

APPENDIX II-E

BIOLOGICAL SURVEY REPORT

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Environment

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Carson, California


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November 22, 2010

Biological Resources Technical Report

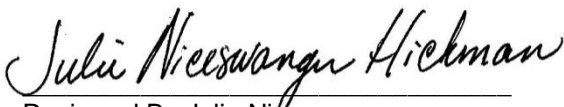
Shell Carson Facility Ethanol (E10) Project

Biological Resources Technical Report

Shell Carson Facility Ethanol (E10) Project



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1.0 Introduction

The Shell Carson Distribution Facility (Facility) Ethanol Project (proposed project), proposed by Shell Oil Products U.S., consists of modifying the current Facility infrastructure to facilitate the storage and distribution of ethanol. The project will be located within the existing Carson Distribution Facility in the City of Carson, Los Angeles County, California. This biological resources technical report is based on research and a survey of the site conducted by AECOM Environment biologists on June 22, 2009.

1.1 Purpose

The purpose of this survey was to identify the biological resources present on the proposed project site and to determine whether special-status species or other sensitive biological resources occur or have the potential to occur at the proposed project site based on site conditions. This report includes the following major elements:

- An overview of applicable regulations;
- Results of the survey;
- Analysis of potential impacts to special-status biological resources; and
- Proposed mitigation measures.

1.2 Project Location and Description

The proposed project is located in the City of Carson, California and is located just northeast of the 405 Freeway, and is bound by East Del Amos Boulevard to the north, East 213 Street to the south, South Wilmington Avenue to the east, and the Dominguez Channel to the west (Figure 1). The entire Facility is approximately 446 acres. The Facility is situated in Township 4 South, Range 13 West, Section 9 of the Long Beach 7.5–Minute U.S. Geologic Survey (USGS) topographic quadrangle.

The Facility is utilized for various petrochemical uses, including tank product storage, product distribution, and chemical plant operations. The majority of the proposed project site is developed or cleared and subjected to heavy industrial use and various petrochemical infrastructures.

The proposed project plan includes the following five components:

- increase the ethanol throughput at an existing two-lane truck loading rack;
- convert up to four existing storage tanks from gasoline to ethanol service;
- install one new ethanol tanker truck loading lane and associated ethanol loading rack;
- expand the existing ethanol loading rack operations building; and
- install one new gasoline storage tank to replace gasoline storage capacity transferred to ethanol service.

The disturbance footprint for the proposed project is approximately 10 acres. Not all activities will result in ground disturbance. Three of the construction activities, the storage tank construction, the new loading rack, and the new loading lane will result in ground disturbance. The disturbance

footprint associated with the storage tank construction is estimated to be approximately 2 acres, which includes an area to be excavated and graded and an area for staging for construction activities. The disturbance footprint associated with the new loading rack and lane construction is estimated to be approximately 8 acres, which includes an area to be excavated and graded and an area for staging for construction activities. Therefore, the total disturbance footprint anticipated from the project is estimated to be approximately 10 acres. The construction activities are anticipated to occur over the course of 2 years.

2.0 Survey Methodology

The following sections contain a description of the survey methodology and background research.

2.1 Literature Review and Database Search

Prior to conducting the site survey, AECOM Environment staff conducted a search of the California Natural Diversity Database (CNDDDB), which is maintained by the California Department of Fish and Game (CDFG), via RAREFIND3 software (CNDDDB 2010), and the California Native Plant Society's (CNPS) online Inventory of Rare and Endangered Plants (CNPS 2010). The database searches were conducted to identify occurrences of special-status species that have been recorded in the project region, which includes the following USGS 7.5 minute quadrangles: Long Beach, Inglewood, South Gate, Whittier, Torrance, Los Alamitos, San Pedro and Seal Beach. Other information sources included:

- Aerial images of the project site and surrounding areas accessed through Google Earth Pro and ArcGis software; and
- The CDFG website, used to review general species information for rare, threatened, or endangered species, Fully Protected species, Species of Special Concern, and special animals.

2.2 Site Survey

On July 22, 2009, AECOM Environment biologists conducted a reconnaissance-level survey of the proposed construction footprints located within the Facility. The extent of the biological assessment study area included the immediate construction footprint and an additional 500-foot buffer surrounding each area, as shown in Figure 1. For convenience, the biological assessment study area has been divided into the "western study area" and the "eastern study area."

Biologists surveyed the biological assessment study area on foot, with particular attention paid to locations where special-status species had the potential to occur based on natural or man-made habitat features or structures that may have provided shelter to wildlife. Existing vegetation and incidental wildlife observations occurring within the biological assessment study area were documented during the surveys and are discussed in Sections 3.0 and 4.0 of this report. Although the focus of the site survey was directed at the biological assessment study area described above, general observations and assessments were also conducted beyond the biological assessment study area to include adjacent areas when relevant, particularly where undeveloped areas occurred next to the proposed construction footprint. Vegetation communities and existing land uses occurring within the biological assessment study area are depicted in Figure 1. Representative photographs of site conditions were taken during the survey and are included in the photographic logs (Appendix A).

