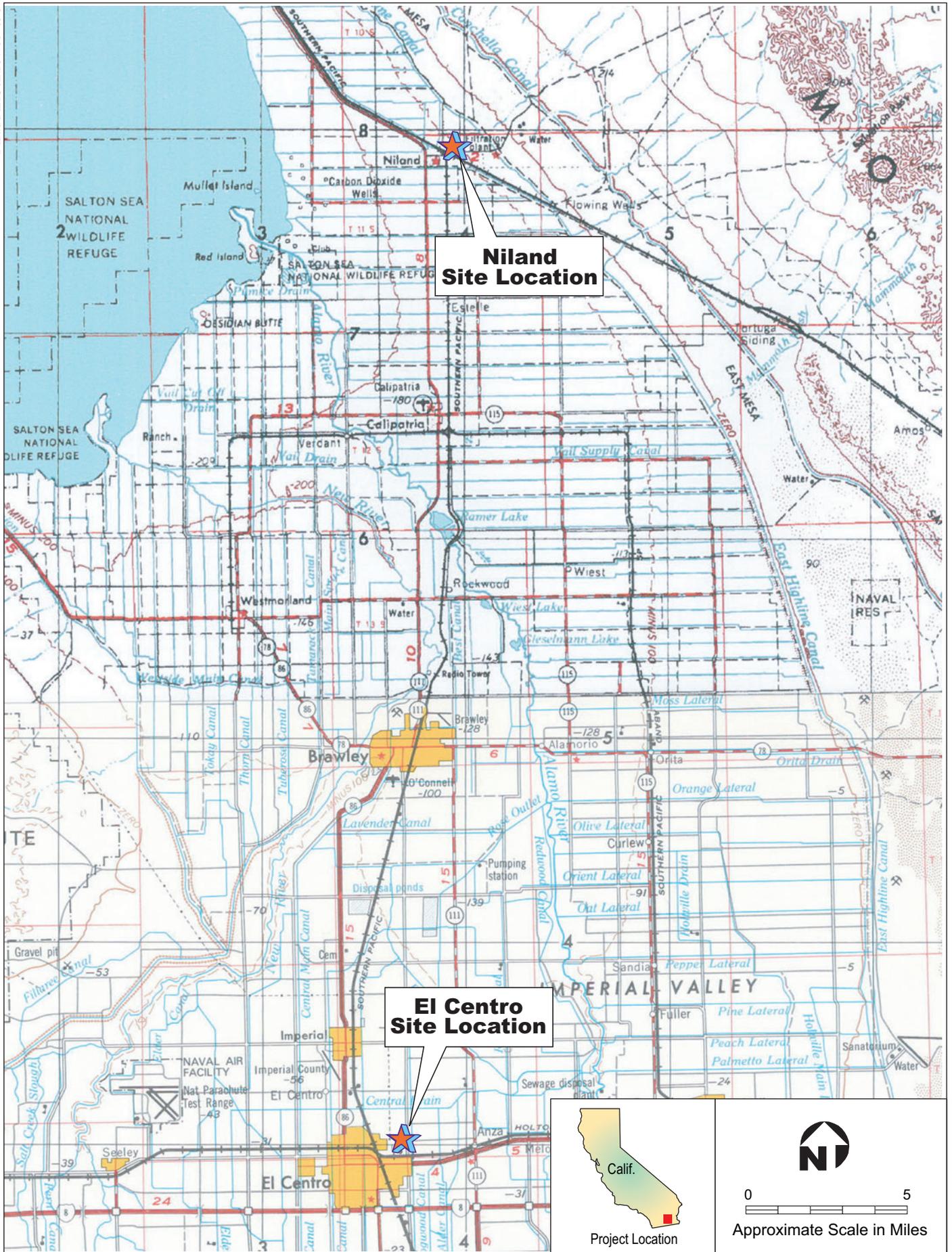
List of Acronyms

CDFG	California Department of Fish and Game
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CSSC	California Species of Special Concern
ECGS	El Centro Generation Station
IID	Imperial Irrigation District
URS	URS Corporation

URS Corporation (URS) was retained by the Imperial Irrigation District (IID), Power Generation Division to characterize the biological resources at the El Centro Generation Station (ECGS) repower site located on East Villa Avenue in El Centro, and the proposed peaker site located on Beal Road near the Town of Niland. Both sites are within Imperial County, California. The site locations are identified in Figure 1, Locations of El Centro and Niland Sites. URS understands that this study will be used by IID to document the current biological resources at the two sites. URS also understands that neither site will involve changes to existing or new linear corridors (natural gas, water, or electric interconnects), and that Project support facilities, such as laydown areas for construction, will be within the designated site boundaries.

The survey areas for both sites were identified in the URS scope of services dated March 10, 2005 prepared by Jeremy Rowland, URS project manager, and includes the existing ECGS site, the Niland site, plus land within 200 feet surrounding these sites. The additional 200 feet was included to evaluate (1) the environmental context of the site, and (2) an area of potential indirect affects due to construction activities. Plant and wildlife biological resources were characterized and documented in this report based on a literature review and a field survey conducted by Donald Mitchell, URS senior biologist. For Mr. Mitchell's detailed resume, please see Attachment B, Project Resume for Donald Mitchell. Mr. Mitchell was accompanied in the field at the ECGS site by IID representative, Charles Canales, and at the Niland site by Mr. Canales and Mr. Kevan Hutchinson, from IID.

URS completed a supplemental biological resource survey of the property surrounding the ECGS, which is owned by IID. The results of this supplemental study are presented in Attachment C, Supplemental Biological Survey.



Imperial Irrigation District
Power Generation Division
URS Corporation

Source:
U.S.G.S. 1:25,000 Maps
Salton Sea, CA, NV-1959 (Rev 1969)
El Centro, CA, AZ-1958 (Rev1977)

Figure 1. **LOCATIONS OF EL CENTRO AND NILAND SITES**

April
2005

2.1 LITERATURE SEARCH

As part of the biological resources characterization study for the sites, a literature search was conducted. Prior to conducting field surveys, office investigations were performed to gather existing information on sensitive botanical and wildlife species that are known or that could occur in the vicinities of the sites. The office investigation included reviews of: (1) available literature; (2) the reports from the California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDDB); the California Native Plant Society (CNPS) Inventory On-line (CNPS 2005); and (4) the IID Water Conservation and Transfer Project, Habitat Conservation Plan (IID 2002). A list of potentially occurring special-status species was prepared based on the literature search.

The review of available literature included standard species field guides and floras including: Powell and Hogue (1979), Stebbins (1985), Peterson (1990), Jameson and Peeters (1988), Abrams and Farris (1960), Hickman (1993), Crampton (1974), and Munz (1974).

2.2 VEGETATION CLASSIFICATION AND MAPPING

On March 31, 2005, URS biologist Donald Mitchell conducted vegetation classification and mapping at the two sites. The efforts focused on classification of natural vegetation types, whereas non-native vegetation, agricultural, horticultural, and disturbance areas were not rigorously assessed. Lists of dominant plant species were developed. A survey for special-status plant species was also conducted. The data collection method at the ECGS site included a tour of the facility grounds conducted by Mr. Canales. The data collection method at the Niland site was conducted by walking several east/west transects. The mapping task included a characterization of the sites and a general characterization of the site vicinity to a distance of 200 feet. The vegetation classification system was based on Holland (1986).

2.3 WILDLIFE SURVEYS

Wildlife surveys were conducted concurrently with the vegetation classification and mapping surveys. The survey focused on the detection of special-status wildlife species. At the ECGS site, IID facilities personnel, including Manual Velarde, operations supervisor, were interviewed regarding their on-site wildlife occurrence knowledge. Wildlife presence and sign were identified and documented in the field at both sites. Signs included scat (fecal material), pellets (raptor species regurgitation), tracks, and burrows. Binoculars were used to aid in bird identification. Potential habitat characteristics for sensitive wildlife species were evaluated for suitability to support the special-status species identified by the literature review.

3.1 VEGETATION COMMUNITIES

3.1.1 ECGS Site

The ECGS site is mostly disturbed bare ground, existing facilities, paved areas, and water reservoirs. The vegetation, ground disturbance, and infrastructure features of the site are mapped in Figure 2, Draft Biological Resources Map, ECGS Site. There are no natural plant communities that occur on-site. The only native plant species that occurred as scattered patches was alkali-mallow (*Malvella leprosa*). There are no special-status plant species that were observed or that are expected to occur on the site. A description of the horticultural plantings on the site and in the adjacent areas is omitted from this report because these areas are not considered habitats for native species. A thumbnail description of adjacent areas within 200 feet of the site includes:

- North: East Villa Avenue, agricultural fields and operations, disturbed grounds.
- East: Dogwood Road, agricultural fields and operations, disturbed grounds.
- South: Railroad tracks, disturbed grounds, light industrial areas.
- West: Vacant lot, disturbed grounds.

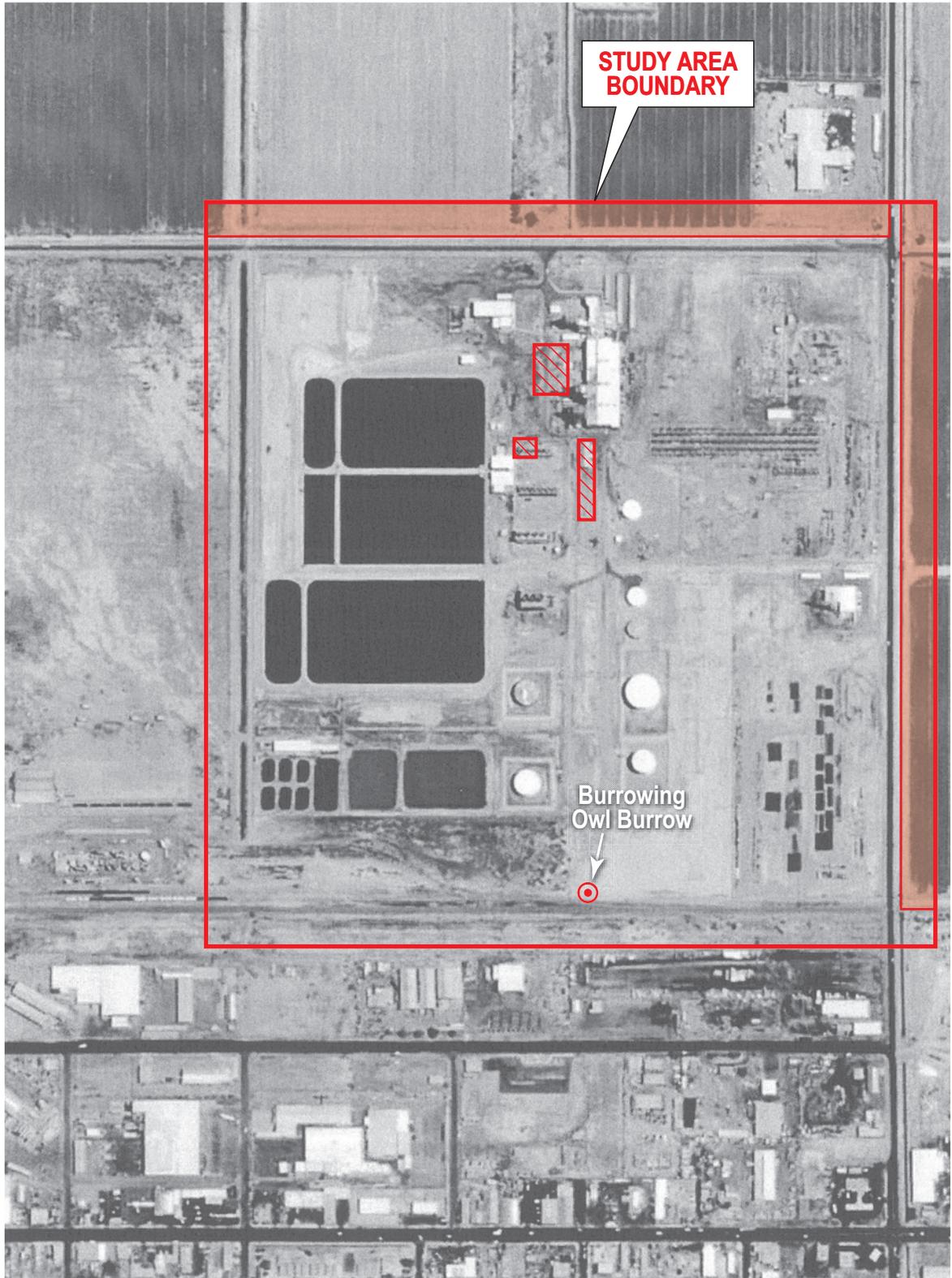
There are no native vegetation communities within 200 feet of the site. The environmental setting of the ECGS site to a radius of 1.0 mile can be characterized as urban and suburban communities and agricultural land uses.

3.1.2 Niland Site

The vegetation, ground disturbance, and infrastructure features of the Niland site are mapped in Figure 3, Draft Biological Resources Map, Niland Site. There is land disturbance associated with an existing IID substation and a storage area for transmission line tower scrap located in the westernmost quarter of the site. However, the majority of the Niland site is in a relatively natural condition and vegetated by a mixed Sonoran creosote bush scrub and desert saltbush scrub vegetation type (Holland 1986). The dominant shrub species are generally widely spaced and include creosote bush (*Larrea tridentata*), shadscale (*Atriplex confertifolia*), allscale (*A. polycarpa*), desert thorn (*Lycium* sp.), and burro-weed (*Ambrosia dumosa*).

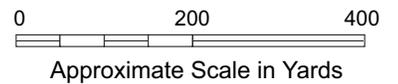
Within the open areas between the shrubs, annual plantain (*Plantago ovata*), red-stemmed filaree (*Erodium cicutarium*), and Mediterranean grass (*Schismus* sp.) are the dominant low-growing herb and grass stratum species that occur. A stand of salt cedar (*Tamarix* sp.) occurs along Cuff Road. Other plant species observed are included in Attachment A. A thumbnail description of adjacent areas within 200 feet of the site includes:

- North: Contiguous natural vegetation.
- East: Cuff Road, rural residential, disturbed grounds.
- South: Beal Road, natural vegetation, disturbed grounds.
- West: Contiguous natural vegetation, disturbed grounds.



Legend

-  New Facilities Locations
-  Agricultural Land
-  Disturbed Ground



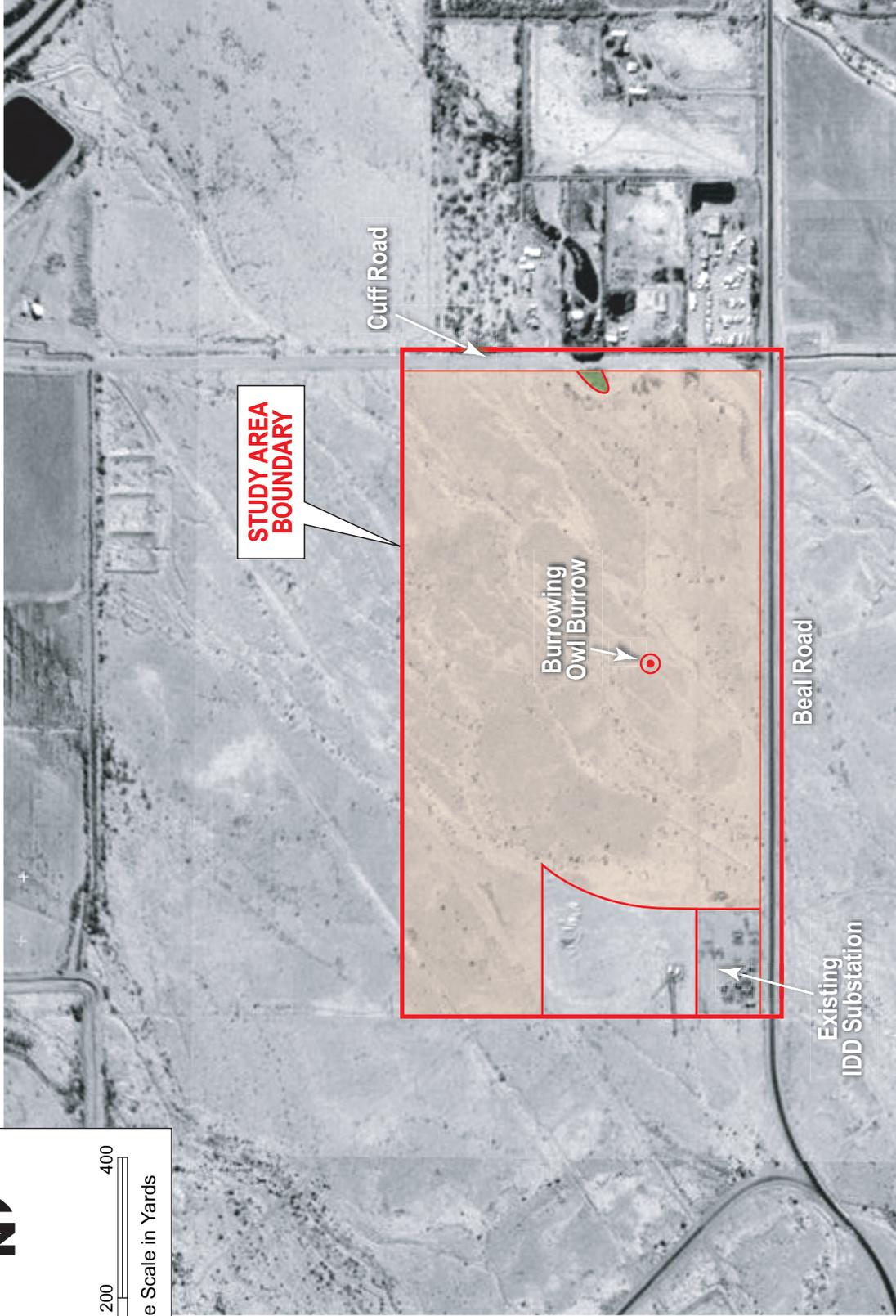
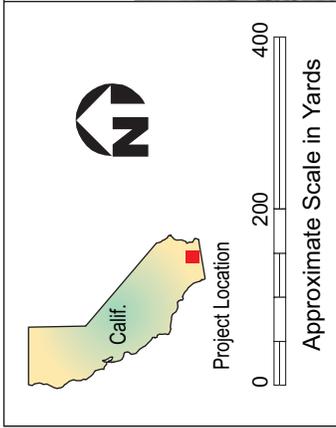
Imperial Irrigation District
Power Generation Division

URS Corporation

Source:
TerraServerUSA
El Centro, CA
Dated 5/28/2002

Figure 2. **DRAFT BIOLOGICAL
RESOURCES MAP**

April
2005



- Legend**
- Mixed Sonoran Creosote Bush Scrub and Saltbush Scrub
 - Disturbed Ground
 - Salt Cedar

Imperial Irrigation District
Power Generation Division
URS Corporation

Source:
TerraServerUSA
2 km East of Niland, CA
Dated 6/8/2002

Figure 3. **DRAFT BIOLOGICAL RESOURCES MAP**

April 2005

3.2 WILDLIFE SPECIES AND HABITAT RESOURCES

Wildlife species and habitat resources observed on the two sites are described below. Refer to Attachment A for a list of wildlife species observed during the field surveys.

3.2.1 ECGS Site

The ECGS site is partly in a developed condition and partly in a disturbed condition and there is a moderate level of ongoing human activities. These factors and the low level of available habitat resources limit the potential of the site to support native wildlife species. Characteristic wildlife that are adapted to such conditions that were observed, reported, or are expected at the site include house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), rock dove (*Columba livia*), Northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), greater roadrunner (*Geococcyx californianus*), and great-tailed grackle (*Quiscalus mexicanus*). There are no native species of reptiles or mammals that are expected to regularly occur on the site.

3.2.2 Niland Site

The Niland site is mostly in a natural condition with contiguous areas of native habitats in the four compass directions within a 1-mile radius. The site is considered to have approximately equivalent habitat resources values as those habitats of a similar type in the general area and, therefore, about the same potential to support wildlife species. As such, it is not expected that there are any wildlife species that would occupy the site preferentially to the adjacent areas.

Characteristic wildlife species that were observed or are expected at the site include side-blotched lizard (*Uta stansburiana*), desert iguana (*Dipsosaurus dorsalis*), western whiptail (*Cnemidophorus tigris*), desert horned lizard (*Phrynosoma platyrhinos*), long-nosed leopard lizard (*Gambelia wislizenii*), zebra-tailed lizard (*Callisaurus draconoides*), western diamondback rattlesnake (*Crotalus atrox*), western patch-nosed snake (*Salvadora hexalepis*), long-nosed snake (*Rhinocheilus lecontei*), gopher snake (*Pituophis melanoleucus*), night snake (*Hypsiglena torquata*), coachwhip (*Masticophis flagellum*), Say's phoebe (*Sayornis saya*), western meadowlark (*Sturnella neglecta*), white-crowned sparrow (*Zonotrichia leucophrys*), black-throated sparrow (*Amphispiza bilineata*), sage sparrow (*Amphispiza belli*), black-tailed gnatcatcher (*Polioptila melanura*), rock wren (*Salpinctes obsoletus*), common raven (*Corvus corax*), lesser nighthawk (*Chordeiles acutipennis*), burrowing owl (*Athene cunicularia*), greater roadrunner (*Geococcyx californianus*), common ground-dove (*Columbina passerine*), mourning dove (*Zenaida macroura*), Gambel's quail (*Callipepla gambelii*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), Audubon's cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), cactus mouse (*Peromyscus eremicus*), desert pocket mouse (*Perognathus penicillatus*), Merriam's kangaroo rat (*Dipodomys merriami*), Botta's pocket gopher (*Thomomys bottae*), round-tailed ground squirrel (*Spermophilus tereticaudus*), and coyote (*Canis latrans*). There are no species of bats that are expected to use the site.