3.0 Results

This section contains a description of existing site conditions and the results of the survey.

3.1 Existing Site Conditions

The proposed project site is predominantly disturbed or developed and includes limited natural areas. The biological assessment study area surveyed during the site visit was almost entirely devoid of vegetation. The limited vegetation that occurred within the biological assessment study area consists of sparse, ruderal herbaceous vegetation. The term "ruderal" generally refers to weedy, non-native vegetation associated with disturbed land. Some native and non-native ornamental shrubs and trees also occurred within the biological assessment study area. The site characteristics in the western and eastern study areas are further described below and are depicted in Figure 1.

3.1.1 Western Study Area – Construction of a Storage Tank

The majority of this study area has been previously developed and can therefore be considered as urban or built-up land (Holland 1986). Urban or built-up land habitat/land use type is generally characterized by human use and development, including cities, business parks, commercial and industrial complexes, etc. This habitat generally offers little value to plants and wildlife, particularly sensitive species, due to lack of natural vegetative cover, lack of food or water sources, past disturbances, and current heavy industrial use occurring in the surrounding areas.

A dry detention pond, shown in Figure 1, is located adjacent to the proposed storage tank footprint (Photographs 1 and 2). Vegetation within this area is ruderal and is dominated by cudweed (*Gnaphalium* sp.) and wild heliotrope (*Heliotropium curassavicum*). The detention pond and surrounding area and the proposed storage tank site appear to have been inundated with stormwater sometime in the past, based on waterfowl and shorebird tracks observed on dry mud. To the northwest of the detention pond, there is a small stand of eucalyptus trees (*Eucalyptus* sp.) (Photograph 3). This eucalyptus grove is located approximately 400 feet from the proposed storage tank construction footprint. A number of storage tanks also exist within this study area (Photographs 2 and 4). The storage tanks are surrounded by earthen berms, some of which have been cemented or covered in asphalt.

3.1.2 Eastern Study Area – Loading Lane and Control Building Expansion

As in the western study area, the habitat/land use within this study area can be characterized as urban or built-up land. The lack of natural vegetative cover or other biotic features, past disturbances, and current heavy industrial use occurring in the surrounding areas contribute to this study area not functioning as suitable habitat for special-status plant and wildlife species.

The existing operational ethanol loading and distribution facility is approximately 4 acres in size. This area is paved and regularly maintained for safety purposes (Photograph 5). The study area includes a construction lay down area, approximately 4 acres in size, designated for the project (Photo 6). This area is also predominantly devoid of vegetation, except for some ruderal herbaceous plants. These plants include cudweed and Australian saltbush (*Atriplex semibaccata*). A burrow measuring approximately 4 square inches was observed approximately 50 feet north of the proposed construction lay down area. This burrow could potentially be utilized by burrowing owl (*Athene*

cunicularia), although no positive signs of burrow occupation (such as “white-wash” or excrement, pellets, feathers, or remains of prey) were observed within or around the burrow opening.

The land immediately to the north of the proposed loading lane expansion footprint consists of a currently inactive construction area (Photograph 7). This area is also disturbed and sparsely covered with ruderal vegetation. A small stand of native mulefat (*Baccharis salicifolia*) and non-native tree tobacco (*Nicotiana glauca*) shrubs occur. Mulefat typically grows in the vicinity of water. Other species observed during the site survey include bristly oxtongue (*Picris echioides*) and bull thistle (*Cirsium vulgare*). Both bristly oxtongue and bull thistle are native to the United States but are introduced species in California. Small stands of ornamental fan palms (*Washingtonia* sp.) also occur within the eastern study area (Photograph 8).

3.2 Wildlife Species Observed

Wildlife species observed during the site survey include northern mocking bird (*Mimus polyglottos*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), rock dove (*Columba livia*), Anna’s hummingbird (*Calypte anna*), house sparrow (*Passer domesticus*), desert cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Spermophilus beecheyi*). No special-status species were observed.

3.3 Jurisdictional Waters

Jurisdictional waters or waterways generally fall into one or more of the following categories:

- An ephemeral, intermittent, or perennial waterway that is considered jurisdictional under Section 1600 of the California Fish and Game Code.
- An ephemeral, intermittent, or perennial waterway that is considered jurisdictional by the United States Army Corps of Engineers under Section 404 of the Clean Water Act.

No jurisdictional waters were observed within the western or eastern study areas.

3.4 Sensitive Plant Communities

Plant communities that are considered sensitive include those habitats that support rare, threatened, or endangered plant or wildlife species; are locally diminishing and of special concern to local resource agencies; or are afforded legal protection through Section 1600 of the California Fish and Game Code or Section 404 of the Clean Water Act.

As described earlier, plant communities occurring within the western and eastern study areas are predominantly non-native, weedy species and ruderal in nature. However, the grove of eucalyptus trees located west of the proposed storage tank location could be considered sensitive, if it serves as habitat for roosting monarch butterflies (*Danaus plexippus*), which are known to utilize eucalyptus trees for roosting.

3.5 Special-Status Species

The following is a discussion of the plant and animal species with potential to occur at the project site that have been afforded special-status designation by Federal, State, or local resource agencies or organizations.

3.5.1 Special-Status Definitions

Special-status species are plants, animals, and fish species that are legally protected under the California Endangered Species Act (CESA), the Federal Endangered Species Act (ESA), or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. Special-status species generally require specialized habitat conditions and are of relatively limited distribution. Special-status species satisfy one or more of the following definitions:

- Species listed or proposed for listing as threatened or endangered under the ESA (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species);
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (Title 14 California Code of Regulations 670.5);
- Species that receive consideration during environmental review under California Environmental Quality Act (Guidelines Section 15380);
- Animal “Species of Special Concern” by the CDFG;
- Animal species considered “Special Animals” by the CDFG;
- Animals “Fully Protected” in California, as recognized by the CDFG (Fish and Game Code Section 3511 [birds], 4700 [mammals], and 5050 [amphibians and reptiles]);
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.);
- Plants considered to be rare, threatened, or endangered in California (Lists 1B and 2), as recognized by the CNPS; or
- Species protected under other laws, regulations, or treaties (e.g. Migratory Bird Treaty Act [MBTA]).

3.5.2 Special-Status Biological Resources

No special-status species were observed during the site survey. A list of special-status species known to occur within the vicinity of the project site was generated from the CNDDDB and CNPS database searches. A total of 56 special-status species were identified within the eight-quad search radius. The potential for each of these species to occur on site was assessed based on their habitat requirements and is discussed in Table 1. The majority of the species were dismissed after further analysis due to the fact that their habitat requirements were not met within the biological assessment study area or in the adjacent areas on the project site. However, it was determined that the limited habitat available within the study areas could potentially be utilized by the monarch butterfly (*Danaus plexippus*), burrowing owls (*Athene cunicularia*), western yellow bats (*Lasiurus xanthinus*), and nesting bird species.

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
Plants				
aphanisma (<i>Aphanisma blitoides</i>)	CNPS List 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub/sandy < 1,000 feet. Annual herb Blooms Mar-Jun.	No suitable habitat is present within the project site.	NE
Ventura marsh milk-vetch (<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>)	USFWS: Endangered CDFG: Endangered CNPS List 1B.1	Coastal dunes, Coastal scrub, Marshes and swamps (edges, coastal salt or brackish) < 115 feet. Perennial herb Blooms Jun-Oct.	No suitable habitat is present within the project site.	NE
coastal dunes milk-vetch (<i>Astragalus tener</i> var. <i>titi</i>)	USFWS: Endangered CDFG: Endangered CNPS List 1B.1	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie (mesic)/often vernal mesic areas < 1,500 feet. Annual herb Blooms Mar-May	No suitable habitat is present within the project site.	NE
Coulter's saltbush (<i>Atriplex coulteri</i>)	CNPS List 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland/alkaline or clay < 460 feet. Perennial herb Blooms Mar-Oct.	No suitable habitat is present within the project site.	NE
South Coast saltscale (<i>Atriplex pacifica</i>)	CNPS List 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas < 6,200 feet. Annual herb Blooms Mar-Oct.	No suitable habitat is present within the project site.	NE
Parish's brittlescale (<i>Atriplex parishii</i>)	CNPS List 1B.1	Chenopod scrub, Playas, Vernal pools/alkaline < 650 feet Annual herb Blooms Jun-Oct.	No suitable habitat is present within the project site.	NE

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Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
Davidson's saltscale (<i>Atriplex serenana</i> var. <i>davidsonii</i>)	CNPS List 1B.2	Coastal bluff scrub, Coastal scrub/alkaline < 65 feet. Annual herb Blooms Apr-Oct	No suitable habitat is present within the project site.	NE
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	CNPS List 1B.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland 300<5,100 feet. Bulbiferous herb Blooms May-Jul	No suitable habitat is present within the project site.	NE
intermediate mariposa lily (<i>Calochortus weedii</i> var. <i>intermedius</i>)	CNPS List 1B.2	Chaparral, Coastal scrub, Valley and foothill grassland 315<2,565 feet. Bulbiferous herb Blooms May-Jul	No suitable habitat is present within the project site.	NE
Santa Barbara morning-glory (<i>Calystegia sepium</i> ssp. <i>binghamiae</i>)	CNPS List 1A	Marshes and swamps (coastal) < 980 feet. Perennial rhizomatous herb Blooms Apr-May.	No suitable habitat is present within the project site.	NE
Lewis' evening-primrose (<i>Camissonia lewisii</i>)	CNPS List 3	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland/sandy or clay < 1,400 feet. Annual herb Blooms Mar-May.	No suitable habitat is present within the project site.	NE
southern tarplant (<i>Centromadia parryi</i> ssp. <i>australis</i>)	CNPS List 1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools < 100 feet. Annual herb Blooms May-Nov.	No suitable habitat is present within the project site and the nearest occurrence is 5 miles to the west.	NE