3.3 SPECIAL-STATUS SPECIES OCCURRENCES

As used in this report, the term “special-status species” includes the following classifications:

- Federally listed as endangered.
- Federally listed as threatened.
- State-listed as endangered.
- State-listed as threatened.
- Federal Category 1 candidate for listing as endangered or threatened.
- Federal Species of Concern (a “term-of-art” for former Category 2 candidates).
- State candidate for possible listing.
- California Species of Special Concern.
- California Department of Fish and Game Fully Protected.
- Species that meet the criteria for listing, even if not currently included on any list, as described in Title 14 California Code of Regulations, Chapter 3 Guidelines, Article 20 Definitions, Section 15380 (d) of CEQA.
- Species protected by other sections of the California Fish and Game Code.
- Species that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring.
- A species population in California that may be on the periphery of its range, but is threatened with extirpation in California.
- A species closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.).
- Species that are designated as special status, sensitive, or declining species by other state or federal agencies, or a non-governmental resources conservation organization.
- California Native Plant Society Lists:
 - List 1B: Plants rare, threatened, or endangered in California and elsewhere.
 - List 2: Plants rare, threatened, or endangered in California but more common elsewhere.

Based on the literature search, results of the field surveys, and conversations with IID personnel, potentially occurring special-status species were identified. Refer to Table 3.1, Potentially Occurring Special-Status Plant Species in the Site Vicinities, and Table 3.2, Potentially Occurring Special-Status Wildlife Species in the Site Vicinities, for potentially occurring special-status plant and wildlife species, respectively. The records search of the CNDDDB did not indicate that known occurrences of special-status species have been documented for either of the two sites. Some categories of special-status species identified in the literature search including fish, waterfowl, and wetland associated birds were removed from consideration in this report for the Niland site because suitable habitat is not present.

TABLE 3.1
POTENTIALLY OCCURRING SPECIAL-STATUS PLANT SPECIES IN THE SITE VICINITIES¹

Species	Status ²	Closest Documented Locations of Occurrence	Year of Documented Occurrence	Potential for Occurrence On-site
ECGS Site				
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	1B	Calexico vicinity	Late 1800s	Discountable. Open sandy places in creosote bush scrub not present on-site.
Abrams's spurge <i>Chamaesyce abramsiana</i>	2	Calexico, Brawley and Heber vicinities	Early 1900s	Discountable. Suitable sandy areas in desert scrub habitat not present on-site.
Rock nettle <i>Eucnide rupestris</i>	2	Mount Signal and Painted Gorge vicinities	1994	Discountable. Habitat is cliff crevices in desert mountain ranges.
Hairy stickleaf <i>Mentzelia hirsutissima</i>	2	Mount Signal vicinity	1961	Discountable. Coarse rubble, talus slope, alluvial fans and washes not present on-site.
Sand food <i>Pholisma sonorae</i>	1B	Meloland vicinity	1915	Discountable. Sand dune habitat not present on-site.
Niland Site				
Abrams's spurge <i>Chamaesyce abramsiana</i>	2	Niland and Wister vicinities	1912	Very low. Preferred habitat of sandy sites within desert scrub vegetation basically absent on-site.
Munz's cholla <i>Opuntia munzii</i>	1B	Chocolate Mountains Aerial Gunnery Range and vicinity	1998	Discountable. Suitable habitat of sandy and gravelly soils of washes and along canyon walls of mountain ranges not present on-site.

¹ California Natural Diversity Database Records Search for USGS El Centro, Brawley, Holtville West, Heber, Seeley, Niland, Wister, Iris Wash, and Iris 7.5-minute Series Quadrangles.

² Status:

CNPS (California Native Plant Society) Lists:

1B – Plants rare, threatened or endangered in California or elsewhere.

2 – Plants rare, threatened or endangered in California but more common elsewhere.

**TABLE 3.2
POTENTIALLY OCCURRING SPECIAL-STATUS WILDLIFE SPECIES IN THE SITE VICINITIES¹**

Species	Status ²	Closest Documented Locations of Occurrence	Year of Known Occurrence	Potential for Occurrence On-site
ECGS Site				
Razorback sucker <i>Xyrauchen texanus</i>	FE/SE	All American Canal, East Highland Canal	None cited	Low, but not discountable within on-site open-water reservoirs. Periodically reported as incidental occurrences of entrained individuals from the Colorado River within the IID irrigation water distribution system.
Colorado River toad <i>Bufo alvarius</i>	CSSC	Holtville and Meloland	1912	Discountable. On-site reservoirs unlikely breeding habitat due to presence of fishes that are predatory on eggs and young.
Flat-tailed horned lizard <i>Phrynosoma mcalli</i>	CSSC	Signal Mountain, Holtville, Seeley, and Brawley vicinities	Historic museum specimens; most recent from 1971	Discountable. No suitable habitat, including fine sandy washes and flats, is present on-site or in the vicinity, and the site is likely not within current species range distribution.
Burrowing owl <i>Athene cunicularia</i>	CSSC	Numerous occurrences in El Centro vicinity generally within agricultural settings and along IID irrigation water system canals, ditches, berms, access roads, etc.	2005	One pair observed at burrow along southern fence line during field survey. Otherwise, carrying capacity of the site is regarded as low relative to the agricultural areas located in the Imperial Valley.
Ferruginous hawk <i>Buteo regalis</i>	CSSC	Meadows Union School, 4 miles east of El Centro	2003	Discountable. Desert scrub habitat with adequate small mammal prey base not present on-site.
Crissal thrasher <i>Toxostoma crissale</i>	CSSC	Brawley vicinity	1910	Discountable. Preferred dense mesquite-ironwood-arrowweed-desert willow wash vegetation not present on-site.
Yellow warbler <i>Dendroica petechia brewsteri</i>	CSSC	Calexico vicinity	1921	Discountable. Riparian woodland habitat not present on-site.
California brown pelican <i>Pelecanus occidentalis</i>	FE/SE	Open-water reservoirs on-site	2005	Reported by IID facilities staff to incidentally occur on-site during migrations to opportunistically forage for fish. Not resident on-site.
Yuma clapper rail <i>Rallus longirostris yumanensis</i>	FE/ST	New River, near El Centro Naval A.S., Seeley	1989	Discountable. Cattail and tule marsh not present within reservoirs on-site.

TABLE 3.2
 POTENTIALLY OCCURRING SPECIAL-STATUS WILDLIFE SPECIES IN THE SITE VICINITIES¹

Species	Status ²	Closest Documented Locations of Occurrence	Year of Known Occurrence	Potential for Occurrence On-site
Colorado Valley woodrat <i>Neotoma albigula venusta</i>	None	Seeley vicinity	1909	Discountable. Cactus and mesquite habitat not present on-site.
American badger <i>Taxidea taxus</i>	None	Silsbee	1911	Discountable. Sufficient prey base (burrowing rodents), friable soils for den sites, and open undisturbed areas not present on-site.
Niland Site				
Colorado River toad <i>Bufo alvarius</i>	CSSC	Niland and Wister vicinities	1916	Discountable. No temporary pools or irrigation ditches present on-site.
Desert tortoise <i>Gopherus agassizii</i>	FT/ST	Chocolate Mountains Aerial Gunnery Range and vicinity	2005	Unlikely to occur in the Imperial Valley area to the west of the East Highline Canal which includes the site.
Flat-tailed horned lizard <i>Phrynosoma mcalli</i>	CSSC	Durmid and Frink vicinities	1995 and 1966	Unlikely to occur. Preferred suitable habitat including fine sandy washes and flats is absent on-site and the site is likely not within the current species range distribution regarded as eastward of the East Highline Canal.
Mountain plover <i>Charadrius montanus</i>	CSSC	Salton Sea National Wildlife Refuge and adjacent fields	1974	Unlikely. Preferred grassland, plowed field, grain field, and sod farm habitats not present on-site.
Yellow warbler <i>Dendroica petechia brewsteri</i>	CSSC	Niland and Wister vicinities	1952	Low as a transient during migration. Discountable as a resident breeding bird on-site.
Southwestern willow flycatcher <i>Empidonax traillii traillii</i>	SE	Niland and Wister vicinities	1952	Low as a transient during migration. Discountable as a resident breeding bird on-site.
Yellow-breasted chat <i>Icteria virens</i>	CSSC	Wister Unit Wildlife Refuge	1961	Low as a transient during migration. Discountable as a resident breeding bird on-site.
Black-tailed gnatcatcher <i>Polioptila melanura</i>	None	West Pond, Imperial Waterfowl Management Area	1968	Moderate foraging potential in desert scrub habitat on-site. Low breeding potential because preferred mesquite-palo verde-ironwood woodland habitat not present on-site.
Crissal thrasher <i>Toxostoma crissale</i>	CSSC	West Pond, Imperial Waterfowl Management Area	1969	Low as a transient during regional movement. Discountable as a breeding bird because preferred dense mesquite-ironwood-arrowweed-desert willow wash vegetation not present on-site.

**TABLE 3.2
POTENTIALLY OCCURRING SPECIAL-STATUS WILDLIFE SPECIES IN THE SITE VICINITIES¹**

Species	Status ²	Closest Documented Locations of Occurrence	Year of Known Occurrence	Potential for Occurrence On-site
Burrowing owl <i>Athene cunicularia</i>	CSSC	Observed on-site and known to be common in the Imperial Valley region	2005	Burrow located during the field survey. Later confirmation by Keyvan Hutchinson, IID, of a breeding pair with one egg. Otherwise, carrying capacity of the site is regarded as low relative to the agricultural areas located in the Imperial Valley.
American badger <i>Taxidea taxus</i>	None	Imperial Waterfowl Management Area	1937	Low, but not discountable. Sufficient prey base (burrowing rodents) considered not likely present on-site.
Nelson's bighorn sheep <i>Ovis canadensis nelsoni</i>	None	Chocolate Mountains Aerial Gunnery Range and vicinity	2005	Unlikely to occur in the Imperial Valley area to the west of the Coachella Canal which includes the site.

¹ California Natural Diversity Database Records Search for USGS El Centro, Brawley, Holtville West, Heber, Seeley, Niland, Wister, Iris Wash, and Iris 7.5-minute Series Quadrangles.