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
salt marsh bird's-beak (<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>)	USFWS: Endangered CDFG: Endangered CNPS List 1B.2	Coastal dunes, Marshes and swamps (coastal salt) < 1,600 feet. Annual herb hemiparasitic Blooms May-Oct.	No suitable habitat is present within the project site.	NE
Catalina crossosoma (<i>Crossosoma californicum</i>)	CNPS List 1B.2	Chaparral, Coastal scrub/rocky < 980 feet. Perennial deciduous shrub Blooms Feb-May.	No suitable habitat is present within the project site.	NE
island green dudleya (<i>Dudleya virens</i> ssp. <i>insularis</i>)	CNPS List 1B.2	Coastal bluff scrub, Coastal scrub/rocky < 4,000 feet. Perennial herb Blooms Apr-Jun.	No suitable habitat is present within the project site.	NE
Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	CNPS List 1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools < 980 feet. Annual herb Blooms Feb-Jun.	No suitable habitat is present within the project site.	NE
Santa Catalina Island desert-thorn (<i>Lycium brevipes</i> var. <i>hasse</i>)	CNPS List 1B.1	Coastal bluff scrub, Coastal scrub < 1,600 feet. Perennial deciduous shrub Blooms in Jun.	No suitable habitat is present within the project site.	NE
mud nama (<i>Nama stenocarpum</i>)	CNPS List 2.2	Marshes and swamps (lake margins, riverbanks) < 1,000 feet. Annual/perennial herb Blooms Jan-Jul.	No suitable habitat is present within the project site.	NE
Gambel's water cress (<i>Nasturtium gambelii</i>)	USFWS: Endangered CDFG: Endangered CNPS List 1B.1	Marshes and swamps (freshwater or brackish) < 4,200 feet. Perennial rhizomatous herb Blooms Apr-Oct.	No suitable habitat is present within the project site.	NE

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Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
Moran's nosegay (<i>Navarretia fossalis</i>)	USFWS: Threatened CNPS List 1B.1	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools < 2,300 feet. Annual herb Blooms Apr-Jun.	No suitable habitat is present within the project site.	NE
prostrate vernal pool navarretia (<i>Navarretia prostrata</i>)	CNPS List 1B.1	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools/mesic. Annual herb Blooms Apr-Jul.	No suitable habitat is present within the project site.	NE
coast woolly-heads (<i>Nemacaulis denudata</i> var. <i>denudata</i>)	CNPS List 1B.2	Coastal dunes < 320 feet. Annual herb Blooms Apr-Sep.	No suitable habitat is present within the project site.	NE
California Orcutt grass (<i>Orcuttia californica</i>)	USFWS: Endangered CDFG: Endangered CNPS List 1B.1	Vernal pools < 2,100 feet. Annual herb Blooms Apr-Aug.	No suitable habitat is present within the project site.	NE
Lyon's pentachaeta (<i>Pentachaeta lyonii</i>)	USFWS: Endangered CDFG: Endangered CNPS List 1B.1	Chaparral (openings), Coastal scrub, Valley and foothill grassland/rocky, clay < 2,000 feet. Annual herb Blooms Mar-Aug.	No suitable habitat is present within the project site.	NE
Brand's star phacelia (<i>Phacelia stellaris</i>)	USFWS: Candidate CNPS List 1B.1	Coastal dunes, Coastal scrub < 1,300 feet. Annual herb Blooms Mar-Jun.	No suitable habitat is present within the project site.	NE
Parish's gooseberry (<i>Ribes divaricatum</i> var. <i>parishii</i>)	CNPS List 1A	Riparian woodland < 980 feet. Perennial deciduous shrub Blooms Feb-Apr.	No suitable habitat is present within the project site.	NE

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
Sanford's arrowhead (<i>Sagittaria sanfordii</i>)	CNPS List 1B.2	Marshes and swamps (assorted shallow freshwater) < 2,100 feet. Perennial rhizomatous herb emergent Blooms May-Oct.	No suitable habitat is present within the project site.	NE
Salt Spring checkerbloom (<i>Sidalcea neomexicana</i>)	CNPS List 2.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas/alkaline, mesic < 5,000 feet. Perennial herb Blooms Mar-Jun.	No suitable habitat is present within the project site.	NE
estuary seablite (<i>Suaeda esteroa</i>)	CNPS List 1B.2	Marshes and swamps (coastal salt) < 16 feet. Perennial herb Blooms May-Oct.	No suitable habitat is present within the project site.	NE
San Bernardino aster (<i>Symphyotrichum defoliatum</i>)	CNPS List 1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland(vernally mesic)/near ditches, streams, springs < 6,600 feet. Perennial rhizomatous herb Blooms Jul-Nov.	No suitable habitat is present within the project site.	NE

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name <i>Scientific Name</i>	Regulatory Status ¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur ²
Invertebrates				
monarch butterfly	CDFG: Special Animal	Roosts located in wind-protected tree groves (eucalyptus, Monterey cypress), with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico.	A small eucalyptus grove does occur in the northwest portion of the Western Study Area.	L
Palos Verdes blue butterfly <i>(Glaucopsyche lygdamus palosverdesensis)</i>	USFWS: Endangered	Restricted to the cool, fog-shrouded, seaward side of Palos Verdes Hills, Los Angeles County.	No suitable habitat is present within the project site.	NE
Fish				
Mohave tui chub <i>(Gila bicolor mohavensis)</i>	USFWS: Endangered CDFG: Endangered	Endemic to the Mojave river basin, adapted to alkaline, mineralized waters.	No suitable habitat is present within the project site.	NE
Reptiles/Amphibians				
silvery legless lizard <i>(Anniella pulchra pulchra)</i>	CDFG Species of Special Concern	Associated with sandy or loose loamy soil of high moisture content, under sparse vegetation, or in leaf litter beneath willows or oaks.	No suitable habitat is present within the project site.	NE
southwestern pond turtle <i>(Emys marmorata)</i>	CDFG: Species of Special Concern	Associated with permanent water or nearly permanent water from sea level to 1830 m (6000 feet). Prefers habitats with basking sites such as floating mats of vegetation, partially submerged logs, rocks, or open mud banks.	No suitable habitat is present within the project site.	NE

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Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
coast horned lizard (<i>Phrynosoma blainvillii</i>)	CDFG: Species of Special Concern	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	No suitable habitat is present within the project site.	NE
western spadefoot (<i>Spea hammondi</i>)	CDFG: Species of Special Concern	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	No suitable habitat is present within the project site.	NE
Birds				
tricolored blackbird (<i>Agelaius tricolor</i>)	CDFG: Species of Special Concern	Highly colonial species requiring open water, most numerous in central valley & vicinity. Largely endemic to California.	No suitable habitat is present within the project site.	NE
burrowing owl (<i>Athene cunicularia</i>)	CDFG: Species of Special Concern	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.	Marginally suitable habitat is present within the project site. Species observed on site in 2007 (SWCA 2007)	M
western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	USFWS: Threatened CDFG: Species of Special Concern	Sandy beaches, salt pond levees & shores of large alkali lakes.	No suitable habitat is present within the project site.	NE
western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	USFWS: Candidate CDFG: Endangered	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	No suitable habitat is present within the project site.	NE
southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	USFWS: Endangered CDFG: Endangered	Riparian woodlands in southern California.	No suitable habitat is present within the project site.	NE

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
Belding's savannah sparrow <i>(Passerculus sandwichensis beldingi)</i>	CDFG: Endangered	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County.	No suitable habitat is present within the project site.	NE
California brown pelican <i>(Pelecanus occidentalis californicus)</i>	USFWS: Recently delisted	Colonial nester on coastal islands just outside the surf line.	No suitable habitat is present within the project site.	NE
coastal California gnatcatcher <i>(Polioptila californica californica)</i>	USFWS: Threatened CDFG: Species of Special Concern	Obligate, permanent resident of coastal sage scrub below 2500 ft in southern California.	No suitable habitat is present within the project site.	NE
light-footed clapper rail <i>(Rallus longirostris levipes)</i>	USFWS: Endangered CDFG: Endangered	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation.	No suitable habitat is present within the project site.	NE
black skimmer <i>(Rynchops niger)</i>	CDFG: Species of Special Concern	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.	No suitable habitat is present within the project site.	NE
California least tern <i>(Sternula antillarum browni)</i>	USFWS: Endangered CDFG: Endangered	Nests along the coast from San Francisco Bay south to northern Baja California.	No suitable habitat is present within the project site.	NE
Mammals				
western mastiff bat <i>(Eumops perotis californicus)</i>	CDFG: Species of Special Concern	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc.	No suitable habitat is present within the project site.	NE