² Status:

FE = Federal endangered

FT = Federal threatened

SE = State endangered

ST = State threatened

CSSC = California Species of Special Concern

3.3.1 Special-Status Plant Species

No federal or state special-status plant species were observed on either the ECGS site or the Niland site during the surveys. The absence of sensitive plant species observations is believed to be due to human-caused reductions in historic range distributions and a general absence of suitable on-site habitat conditions and not due to poor germination attributable to unfavorable climatic conditions since rainfall was plentiful in 2005. Plant species that are documented in the CNDDDB to have occurred in the region of the two sites are presented in Table 3.1, Potentially Occurring Special-Status Plant Species in the Site Vicinities, and information is provided regarding sensitivity status, closest documented locations of occurrences, year of known occurrence, and assessments of potential for occurrence on-site. All of the plant species in Table 3.1 are assessed to have an occurrence probability ranking of discountable or very low for the two sites. As such, no additional surveys for special-status plant species are considered to be necessary.

3.3.2 Special-Status Wildlife Species

With the exception of burrowing owls that were observed at both sites, and the California brown pelican which is reported by IID staff as incidentally occurring at the water reservoirs on the ECGS site, no federal or state special-status wildlife species were observed on either of the sites during the surveys. Wildlife species that are documented in the CNDDDB to have occurred in the region of the two sites, and species observed during the surveys or reported by IID staff to occur on the sites, are presented in Table 3.2, Potentially Occurring Special-Status Wildlife Species in the Site Vicinities. Information is provided in the table regarding sensitivity status, closest documented locations of occurrences, year of known occurrence, and assessments of potential for occurrence on-site. Of the 23 species records included in Table 3.2, most are assessed to have discountable and low potentials for occurrence at the two sites.

Further discussion is provided below regarding those species that are considered to have known occurrences or a reasonable expectation for on-site occurrences, the potential for affects to these species, and preliminary mitigation suggestions if needed.

Burrowing Owl

A burrowing owl pair was observed along the southern fence line of the ECGS facility (Figure 2, Draft Biological Resource Map, ECGS Site). The burrow is located about 800 feet away from the sites proposed for new construction, so potential affects are expected to be minimal. A burrowing owl burrow and pellets were observed at the Niland site at approximate GPS coordinates utm 11S 0640169 / 3679147 or N 33 14.636 / W 115 29.728 (Figure 3, Draft Biological Resources Map, Niland Site). However, visual confirmation of owl presence could not be confirmed. Accordingly, Kevan Hutchinson from the IID Environmental Group returned to the location on April 4, 2005, and used a fiber optic scope to inspect the interior. The results indicated that the burrow was occupied by a breeding pair and at least one egg was observed.

IID may consider it prudent to adhere to either of the following two suggested courses of action to minimize potential affects to burrowing owls on the two sites:

1. Monitor owl activity on-site, establish a 500-foot setback from active burrows, and implement construction activities to occur outside the breeding season (February 1 through August 30).
2. Follow the protocol for burrowing owl burrow closure specified in *Appendix D, Procedures for Removing Burrowing Owls*, in the *IID Water Conservation and Transfer Project Final Environmental Impact Report/Environmental Impact Statement Habitat Conservation Plan*, June 2002.

California Brown Pelican

Pelicans are reported by IID facilities staff to incidentally occur at the water reservoirs on the ECGS site during migrations to opportunistically forage for fish. They are not resident on-site and no direct affects to pelican survival are expected. There is potential for an incremental perturbation of opportunistic foraging activity during the construction phase. However, this potential affect is considered not to be significant because far greater foraging opportunities occur at the Salton Sea. No mitigation is considered to be needed.

Razorback Sucker

This fish species is periodically reported as incidental occurrences of entrained individuals from the Colorado River within the IID irrigation water distribution system. The species is regarded as not likely to breed in the IID system, including terminal reservoirs such as those that occur on the ECGS site. These reservoirs will not be subject to construction disturbance and no direct affects, or indirect affects, are expected to any entrained individuals that might be present. No mitigation is considered to be needed.

3.3.3 Other Fish and Game Code Special-Status Categories

Raptor Species

Some species of raptors may use the ECGS site and the Niland site for foraging, roosting, or breeding activities. The burrowing owl, American kestrel, and the red-tailed hawk are cited as examples. Section 3503.5 of the California Fish and Game Code states: “It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” As such, it is possible that Section 3503.5 of the code could be invoked by development activities at the two sites. Appropriate mitigation for compliance with Section 3503.5 would likely include: (1) scheduling construction activity to occur outside of the breeding seasons for any raptor species that become resident on a site, and/or (2) dedication of a minimum construction setback from an active nesting location following consultation with the California Department of Fish and Game.

Nesting Songbirds

Section 3503 of the California Fish and Game Code states: “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” Similar to the previous discussion, appropriate mitigation for compliance with Section 3503 would likely include: (1) scheduling construction activity to occur outside of the breeding seasons for any songbird species that become resident on a site, and/or (2) dedication of a minimum construction setback from an active nesting location following consultation with the California Department of Fish and Game.

Migratory Nongame Birds

Section 3513 of the California Fish and Game Code states: “It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.” Through compliance with the code sections cited previously, it is considered unlikely that Section 3513 of the code would be invoked by development of the two sites.

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- California Native Plant Society Inventory On-line (CNPS). 2005. <http://www.cnps.org/>
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Attachment A
Plant and Wildlife Species Lists

PLANT SPECIES LIST

ECGS Site

<u>Scientific Name</u>	<u>Common Name</u>
<i>Malvella leprosa</i>	alkali-mallow

Niland Site

<i>Ambrosia dumosa</i>	burro-weed
<i>Atriplex confertifolia</i>	shadscale
<i>A. polycarpa</i>	allscale
<i>Bromus rubens</i>	red brome
<i>Encelia frutescens</i>	bush encelia
<i>Erodium cicutarium</i>	red-stemmed filaree
<i>Larrea tridentata</i>	creosote bush
<i>Lycium</i> sp.	desert thorn
<i>Plantago ovata</i>	annual plantain
<i>Schismus</i> sp.	Mediterranean grass
<i>Sonchus oleraceus</i>	annual sowthistle
<i>Tamarix</i> sp.	salt cedar

WILDLIFE SPECIES LIST

ECGS Site

Birds:

<i>Athene cunicularia</i>	burrowing owl
<i>Columba livia</i>	domestic pigeon
<i>Carpodacus mexicanus</i>	house finch
<i>Columba livia</i>	domestic pigeon
<i>Corvus brachyrhynchos</i>	American crow
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Geococcyx californianus</i>	greater roadrunner
<i>Mimus polyglottos</i>	northern mockingbird
<i>Passer domesticus</i>	house sparrow
<i>Quiscalus mexicanus</i>	great-tailed grackle

Attachment A
Plant and Wildlife Species Lists

Scientific Name

Common Name

Sturnus vulgaris

European starling

Zenaida macroura

mourning dove

Niland Site

Reptiles:

Callisaurus draconoides

zebra-tailed lizard

Cnemidophorus tigris

western whiptail

Dipsosaurus dorsalis

desert iguana

Gambelia wislizenii

long-nosed leopard lizard

Phrynosoma platyrhinos

desert horned lizard

Uta stansburiana

side-blotched lizard

Crotalus atrox

western diamondback rattlesnake

Hypsiglena torquata

night snake

Masticophis flagellum

coachwhip

Pituophis melanoleucus

gopher snake

Rhinocheilus lecontei

long-nosed snake

Salvadora hexalepis

western patch-nosed snake

Birds:

Amphispiza belli

sage sparrow

Amphispiza bilineata

black-throated sparrow

Athene cunicularia

burrowing owl

Buteo jamaicensis

red-tailed hawk

Callipepla gambelii

Gambel's quail

Carpodacus mexicanus

house finch

Chordeiles acutipennis

lesser nighthawk

Columbina passerine

common ground-dove

Corvus brachyrhynchos

American crow

Corvus corax

common raven

Falco sparverius

American kestrel

Geococcyx californianus

greater roadrunner

Mimus polyglottos

northern mockingbird

Passer domesticus

house sparrow

Scientific Name

Common Name

Polioptila melanura

black-tailed gnatcatcher

Salpinctes obsoletus

rock wren

Sayornis saya

Say's phoebe

Sturnella neglecta

western meadowlark

Sturnus vulgaris

European starling

Zenaida macroura

mourning dove

Zonotrichia leucophrys

white-crowned sparrow

Mammals:

Canis latrans

coyote

Lepus californicus

black-tailed jackrabbit

Dipodomys merriami

Merriam's kangaroo rat

Perognathus penicillatus

desert pocket mouse

Peromyscus eremicus

cactus mouse

Spermophilus tereticaudus

round-tailed ground squirrel

Sylvilagus audubonii

Audubon's cottontail

Thomomys bottae

Botta's pocket gopher

Attachment B
Project Resume for Donald Mitchell

AREAS OF EXPERTISE

- CEQA/NEPA Environmental Impact Assessment
- Corps Section 404 Waters and Wetlands Jurisdictional Determination
- CDFG Section 1601-03 Jurisdiction Determination
- Revegetation Plan Design and Implementation
- Field Botany, Ecology and Vegetation Mapping
- Wildlife Ecology and Habitat Quality Assessment
- Focused Sensitive Plant and Wildlife Species Surveys
- RFP scope-of-work and cost proposal development

EDUCATION

University of California, Riverside, CA, B.S., Botany, 1986

University of California, Riverside, CA, M.S., Botany, 1989

PROFESSIONAL HISTORY

2004 – Present URS Corp., Santa Barbara, CA; Senior Project Biologist

REPRESENTATIVE EXPERIENCE

Mr. Mitchell has conducted biological and environmental assessments at project sites in Alameda, Calaveras, Fresno, Kern, Los Angeles, Madera, Monterey, Nevada, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura counties in California, as well as in the states of Arizona, Nevada, Wyoming, and Utah. He has conducted the following types of assessments: rare plant species surveys; plant species inventory and vegetation mapping; revegetation plan preparation and implementation; wildlife species general surveys; focused sensitive wildlife species surveys and habitat quality assessments; sensitive wildlife species monitoring and relocations; small mammal trapping studies; Corps Section 404 waters/wetlands delineation and jurisdictional determination; CDFG 1601-3 stream and riparian habitat assessments and jurisdictional determinations; Corps and CDFG permit Application preparation and coordination; and preparation of biological assessment reports and sections of EIS and EIR documents for federal, state, and/or county agency CEQA and NEPA environmental review. Mr. Mitchell's duties have also included providing project management support as well as developing scopes and budgets for responding to RFPs.