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name Scientific Name	Regulatory Status¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur²
western yellow bat (<i>Lasiurus xanthinus</i>)	CDFG: Species of Special Concern	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	Marginally suitable habitat is present within the project site.	L
south coast marsh vole (<i>Microtus californicus stephensi</i>)	CDFG: Species of Special Concern	Tidal marshes in Los Angeles, Orange and southern Ventura Counties.	No suitable habitat is present within the project site.	NE
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	CDFG: Species of Special Concern	Coastal scrub of southern California from San Diego county to San Luis Obispo County.	No suitable habitat is present within the project site.	NE
pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	CDFG: Species of Special Concern	Variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian.	No suitable habitat is present within the project site.	NE
big free-tailed bat (<i>Nyctinomops macrotis</i>)	CDFG: Species of Special Concern	Low-lying arid areas in southern California.	No suitable habitat is present within the project site.	NE
Pacific pocket mouse (<i>Perognathus longimembris pacificus</i>)	USFWS: Endangered CDFG: Species of Special Concern	Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles Co.	No suitable habitat is present within the project site.	NE
southern California saltmarsh shrew (<i>Sorex ornatus salicornicus</i>)	CDFG: Species of Special Concern	Coastal marshes in Los Angeles, Orange and Ventura Counties.	No suitable habitat is present within the project site.	NE
American badger (<i>Taxidea taxus</i>)	CDFG: Species of Special Concern	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	No suitable habitat is present within the project site.	NE

Table 1: Special-Status Species Known to Occur or with Potential to Occur within the Shell-Carson Distribution Facility Ethanol Project Area

Common Name <i>Scientific Name</i>	Regulatory Status ¹	General Habitat Description (CDFG 2010)	Habitat Suitability	Potential to Occur ²
<p>1 Sensitivity Status Codes</p> <p>USFWS U.S. Fish and Wildlife Service</p> <p>CDFG California Department of Fish and Game</p> <p>CNPS California Native Plant Society</p> <p>1B: Plants rare, threatened, or endangered in California and elsewhere</p> <p>2: Plants rare, threatened, or endangered in California, but more common elsewhere</p> <p>3: Plants more information is needed for</p> <p>4: Plants of limited distribution – a watch list</p> <p>2 Potential</p> <p>NE (not expected) – Suitable habitat for species does not occur</p> <p>L (low potential) – Suitable habitat present, but of marginal quality</p> <p>M (moderate potential) – Suitable habitat present</p> <p>H (high potential) – Suitable habitat present, and species known to occur within the vicinity</p>				

3.5.3 Special-Status Species Descriptions

Species identified to have a low to high potential to occur on the within the proposed project or the buffer areas area described below.

3.5.3.1 Monarch Butterfly

Monarch butterflies are not specifically protected under Federal or State laws; however, in California the butterfly and its overwintering habitats are indirectly protected under two statutes dealing with natural resources and the environment, namely the Public Resources Code and the Fish and Game Code. The primary agencies responsible for administering and enforcing the former statute are the California Coastal Commission and the California Department of Parks and Recreation, while the CDFG is responsible for the latter statute. State and local municipalities usually have policies to protect such habitats. Cities and counties with established roost sites have adopted protection measures specific to the Monarch butterfly. For example, the City of Goleta (2009) has established “Environmentally Sensitive Habitat Areas” for the Monarch butterfly, which requires a 200-foot buffer around roost trees when an active roost or aggregation of butterflies is present between October 1 and March 1.

Monarch butterflies are a predominantly open country, frost intolerant species whose range of breeding habitats is greatly dependent upon the presence of asclepiad flora (*milkweeds*). Monarchs require dense tree cover for overwintering, and the majority of the present sites in California are associated with eucalyptus trees (*Eucalyptus* sp.). These trees were introduced from Australia and have filled the role of native species that have been reduced by logging.

The CNDDDB database analysis reveals that there are five records of this species in the project area, the nearest being a roost site in non-native pine trees approximately 6.75 miles to the east of the Facility Figure 2. The project site does not support milkweed (*Asclepias* sp.), which is the primary host plants of monarch butterflies. However, the small grove of eucalyptus trees located west of the proposed storage tank construction could provide wintering roosts for this species. This potential roosting habitat is located approximately 400 feet from the construction area and no direct impacts (loss of eucalyptus trees) to this roosting habitat will occur. The proposed gasoline storage tank construction would also be more than 200 feet from the grove, which is considered to be a buffer limit around roost trees to avoid disturbing an active roost or aggregation of butterflies. Thus, there would be no adverse indirect impacts to potentially roosting butterflies from added noise and vehicle activity.

3.5.3.2 Burrowing Owl

The burrowing owl is recognized by the CDFG as a Species of Special Concern and is protected under the MBTA. The CNDDDB database review yielded two occurrences for the area. As identified earlier, there is very limited opportunity for burrowing owls to inhabit the proposed construction footprints and associated buffers. However, this species is known to use man-made structures such as culverts, pipes, and berms as burrows. Additionally, two burrowing owls were observed during surveys of the Facility in October 2007 (SWCA 2007). No burrows were documented during that survey and it is most likely the owls were migratory rather than nesting or breeding on the Facility. However, the man-made berms surrounding the tanks and bare areas with sparse vegetation within the biological assessment study area do afford marginal habitat for this species. In addition, open, relatively undisturbed areas adjacent to the biological assessment study area, such as the former agricultural field, provide foraging and breeding habitat for burrowing owls. During the survey, a single burrow that was of appropriate size to potentially be utilized by this species was detected in the eastern study area. The burrow was detected approximately 50 feet north of the construction lay down area and no owls nor sign indicating use by burrowing owls (owl pellets, whitewash, or feathers) were observed. Although no owls were seen occupying this burrow and there were no signs of use, future occupancy of this burrow by an owl cannot be precluded.