DETAILED CORE SKILLS OR DETAILS BY ECONOMIC SECTOR AND BY PROJECT

Flood Control and Watershed Management

- **Santa Clara River Enhancement and Management Plan (SCREMP).** Development of a comprehensive plan for managing and preserving the physical, ecological, and economic resources within the 500-year floodplain of a 100-mile-long reach of the Santa Clara River in southern California.
- **Logan Wash Improvement Project.** Focused desert tortoise surveys and monitoring; Clark County, Nevada; Clark County Flood Control District.
- **Arroyo Simi Flood Control Project.** Biological surveys, vegetation mapping, technical illustration, EIR preparation; Simi Valley, Ventura County; Ventura County Flood Control Department.

2002 – 2004 AMEC Earth & Environmental, Inc., Riverside, CA; Senior Project Manager

2000 – 2002 Coachella Valley Water District, Coachella, CA; Biologist

1998 – 2000 Self-Employed (as M&C Biological Consultants, Goleta CA); Biological Consultant

1991 – 1998 Dames & Moore, Santa Barbara, CA; Staff Biologist

1989 – 1991 Tierra Madre Consultants, Riverside, CA; Staff Botanist

PROFESSIONAL QUALIFICATIONS

California Community Colleges Instructors Credential in Botanical Sciences #22 2MIT 001 - 367333; June 25, 1990 - valid for life

Society for Ecological Restoration. "Desert Restoration, Arid Ecosystems in the Southwest." Boulder City, NV, November 1996

Wetland Training Institute, Inc. "Wetland and Riparian Restoration, Creation and Monitoring." Sacramento, CA, October 1991.

- **Borrego Wash Channel Improvements Project.** Coastal California gnatcatcher, coastal cactus wren, and Quino checkerspot butterfly surveys and habitat assessments; Orange County; Irvine Ranch Water District.
- **Mojave River Improvement Project.** Waters/wetlands delineation, riparian habitat assessment; Victorville, San Bernardino County; San Bernardino County Flood Control District.
- **Galivan Retarding Basin and Associated Oso Creek Improvements Project.** Sensitive wildlife species survey and habitat suitability assessment, waters/wetlands delineation, riparian habitat assessment; Mission Viejo, Orange County; Orange County Environmental Management Agency.
- **Tahquitz Creek Flood Control Channel Improvement Project.** Pre-construction salvage of native plant species vegetative stocks and seed for post-construction phase revegetation; Riverside County; Riverside County Flood Control and Water Conservation District.
- **Wilson Creek Bridge Project Mitigation Monitoring Project.** Riparian revegetation success criteria monitoring; Riverside County; Riverside County Flood Control and Water Conservation District.
- **San Jacinto River Improvement Project.** Preparation of riparian habitat mitigation plan, preparation of Stephens' kangaroo rat mitigation plan, and preparation of population status report and mitigation plan for the San Jacinto Valley saltbush and thread-leaved brodiaea; Riverside County; Riverside County Flood Control and Water Conservation District
- **Coachella Valley Stormwater Channel Slope Protection Project Section 404 Delineation.** Conducted "waters/wetlands" delineation and prepared report submitted to the Corps; Riverside County; CVWD.

Domestic Water Development and Supply

- **Coachella Canal Lining Project.** Preparation of FEIS/R, Environmental Commitment Plan, and Revegetation Strategy; participation in ESA Section 7 Informal Consultation, NEPA Record of Decision, and CEQA Findings of Fact and Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program processes and document preparation; project

Wetland Training Institute, Inc. "Federal Wetland Regulation." San Francisco, CA, February 1990.

Wetland Training Institute, Inc. "Preparation for Taking the Corps' Delineators Certification Program Test." Ontario, CA, January 1994.

The Central and Southern California Chapters of the Wildlife Society. "Biology and Inventory Techniques of Amphibians in Central and Southern California - a Workshop." Santa Barbara, CA, May 1993.

American Fisheries Society. "Introduction to Aquatic Invertebrate Biocriteria and Standardized Procedures for Rapid Biological Assessment." San Diego, CA, February 1998.

U.C. Davis University Extension. "California Watersheds: Protecting Water Quality and Aquatic Habitat." Sacramento, CA, March 1999.

Environmental Coordinator; desert tortoise and flat-tailed horned lizard surveys; Section 404 and Section 1601 coordination; Imperial and Riverside counties; CVWD.

- **Metropolitan Water District Westside Conveyance Project.** General biological survey; rare plant surveys including population mapping conducted for spiny rush, Peirson's morning glory, Catalina mariposa lily, and Lyon's pentachaeta; vegetation mapping; waters/wetlands delineation, riparian habitat assessment; technical report and EIR preparation; Ventura and Los Angeles counties; Metropolitan Water District.
- **Metropolitan Water District San Diego Pipeline #6 Project.** Waters/wetlands delineation, riparian habitat assessment; Riverside and San Diego counties; Metropolitan Water District.
- **Colorado River Commission (CRC) River Mountains Tunnel Water Supply Project for Las Vegas Valley, Nevada.** Desert tortoise monitoring; Clark County, Nevada; CRC.
- **Kern County Water Agency Long-term Water Supply Project.** Habitat/vegetation mapping; sensitive species habitat assessment; Tipton kangaroo rat trapping study; Kern County; Kern County Water Agency.
- **Imperial Irrigation District – San Diego County Water Authority 300 acre-feet Water Transfer Project HCP.** Represented CVWD interests with respect to the proposed water transfer; Imperial County; CVWD.
- **Lower Colorado River Multiple Species Habitat Conservation Plan.** Member of Biological Workgroup; represented CVWD interests pertaining to effects to biological species resulting from allocation and diversion of Colorado River waters to SoCal water agencies; Riverside and Imperial counties; CVWD.
- **Coachella Valley Water District Water Management Plan.** Development of baseline information pertaining to potential impacts to desert pupfish, Yuma clapper rail, and California black rail resulting from plan implementation; Riverside County; CVWD.
- **Vista del Mar Union School District Water Line Project Revegetation, Erosion Control, and Reclamation Plan (RECRP) Project.** Waters/wetlands delineation, riparian habitat assessment, RECRP

preparation and implementation monitoring, native grassland habitat restoration and transplanting implementation, Gaviota tarplant mitigation plan surveys and monitoring; Gaviota, Santa Barbara County; Vista del Mar Union School District/Chevron Company.

Electrical Power

- **Mead/McCullough - Victorville/Adelanto Transmission Project.** Waters /wetlands delineation, focused desert tortoise pre-construction surveys and construction monitoring, tortoise den excavations and relocations, rare plant surveys and population monitoring, revegetation monitoring, compliance report preparation; Nevada and California; Los Angeles Department of Water and Power (LADWP).
- **Edison Utilities Facilities Acquisition Project.** Rare plant survey; San Bernardino National Forest, San Bernardino County; SoCal Edison Co.

Department of Defense

- **Nellis AFB Target Site Project.** Desert tortoise monitoring, abandoned target site revegetation and restoration plan preparation and implementation; Nellis AFB, Clark County, Nevada; USAF.
- **Nellis AFB Wetland, Spring and Floodplain Inventory Project.** Development of workplan to inventory wetlands, springs and floodplains on the Nellis AFB range; Nellis AFB, Clark County, Nevada; USAF.
- **NAS Miramar Land Use Management Plan.** Biological resources research and baseline data development; NAS Miramar, San Diego County; USMC.
- **Vandenberg AFB, Septic System Sites Revegetation Project.** Revegetation plan preparation; Vandenberg AFB, Santa Barbara County; USAF.
- **California Commercial Spaceport Project Wetlands Assessment, Vandenberg AFB.** Waters/wetlands delineation; Vandenberg AFB, Santa Barbara County; Lockheed Environmental/USAF.

Transportation and Infrastructure

- **Union Pacific Railroad – Southern Pacific Railroad Merger Project.** General research and report preparation addressing sensitive species and jurisdictional waters

issues pending the merger; western regional United States; Union Pacific Railroad.

- **Isabel Avenue Biological Assessment Project.**
Vegetation mapping, general biological survey, waters/wetlands delineation, riparian habitat assessment, NES preparation; Livermore, Alameda County; Caltrans.
- **Highway 1 Improvement Project, Castroville to the Santa Cruz County Line, Wetland Assessment.**
Waters/wetlands delineation, draft EIR preparation/revision for final EIR; Monterey County; Caltrans.
- **State Highway 14 Improvement Project.**
Waters/wetlands delineation, Mohave ground squirrel Cumulative Human Impact Evaluation Format (CHIEF) survey, NES preparation; Kern County; Caltrans.
- **State Highway 33 Improvement Project.**
Waters/wetlands delineation; NES preparation; Fresno County; Caltrans.
- **State Highway 41 Improvement Project.** Sensitive amphibian survey for western spadefoot toad and California tiger salamander; vernal pool delineation and botanical assessment; Madera County; Caltrans.
- **State Highway 49 Improvement Project.**
Waters/wetlands delineation, riparian habitat assessment, oak tree inventory, general botanical assessment, rare plant surveys; Nevada County; Caltrans.
- **State Highway 58 Improvement Project.** Biological resources survey of eight culvert sites; Kern County; Caltrans.
- **State Highway 79 Improvement Project.** General biological survey, Stephens' kangaroo rat survey, rare plant survey, sensitive species habitat assessment, waters/wetlands delineation, riparian habitat assessment, IS/NES preparation, compliance/mitigation monitoring, revegetation plan preparation; western Riverside County; Riverside County Transportation Commission/Caltrans.
- **State Highway 178 Improvement Project.** Oak tree inventory, rare plant habitat assessment, general wildlife assessment, small mammal trapping study,

- **State Highway 180 Improvement Project.** Waters/wetland delineation, NES preparation; Fresno County; Caltrans.
- **Arroyo Seco and Piney Creek Bridges Replacement Project.** Sensitive species surveys and habitat assessments, waters/wetlands delineation, riparian habitat assessment; Monterey County; Federal Highways Administration.
- **Boyd Road and Norrish Road Bridges Replacement Project.** Sensitive species surveys and habitat assessments, burrowing owl relocation; Imperial County; Imperial County Department of Public Works.
- **Scott Road/Washington Street Realignment Project.** Biological assessment; Riverside County; Office of Road Commissioner & County Surveyor, County of Riverside Road & Survey Department.
- **Project.** Waters/wetlands delineation, riparian habitat assessment, rare plant survey, response to comments researcher; Los Angeles County; Elsmere Corporation/USFS/Los Angeles County Department of Regional Planning.

Attachment C
Supplemental Biological Survey

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- Figure 8 Burrowing owl observation on Parcel C.

List of Acronyms

ECGS	El Centro Generating Station
SPPE	Small Power Plant Exemption

The purpose of this supplemental biological survey at five sites located adjacent to the ECGS Site is to support the Unit 3 Repower Project. The five parcels are depicted on Figure 1, Biological Resources Map. These five parcels were identified by IID subsequent to biological survey work that was conducted at the ECGS Site on March 31, 2005, and that has been developed as Section 6.3, Biological Resources, in the Small Power Plant Exemption (SPPE) Application; accordingly, this supplemental biological survey is appended as a support document for the SPPE Biological Resources section and the Biological Resources Technical Report. The five sites were originally identified as potential parcels for construction parking, materials laydown, and storage. However, as discussed in the SPPE Application all Temporary Construction Areas will be within the existing and previously disturbed ECGS Site.

The focus of the supplemental biological survey is to characterize the habitat characteristics and assess the potentials for supporting special-status plant and wildlife species. As described in Section 6.3.1, Affected Environment, and in Table 6.3-1, Potentially Occurring Special-Status Plant Species in the Site Vicinities, of the SPPE, the ECGS Site and vicinity are not considered to represent viable habitat for sustaining any rare plant species that may have had historic range distributions that included the five adjacent parcels largely due to the conversion of lands to agricultural and urban uses. Similarly, as described in Section 6.3.1 and in Table 6.3-2, Potentially Occurring Special-Status Wildlife Species in the Site Vicinities, of the SPPE, land alteration has largely eliminated the natural habitat types that supported endemic wildlife species, but has created habitat opportunities for other special-status wildlife species due to the availability of water and insect biomass as a consequence of large-scale agricultural production in the Imperial Valley. Based on review of Section 6.3.1, the *Water Conservation and Transfer Project Final Environmental Impact Report/Environmental Impact Statement, Habitat Conservation Plan, June 2002* (IID 2002), and correspondence with USFWS (2006), the three species that were considered to have potentials to occur at the five parcels were burrowing owl (*Athene cunicularia hypugea* [= *Athene cunicularia*]), mountain plover (*Charadrius montanus*), and American badger (*Taxidea taxus berlandieri*). The discussions of the other special-status wildlife species in Section 6.3.1, as well as other categories of wildlife species such as raptors and migratory birds that are addressed in Section 6.3.1, under Impact BIO 5, are considered applicable and adequate to the five parcels and, as such, receive no further discussion in this supplemental report. The rationale for this consideration is that while several of these species are acknowledged as likely to periodically occur within the Project vicinity, they are not considered likely to preferentially rely on-site resources to the exclusion of similar resources available within the regional setting of vast tracts of agricultural lands, the associated irrigation water supply and drain system, and the relictual patches of desert scrub and desert dry wash habitats. As such, development at any of the five parcels is not considered likely to represent a noteworthy amount of habitat loss in a regional context that could constitute jeopardy to the continued existence of these species. Similarly the potentials for federal and state defined “take” are regarded as discountable for all these identified species.

1.1 PARCEL DESCRIPTIONS

The five parcels that are the subject of this supplemental biological study are identified and briefly described below and are depicted on Figure 1, Draft Biological Resources Map. Representative photographs depicting site characteristics at each parcel are included below as Figures 2 through 7. The five sites are identified as follows:

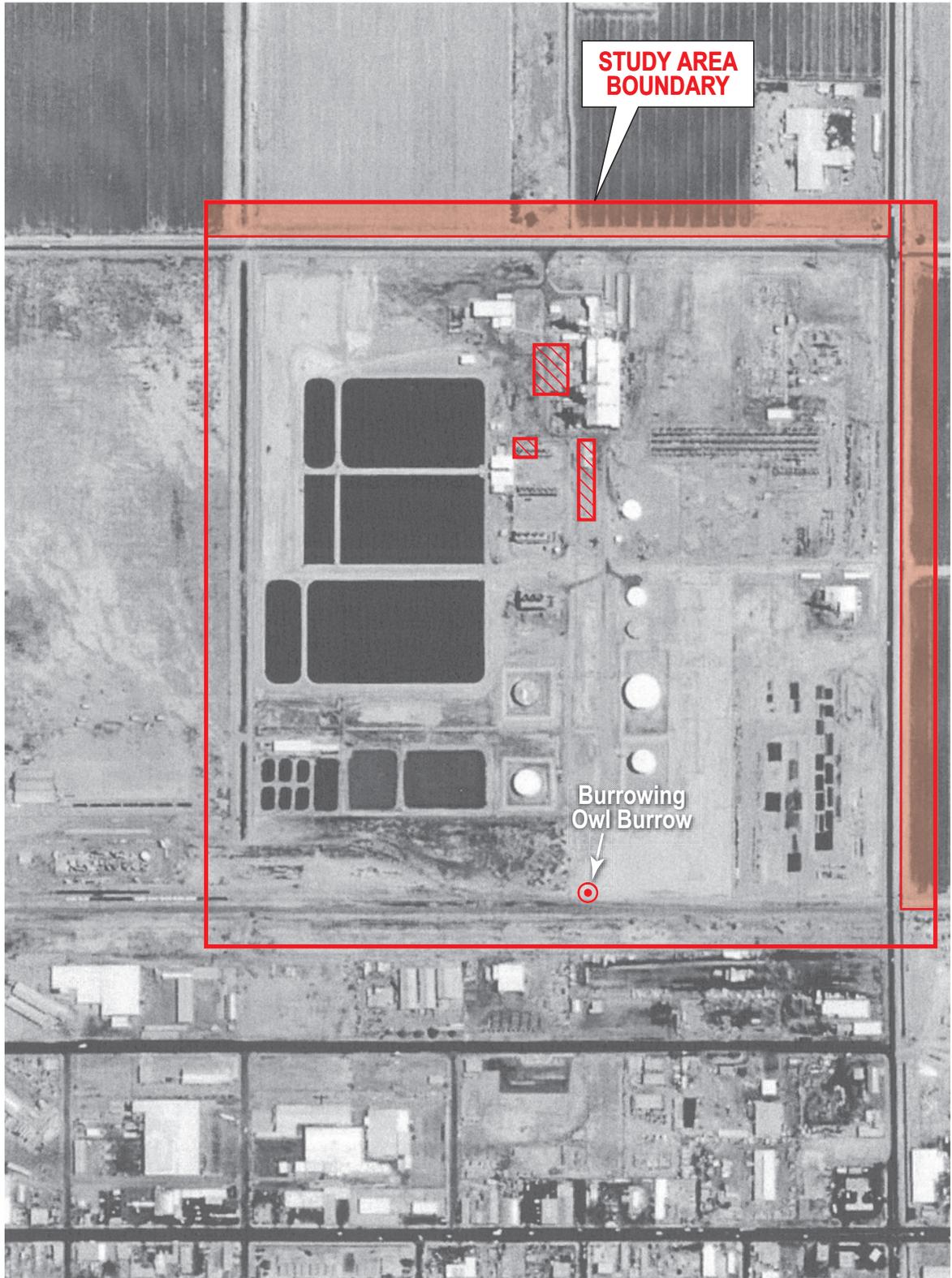
- 1) Parcel A (17-acre site)
- 2) Parcel B (20-acre site)
- 3) Parcel C (58-acre site)
- 4) Parcel D (33-acre site)
- 5) Parcel E (40-acre site)

Generally, all five parcels and the ECGS Site occur on level, highly disturbed lands at about 52 feet below sea level. The parcels are located adjacent to the residential, industrial, and commercial developed areas of the City of El Centro on the south and west, and to the agricultural developed areas of the Imperial Valley on the north and east.

1) Parcel A (17-acre site)

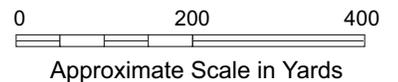
The parcel occurs north of East Villa Avenue and the ECGS Site. Site features include:

- Recently cropped hay field
- Antenna tower located off-site near northwestern corner (see Figure 1, Draft Biological Resources Map)
- Commercial agribusiness building located off-site near southeastern corner (see Figure 1, Draft Biological Resources Map).
- Perimeter roads
- Perimeter not fenced
- Irrigation supply and drain infrastructure



Legend

-  New Facilities Locations
-  Agricultural Land
-  Disturbed Ground



Imperial Irrigation District
Power Generation Division

URS Corporation

Source:
TerraServerUSA
El Centro, CA
Dated 5/28/2002

Figure 1. **DRAFT BIOLOGICAL
RESOURCES MAP**

April
2005



Figure 2

Parcel A – 17 Acres. Northward view of western portion of the parcel from along East Villa Avenue. Parcel D is adjacent in the left side of the frame. An antenna tower occurs outside of the parcel near the northwestern corner.

2) Parcel B (20-acre site)

The parcel occurs west of Dogwood Road and to the southeast of the ECGS Site. Site features include:

- Graded and graveled surface area
- Compacted and unvegetated substrate
- Equipment and materials storage areas
- Transmission lines
- Fenced perimeter around site



Figure 3

Parcel B – 20 Acres. Southwestern view from Dogwood Road of northern portion of the parcel.

3) Parcel C (58-acre site)

The parcel occurs south of East Villa Avenue and east of the ECGS Site. Site features include:

- Highly disturbed and largely unvegetated substrate except for about a 7-acre patch of sparse alkali scrub along northern boundary
- Previous land use consisted of a safflower processing facility
- Scattered piles of wood, concrete, and metal debris
- Residential area adjacent to the west of the parcel and commercial operations are along the southern portion of the parcel (see Figure 1, Draft Biological Resources Map)
- Fenced perimeter around parcel



Figure 4
Parcel C – 58 Acres. Northeastern view from the southern portion of the parcel.
The ECGS Site is in the distance.

4) Parcel D (33-acre site)

The parcel occurs north of East Villa Avenue and the ECGS Site. Site features include:

- Cropped hay field at sometime in the past; haybale row in northwestern corner of parcel (see Figure 6, Central 5 Drain). Northern view along drain with Parcel D located to the east and Parcel E located to the west. Haybale row on Parcel D visible in upper right-hand corner of frame. Dirt piles on Parcel E visible on left-hand side of frame.
- Ruderal vegetation and saltgrass are the prevalent recolonizers of the parcel
- Saltbush scrub vegetation occurs as a > 4-acre patch along eastern parcel boundary
- Demolished structure, foundations, rubble, debris, and refuse piles occur on about 1-acre in the southeasternmost corner of the parcel
- Perimeter roads
- Perimeter not fenced
- Irrigation supply and drain infrastructure
- Central 5 Drain occurs along western border of parcel (see Figure 6, Central 5 Drain). Northern view along drain with Parcel D located to the east and Parcel E located to the west.

Haybale row on Parcel D visible in upper right-hand corner of frame. Dirt piles on Parcel E visible on left-hand side of frame.



Figure 5
Parcel D – 33 Acres. Southeastern view from the northern portion of the parcel.
The ECGS Site is in the distance.



Figure 6

Central 5 Drain. Northern view along drain with Parcel D located to the east and Parcel E located to the west. Haybale row on Parcel D visible in upper right-hand corner of frame. Dirt piles on Parcel E visible on left-hand side of frame.