The presence of an owl or the presence of an occupied burrow in the vicinity of a construction area poses some potential risk to individual owls in the form of direct mortality or accidental injury from construction vehicles, or entrapment inside the burrows during grading, as they are ground-dwelling species. Seeking protection, owls may also instinctively enter the burrow with the onset of construction activities. Noise and vehicular activities from construction may also indirectly affect their breeding and feeding behavior.

3.5.3.3 Western Yellow Bat

The western yellow bat is recognized by the CDFG as a Species of Special Concern. This species is range from northern Mexico across the desert regions of the southwestern United States. These bats show an association for palm oases and desert riparian habitats and appear to be expanding their range with the increased use of palms in ornamental landscaping. This species does not appear to hibernate and at least some individuals or populations may be migratory, although some individuals appear to be present year-round, even in the northernmost portion of their range. The females are pregnant and nursing pups from April through July. Although the closest record of the western yellow bat is approximately 13 miles away from the project site, this species uses palm trees as roost sites. A study prepared for Caltrans (Johnston, Tatarian, and Pierson, 2004) considers 100 feet as a buffer limit to avoid disturbing roosting bats. The small stand of fan palms approximately 250 feet from the proposed ethanol loading area and lay down areas may provide suitable roosting habitat. The stand would be considered low quality habitat as there are only a few isolated trees within an industrial

complex. This species has not been observed on the project site, though focused surveys have not been conducted.

3.5.3.4 Nesting Birds

Nesting birds are protected under the MBTA. The eucalyptus trees in the western study area and the fan palms and stands of mulefat in the eastern study area may support nesting birds during nesting season.

Nesting birds and active nests are protected under Federal (MBTA) and California (Fish and Game Code) regulations. Generally, regulatory agencies consider 300 feet as the buffer limits for nesting passerine (perching) birds and 500 feet for nesting raptors. The grove of eucalyptus tree is located approximately 400 feet from the construction footprint and the stands of fan palms and mulefat are located approximately 250 feet from the proposed construction footprints (Figure 1). Therefore, no direct impacts to these resources will occur. However, noise and other activities from construction activities could result in indirect adverse impacts to nesting birds if construction activities occur within the nesting season. These impacts may include interruption in courtship and breeding activities and nest abandonment.

4.0 Biological Impacts

This section provides a discussion of the potential impacts to biological resources.

4.1 Impact Analysis

Impacts can be generally classified as either direct or indirect. Direct impacts on biological resources are generally considered as primary impacts where there is a discernable cause and effect; they are generally quantifiable and measurable impacts, usually occurring at the time of the project actions. An example of a direct impact is accidental killing of wildlife during construction. Indirect impacts, generally considered secondary impacts, on biological resources can occur during and after the completion of the proposed project and are generally not quantifiable but are reasonably foreseeable. An example of an indirect impact is increased human activity as a result of project development. This may have long-term adverse impacts on biological resources.

The analysis of impacts takes into consideration both direct and indirect effects of implementation of the project on plant and wildlife habitat and on both common and special-status resources. A number of factors were considered in this analysis, including on-site biological surveys and studies, results of literature and database reviews, and established and recognized ecological and biodiversity principles and assumptions.

In general, the majority of the project site consists of urban or built-up land, which is mostly devoid of natural habitat. During the survey of the project site, common urban-tolerant wildlife species were observed. These include northern mockingbird, Mourning dove, house sparrow, Anna's hummingbird, American kestrel, desert cottontail and California ground squirrel. No special-status plants, wildlife, or plant communities were observed. Within the specific footprint of the project, there is no suitable habitat to support special-status species. Therefore, no direct impacts to special-status species are anticipated from implementation of the proposed project.

Marginal habitat in the form of a small grove of non-native eucalyptus trees, a few stands of ornamental California fan palms and scattered stands of native emerging mulefat occur outside of the project footprint and could provide habitat for some special-status species; namely the monarch butterfly, burrowing owls, western yellow bat, and nesting birds. The eucalyptus, fan palms and mulefat stands may support nesting birds. The eucalyptus trees may also serve as a roosting habitat for monarch butterflies and the fan palms as roosting habitat for western yellow bats. However, the construction areas are outside of the recommended buffer distance for monarch butterflies, and the laydown area is outside of the recommended buffer distance for roosting bats. Therefore, no indirect impacts to the monarch butterfly or the western yellow bat are anticipated from implementation of the proposed project, but indirect impacts to the western burrowing owl or nesting birds may occur.