5) Parcel E (40-acre site)

The parcel occurs north of East Villa Avenue and northwest of the ECGS Site. Site features include:

- Indicators of tillage but not recently cropped
- Ruderal vegetation elements are the primary recolonizers of the site
- Perimeter roads
- Perimeter not fenced
- Irrigation supply and drain infrastructure
- Trucks observed piling dirt along eastern parcel boundary



Figure 7

Parcel E – 40 acres. Northeastern view from the southern portion of the parcel along East Villa Avenue. Piles of dirt visible to the right of the open field area.

1.2 RELATIONSHIPS TO MAIN PROJECT SITE AND PROJECT VICINITIES

The five parcels are related to the main Project Site in terms of proximity and general similarity in physical characteristics. All sites are flat terrain with similar substrate conditions and all have undergone various degrees of land use alteration for agricultural, commercial, or related purposes. The proximity of the five parcels and the ECGS Site to other similar areas in the vicinity indicates that wildlife species that may potentially use these parcels would do so based on the following two factors: (1) similarities in habitat attributes on-site to those in adjacent areas that may serve as attracting factors for sensitive wildlife species, and (2) the proximity of the parcel to reported occurrences and to utilized habitats in the adjacent areas that may provide translocational opportunities.

A survey of biological resources and site conditions was conducted at all five parcels on March 1, 2006, by Donald Mitchell, URS Senior Biologist. Mr. Mitchell was provided access and escorted in a vehicle at Parcels B and C by IID representative Mike Taylor. Parcels A, D, and E have no access limitations and Mr. Mitchell surveyed these parcels solo.

2.1 LITERATURE REVIEW

The literature review for this supplemental biological survey included the sources identified in Section 6.3.6, References, of the SPPE and the reader is directed to review that section, as needed. The letter from the USFWS (2006) which identified the burrowing owl and mountain plover as federal species of interest for the Project constitutes the most recent new source included in the literature review (see Section 6.0, References, below).

2.2 FIELD SURVEY

The survey consisted of visiting each of the five parcels and characterizing the site conditions as summarized by the bulleted entries under Section 1.1, Parcel Descriptions, above. An aerial figure depicting the five parcels was marked-up to depict relevant site characteristics and that figure was later developed as Figure 1, Draft Biological Resources Map. Representative photographs of site conditions were taken, as included in Section 1.1, above.

2.2.1 General Biological Resources

Where vegetation elements were present at each of the parcels, notations regarding prevalent species and qualitative cover estimates were recorded. Similarly, where wildlife species were present or indicated by sign, notations were recorded. The general condition of the vegetation and wildlife habitats were assessed for ecological functions and values.

2.2.2 Special Status Species

Preliminary general assessments of the potentials of the various parcels to support the three special status wildlife species under consideration in this supplemental biological survey were formulated during the field survey on the basis of observations of site features and habitat attributes. A photograph of the burrowing owl observed on Parcel C was taken and is included in Section 3.2.1, Burrowing Owl, below.

This section presents the results of the supplemental biological resources survey at the five parcels. Overall, the potentials for biological resources richness and abundance have been greatly reduced from the historic natural assemblages of native desert plants and wildlife that occurred in this region over a century ago. Crop cultivation and irrigation practices and urban development have altered the native soil condition and, thus, substantially reduced or eliminated its capacity to support rare desert plant species. Also, proliferation of several persistent weed species has displaced and largely eliminated the potentials for rare native desert plants to compete, reproduce, and recruit from the soil seed bank. Similarly, a different assemblage of mixed non-native and native wildlife species that are adapted to the ecological niches provided by urban and agricultural environments have replaced the wildlife associations that occurred at the five parcels over a century ago. For some species, such as burrowing owl, mountain plover, herons, and egrets, the high productivity of insect biomass (e.g., crickets, grasshoppers, beetles, etc.) and the ready availability of water and prey in the irrigation canals and ditches, has provided an ecological benefit for sustaining their local populations and during migrations.

3.1 GENERAL BIOLOGICAL RESOURCES

Generally, the five parcels do not support native vegetation types that are classifiable according to a system such as those of Sawyer and Keeler-Wolf (1995) or Holland (1986). Parcels C, D, and E have some representative elements of plant species that are common natives to the region, however, these occur as dispersed plants, marginally along features such as drains, and as small, isolated clumps. None of these areas individually, nor in a cumulative capacity, constitute suitable habitat for special-status species; however, they do provide some measure of habitat functions and values for supporting common wildlife species such as lagomorphs (rabbits and hares). Low numbers and low frequencies of common species of native and non-native birds are also expected to use these areas. The noteworthy biological attributes of the five parcels, including plant and wildlife species observations, are summarized below:

Parcel A: Cropped area, possibly for hay production, so mostly ruderal plants occur at the field margins. The parcel generally does not constitute habitat that is valuable for common wildlife species that are characteristic of the Project region (see Section 6.3.1, Affected Environment, in the SPPE). No noteworthy wildlife species observations; however, species described for other parcels would likely use this area also. Overall, the parcel is considered low quality habitat for regional common wildlife species.

Parcel B: There are no noteworthy biological resources on the parcel and the site is not capable of sustaining wildlife species and habitats.

Parcel C: With the exception of about 7 acres along the northern boundary of the parcel which supports sparse, low growing sea-blite (*Sueda* spp.) shrubs, the majority of the parcel is cleared, unvegetated land. Piles of debris occur in the southernmost portion of the parcel. A burrowing owl was observed at one of these debris piles (see Figure 8, Burrowing owl observation on Site C); however, there was no burrow located on-site and this bird is considered likely to be from the ECGS Site (see Figure 1, Draft Biological Resources Map). There were no noteworthy observations of wildlife species and sign so the site is regarded as marginal quality habitat for wildlife species.

Parcel D: Area cropped in the past, likely for hay production (i.e., haybale row occurs in northwestern corner of parcel). Saltgrass (*Distichlis spicata*) appears to be recolonizing the site

along with ruderal components. There are a few tamarisk trees that occur in the southeastern corner of the parcel that may provide some limited cover and nesting opportunities for common bird species. A relictual patch of saltbush shrubs (*Atriplex lentiformis*) occurs on an approximate 4-acre strip along the eastern edge of the parcel. A black phoebe (*Sayornis nigricans*) was observed in a strip of salt cedar (*Tamarix* spp.) and arrow-weed (*Pluchia sericea*) along the ditch that occurs along the northern border of the parcel. The only other bird observations were American crow (*Corvus brachyrhynchos*), greater roadrunner (*Geococcyx californianus*), and mourning dove (*Zenaida macroura*). Overall, the parcel is considered low quality habitat for regional common wildlife species.

Parcel E: Area cropped in the past, likely for hay production. Ruderals are recolonizing the site; however, due to the dried condition of the vegetation, closest-fit identification indicated mustards (*Brassica* spp., *Sisymbrium* spp.) and horseweed (*Conyza Canadensis*) are among the dominant components. There are a few scattered palo verde (*Cercidium* spp.) shrubs on the parcel; however, these do not constitute potential nest sites for birds. Cottontail (*Sylvilagus auduboni*) and jackrabbit (*Lepus californicus*) were observed on the parcel. Generally, it is noted that Parcels A, C, D, and E may support gophers (*Thomomys bottae*), although no direct observations were specifically recorded. Overall, the parcel is considered low quality habitat for regional common wildlife species.

3.2 SPECIAL-STATUS SPECIES

Results of the surveys and assessment of the potentials of the various parcels to support the three special-status wildlife species under consideration in this supplemental biological survey are provided in this section. Of the three species including burrowing owl, mountain plover, and American badger, only the owl was observed.

3.2.1 Burrowing Owl (*Athene cunicularia hypugea* [= *Athene cunicularia*])

State Status: Species of Special Concern

Federal Status: None

For the sake of brevity in this section, the reader is directed to the life history discussion of the burrowing owl that is presented in Section 6.3.1, Affected Environment, in the SPPE Application. The discussion below will focus on the potentials for occurrences at the five parcels.

The burrowing owl observed on Parcel C (see Figure 8, Burrowing owl observation on Parcel C) is believed to be non-resident to this site because no burrow was observed. Furthermore, when the bird was approached, it flew towards the ECGS Site in the direction of the known burrow location on that site (see Figure 7.2-2 in the SPPE). Since one pair of owls were observed at a burrow along the southern fenceline of the ECGS Site during the March 31, 2005 field survey, it is presumed that the owl on Parcel C is one of that pair out foraging. The carrying capacity of the ECGS, B, and C sites are regarded as low relative to the agricultural areas located in the larger regional setting of the Imperial Valley. While burrowing owls were not observed on Parcels A, D, and E, these sites are regarded as having moderate potentials for supporting burrowing owls because habitat attributes are present such as open sparsely-vegetated areas, embankments along irrigation ditches and drains, insect prey (i.e., crickets, grasshoppers, etc.),

relatively low levels of human activities, contiguity with occupied habitats in the region, and features such as the haybale row and the dirt mounds that may represent potential opportunities for occupation.



Figure 8
Burrowing owl observation on Parcel C.

3.2.2 Mountain plover (*Charadrius montanus*)

State Status: Species of Special Concern

Federal Status: None (except USFWS Bird of Conservation Concern designation)

This small 8 to 9 ½ inches long (20-24 cm) songbird is long-legged and sandy-brown in color. The breeding adult has a black forecrown, white forehead, and thin black eye line. In winter adults and young birds, the face is plain with a conspicuous dark eye. In all plumages, there is a whitish wing stripe, whitish wing linings, and a black band near the tail tip. Nesting birds produce, usually, three dark olive eggs, heavily spotted with brown, in a shallow depression on the ground, sometimes lined with bits of cow dung, twigs, or grass. It feeds singly or in small flocks, mostly on insects. Breeding habitat includes arid plains, short-grass prairies, and fields from Montana, Wyoming, Colorado, New Mexico, and the Texas Panhandle east to Nebraska. The mountain plover is typically associated with shortgrass prairie habitat, composed primarily

of blue grama (*Bouteloua gracilis*) and buffalo grass (*Buchloe dactyloides*). With its breeding range centered on the short-grass prairie, a region subject to heavy grazing and cultivation, the mountain plover has been drastically reduced in number. It migrates from these areas to its wintering grounds from central California and southern Arizona southward into Mexico. They apparently depart for wintering grounds from early August to late October and arrive in California in September through November. In winter, larger concentrations can be seen in freshly plowed fields, turfgrass/sod farms, and new sprouting grain fields, often in association with marsh areas and agricultural drains in the Imperial Valley. Plovers are more commonly observed on alfalfa and Bermuda grass fields than other field types (Wunder et al. 2001). This study indicated that most birds were on alfalfa fields that were currently being (or had recently been) grazed, primarily by domestic sheep, and that plovers used Bermuda grass fields only after harvest and subsequent burning.

Mountain plover would be present in the Imperial Valley at this time of the year, but was not observed on the five sites. The assessment of potentials for occurrence based on habitat suitability is as follows:

Parcel A: Currently low, since the site does not display the types of preferred habitat attributes described above. However, potential can change to a higher order if this site were to be subject to the types of cropping and grazing conditions described above.

Parcel B: Discountable due to absence of any suitable habitat attributes.

Parcel C: Very low, and then only transient occurrence when moving to more favorable sites, due largely to absence of suitable habitat attributes.

Parcel D: Currently low, since the site does not display the types of preferred habitat attributes described above. However, potential can change to a higher order if this site were to be subject to the types of cropping and grazing conditions described above.

Parcel E: Currently low, since the site does not display the types of preferred habitat attributes described above. However, potential can change to a higher order if this site were to be subject to the types of cropping and grazing conditions described above.

3.2.3 American badger (*Taxidea taxus berlandieri*)

State Status: Species of Special Concern

Federal Status: None

The reader is directed to the life history discussion of the American badger that is presented in Section 6.3.1, Affected Environment, in the SPPE. The discussion below will focus on the potentials for occurrences at the five parcels.

American badger individuals and sign were not observed on the five parcels. As depicted on Figure 7.2-1 in the SPPE, the CNDDDB reports an historic occurrence of this species within the Imperial Valley (see also Table 6.3-2, Potentially Occurring Special-Status Wildlife Species in the Site Vicinities, in the SPPE). It is possible that this species may persist in areas where habitat patches remain such as along the New and Alamo river corridors, and within relictual patches of desert scrub habitat where human disturbances are not too great. The current status and distribution of this species within the Imperial Valley and in the vicinity of the Project Site are not known; however, since Parcels A, D, and E are open field sites that are contiguous with other

areas that may support badgers, the consideration of the potential for occurrences has to be independent from the conclusion provided in Section 6.3.1, Affected Environment, and Table 6.3-2 of the SPPE. Accordingly, the occurrence potentials for this species at each of the five sites is assessed below based on habitat attribute criteria such as presence of a sufficient prey base (burrowing rodents), friable soils for den sites, and open undisturbed areas not subject to human activities.

Parcel A: Very low due to relatively recent cropping activity, apparent low abundance of prey species, and with friable soils the only positive attribute. However, this assessment is contingent upon there being an extant status for this species in the Imperial Valley and that barriers to dispersal of badgers from occupied areas to the site are not too restrictive.

Parcel B: Discountable due to no suitable habitat present.

Parcel C: Discountable due to no suitable habitat present. Parcel is a former safflower processing facility that has been demolished and the perimeter is fenced.

Parcel D: Low due to low density occurrence of prey, with relatively undisturbed condition of site and friable soils representing positive attributes, and taking into consideration that this assessment is contingent upon there being an extant status for this species in the Imperial Valley and that barriers to dispersal of badgers from occupied areas to the site are not too restrictive.

Parcel E: Low due to low density occurrence of prey, with relatively undisturbed condition of site and friable soils representing positive attributes, and taking into consideration that this assessment is contingent upon there being an extant status for this species in the Imperial Valley and that barriers to dispersal of badgers from occupied areas to the parcel are not too restrictive.

The assessment of potential impacts is based on the observed, and potentials for, occurrences of wildlife species at the five parcels and the perceived level to which construction activities including permanent and temporary ground disturbances, noise, dust generation, nighttime lighting, and general machinery and vehicle operation, may result in the take of individuals, perturbation of behavioral activities, and/or loss of habitat. Since the Applicant determined not to use any of the five parcels as part of construction or operations, this section is meant to provide information only.

4.1 GENERAL BIOLOGICAL RESOURCES

The assessment of potential impacts to general biological resources is addressed, below, under the categories of Vegetation and Wildlife Habitats and Take of Common Native Wildlife Species.

4.1.1 Vegetation and Wildlife Habitat

As stated previously in Section 3.1, General Biological Resources, Parcels C, D, and E have some representative elements of plant species that are common natives to the region, however, these occur as dispersed plants, marginally along features such as drains, and as small, isolated clumps. As such, this vegetation does not represent a substantial patch of a native vegetation type that constitutes high quality habitat for wildlife species. Relatedly, this vegetation is insufficient in extent and too isolated in the context of the Project region, to provide a viable “habitat island” or a substantial movement/migration corridor for wildlife. Parcel B is devoid of vegetation. Parcel A is similar to the other cropped parcels in the Project vicinity and does not seemingly demonstrate any habitat attributes that would cause it to be utilized preferentially by wildlife species. Accordingly, the native species that are most likely to use the vegetation on the five parcels are species that are adapted to a wide range of habitat types, often referred to as “habitat generalists” such as those described in Section 6.3.1, Affected Environment, of the SPPE. The loss of all, or a part, of these areas does not constitute a noteworthy loss of wildlife habitat that is important for sustaining native wildlife species in a regional context. As such, there are **no potential impacts** to vegetation and wildlife habitat as a consequence of Project construction at the five sites that are identified as substantial or significant.

4.1.2 Take of Common Native Wildlife Species

As described above, there are no native species of wildlife that would be expected to use the marginal quality habitats at the five parcels preferentially to other similar habitats in the Project region. As such, the use of areas for materials laydown are unlikely to result in take due to permanent or temporary loss of habitats that sustain any specific individual animal or contribute to sustaining a population in a regional context. Furthermore, IID determined not to use these parcels as Temporary Construction Areas. Specific examples include the greater road runner, black phoebe, and jackrabbit. These species are adapted to human activities, are wary, and, therefore, are highly capable of avoiding take by virtue of their mobility. Categories of common wildlife that could be at risk of direct take include burrowing species such as gophers, and the side-blotched lizard which seeks escape cover in holes and under objects. However, the loss of small numbers of such common species is not considered noteworthy. The potential for take of nesting migratory native birds is regarded as very low since potential nesting habitat is likely restricted

to the few tamarisk trees located on Parcel D. As such, there are **no potential impacts** associated with the take of common native wildlife species as a consequence of potential use of one any of these five parcels as part of Project construction that are identified as substantial or significant and no mitigation is proposed.

4.2 SPECIAL STATUS SPECIES

4.2.1 Burrowing Owl

Because burrowing owls are known to be resident on the ECGS Site, an increase in the levels of noise associated with construction activities may constitute a potentially significant impact if the noise results in displacement of these birds from the site and/or abandonment of a nest and brood. However, it is noted that various loud noise levels occur at the plant all year long and these noise levels have not appeared to have any adverse impact on the resident burrowing owls (Mike Remington, personal communication, April 28, 2006). Accordingly, based on the current ECGS operation noise situation, and the expectation that construction of the Project will not represent an increase in ambient noise levels, the potential impact to the burrowing owl is assessed as **not significant**, and no mitigation recommendations are regarded as necessary.

4.2.2 Mountain Plover

As described previously, this species was not addressed in the SPPE because it has no potential for occurrence on the ECGS Site due to absence of suitable habitat. However, Parcels A, D and E are considered to have low, but not discountable, potentials for transient occurrences of these birds. Since this species overwinters, but does not breed in the Imperial Valley; and since it is a wary species that can easily take flight and avoid human activities, there is no potential for a loss of breeding habitat nor take of individual birds. Relatedly, the loss of the cumulative site acreage of Parcels A, D, and E (less than 90 acres) is considered to represent an incremental loss of marginal quality habitat in a regional context that is not essential for the continued survival of this species, if one or all of these parcels were used during Project construction. As such, an assessment of **no significant impact** is rendered and no mitigation other than that afforded by the contingency provided by pre-construction surveys and construction monitoring as specified in Section 5.2, Mountain Plover, below, is considered warranted.

4.2.3 American Badger

Per the assessment provided under Section 3.2.3, American Badger, above, the potential for occurrence on the ECGS Site is considered remote. However, because badger has a statewide distribution that includes the Imperial Valley, and since CDFG generally considers a species “presumed extant” until it can be demonstrated otherwise, a contingency is included in this section to safeguard the Project. As such, the take of an individual is considered to be **potentially significant** and the mitigation specified under Section 5.3, American Badger, below, should be implemented.

5.1 BURROWING OWL

Based on the current ECGS operation noise situation, and the expectation that construction of the Project will not represent an increase in ambient noise levels, the potential impact to the burrowing owl is assessed as **not significant**, and no mitigation recommendations are regarded as necessary.

5.2 MOUNTAIN PLOVER

To provide assurances that no take of mountain plover will occur at any of the five parcels in the unlikely event that this species might be found to occur, the mitigation provided for construction monitoring, as specified in Mitigation Measure BIO 3, is considered applicable and adequate, if one of the five parcels were used during construction. However, as stated previously, IID does not plan to use any one of the five parcels during the construction or operation of the Project.

5.3 AMERICAN BADGER

As described in Section 6.3.1, Affected Environment, of the SPPE, the potential for this species to occur on the ECGS Site is regarded as discountable because suitable habitat, including friable soils for burrowing and adequate prey base, do not occur at the site. As such, no mitigation recommendations are presented in Section 6.3.3, Mitigation, of the SPPE. The remaining Parcels A, D, and E, are considered to have low, but not discountable potentials, for occurrences of American badger.

The two general mitigation measures below (as identified in Section 6.3.3, Mitigation, of the SPPE) are considered applicable and adequate to all sites for mitigation purposes for American badger. With regard to Mitigation Measure BIO 8, below, in the event that one is encountered during preconstruction surveys or during construction monitoring, the qualified biologist shall take appropriate measures to safeguard the animal and notify the CDFG local game warden to facilitate the safe capture and removal of the animal to a suitable habitat location.

- Mitigation Measure BIO 2. Biological Resources Mitigation Implementation Plan
- Mitigation Measure BIO 3. Construction Monitoring

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- Imperial Irrigation District (IID). 2002. *Water Conservation and Transfer Project Final Environmental Impact Report/Environmental Impact Statement, Habitat Conservation Plan*. June 2002.
- _____. 2002. Appendix D. Procedures for Removing Burrowing Owls.
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- USFWS. 2006. Letter regarding a request for candidate, proposed, threatened, or endangered species for the El Centro Generation Station Unit 3 Re-powering Project and the Niland Gas Turbine Plant Project, Imperial County, California. Letter dated February 13, 2006 from Carol Roberts (USFWS) for Therese O'Rourke (USFWS) to Don Mitchell (URS).
- Wunder, Michael B., Fritz L. Knopf. 2001. The Imperial Valley of California is Critical to Wintering Mountain Plovers. *Journal of Field Ornithology*. Vol. 74, Issue 1. pp. 74-80