5.0 Protection Measure Recommendations

Although there is only a limited potential for special-status species to occur within the biological assessment study area, the following biological resources are discussed further in this document due to marginal habitat within the biological assessment study area and in the immediately adjacent areas.

5.1.1 Nesting Bird Protection Measures

Within 30 days of construction activities, a pre-construction nesting bird survey of the potential nesting habitat (eucalyptus trees, fan palms, and mulefat) should be conducted by a qualified biologist. If construction will occur during the nesting bird season (generally considered to be from February 15 through August 31), a qualified biologist shall conduct a survey once per week to inspect for potential nesting activity, particularly in areas such as trees and native scrub.

If active non-raptor nests are detected within 300 feet of the construction footprints, a 300-foot buffer should be established in accordance with regulatory agency standards, and no construction activities should occur within this zone until a qualified biologist determines that the nests have been abandoned and any chicks have fledged.

If active raptor nests are detected, a 500-foot "no activity" buffer should be established in accordance with regulatory agency standards. Ongoing monitoring of the raptor nest(s) should be conducted by a qualified biologist to determine whether construction activities or noise are negatively affecting the nesting raptors. The biologist should also determine at what point the nest becomes inactive and/or the young have fledged and construction within the buffer can resume.

5.1.2 Burrowing Owl Protection Measures

Prior to construction activity, a survey of the proposed construction footprint and surrounding areas up to 300 feet should be conducted to determine if there are any occupied burrows. As directed by the Mitigation Guidelines presented in the Burrowing Owl Consortium's guidance document "Burrowing Owl Survey Protocol and Mitigation Guidelines" (Burrowing Owl Consortium, 1993), if occupied burrows are detected, then construction activities should not occur within 160 feet of such burrows during the non-breeding season (September 1 through January 31) or within 250 feet during the breeding season (February 1 through August 31).

6.0 Conclusion

The project site is located in the middle of a highly urbanized region, known for its petrochemical and other industrial activities. Therefore, natural habitats in the project vicinity are limited, fragmented and confined to small areas. In addition, the proposed project activities will occur within the heavily disturbed settings of the project site, where natural vegetation cover and supply of food and water is very limited. Therefore, habitat opportunities for special-status wildlife and even common wildlife are severely constrained. The heavily disturbed and industrial setting also precludes habitat for special-status plant species. Site surveys did not reveal any special-status plant or wildlife species. The construction footprints are small and do not encroach into areas that provide suitable habitat for wildlife. Although there is some potential for some special-status or "sensitive" biological resources to occur outside of the construction footprint, these resources will not be directly impacted by proposed project activities. These sensitive resources include burrowing owl, and nesting bird species protected under the MBTA. Despite the limited potential for impacts, applicable measures are proposed for avoidance of potential impacts to these resources. With the implementation of the recommended measures, impacts to these sensitive species potentially occurring within the biological assessment study area is expected to be avoided or minimized.

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Figures

Appendix A

Site Photographs

PHOTOGRAPHIC LOG

Client Name: Shell Oil Products US	Site Location: Carson , Los Angeles County, CA	Project No. 60137613
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Photo No. 1	Date: 07/22/09
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Direction of Photo:

South



Description:

Proposed location for the new product storage tank situated at the west end of the subject property. Existing product storage tanks can be seen in the distance.

Photo No. 2	Date: 07/22/09
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Direction of Photo:

East



Description:

Detention basin just west of the proposed product storage tank location.

PHOTOGRAPHIC LOG

Client Name: Shell Oil Products US	Site Location: Carson, Los Angeles County, CA	Project No. 60137613
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Photo No. 3	Date: 07/22/09
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Direction of Photo:

North

Description:

Eucalyptus woodland situated approximately 400 feet to the west of the detention basin and proposed storage tank location.



Photo No. 4	Date: 07/22/09
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Direction of Photo:

Northwest

Description:

Photograph exemplifies the area south of the proposed product storage tank location.



PHOTOGRAPHIC LOG

Client Name: Shell Oil Products US	Site Location: Carson, Los Angeles County, CA	Project No. 60137613
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Photo No. 5	Date: 07/22/09
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Direction of Photo:

South

Description:

Existing ethanol loading and distribution center, the location at which construction of the proposed lane addition will take place.



Photo No. 6	Date: 07/22/09
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Direction of Photo:

West

Description:

Construction lay down area for the proposed construction of the lane addition.



PHOTOGRAPHIC LOG

Client Name: Shell Oil Products US	Site Location: Carson, Los Angeles County, CA	Project No. 60137613
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Photo No. 7	Date: 07/22/09
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Direction of Photo:

South

Description:

Area to the north of the existing ethanol loading and distribution center and associated construction lay down area.

Emergent growth of mulefat and tree tobacco similar to that depicted in this photo occurs throughout the Study Area to the north of the impact footprint.



Photo No. 8	Date: 07/22/09
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Direction of Photo:

East

Description:

California fan palms located within the Study Area to the east of the construction lay down area.

