

Section 3.3

Biological Resources

3.3.1 Introduction

This section identifies and evaluates biological resource issues related to the Proposed Project. It also includes a discussion of existing biological conditions and regulations applicable to biological resources associated with the Proposed Project and its alternative. This section describes potential impacts resulting from the retention of all remnant gravel associated with permitted exploratory drilling activities in Rancho Guadalupe Dunes County Park. This section also describes impacts to biological resources resulting from alternatives to the Proposed Project and, where applicable, discusses mitigations to reduce these impacts.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, regional information available in previous environmental impact reports prepared by the County, literature and database reviews (e.g., California Natural Diversity Database [CNDDDB]), a biological resources reconnaissance survey conducted on February, 20 2014 by AMEC biologist Jon True and peer reviewed by County biological consultant John Storrer, and previous biological surveys conducted in 2008 and 2010 (FLx 2008, 2010).

3.3.2 Environmental Setting

This section describes existing conditions related to biological resources in Rancho Guadalupe Dunes County Park. The existing conditions at the Rancho Guadalupe Dunes County Park and Project Site have changed during the time between preparation of the 1982 Final EIR and this Supplemental Environmental Impact Report (SEIR) as a result of multiple factors, including the implementation Husky Oil Project, remediation efforts related to 82-CP-75 (cz), partial removal of the gravel under 96-CDP-010, and unforeseen ecological succession and natural processes. The 1982 Final EIR, per California Environmental Quality Act (CEQA) guidelines, based its analysis on a reasonably foreseeable worst-case scenario and anticipated several potentially significant impacts to biological resources that would result from implementation of the Husky Oil Project. In particular, the 1982 Final EIR anticipated incremental but significant fragmentation of the dune ecosystem by roads, pads, and related structures. However, due in part to the partial removal of remnant gravel in 1997 as well as long-term unforeseen ecological succession, the baseline has shifted and the anticipated ecosystem fragmentation did not occur. Rather, sensitive plant species have reestablished and are currently thriving in the area affected by the remnant gravel. Because these changes in baseline conditions have occurred over the past 32 years since the preparation of the 1982 Final EIR, the environmental setting below describes the baseline conditions at of the time of the publication of the Notice of Preparation (NOP) for this SEIR.

3.3.2.1 Regional Biological Resources

As described in Section 2.3.1, *Regional and Project Vicinity*, Rancho Guadalupe Dunes County Park is a recreational area located in the coastal zone of the County in the southern portion of the coastal dune system known as Guadalupe-Nipomo Dunes Complex (see Figure 3.3-1). The dune complex extends approximately 18 miles and covers approximately 15,000 acres. The Guadalupe-Nipomo Dunes Complex is the largest dune complex south of San Francisco and one of the most intact dune complexes in the state of California.



The Project Site is located within Rancho Guadalupe Dunes County Park, one of 10 land management areas in the Guadalupe-Nipomo Dunes Complex.

The Guadalupe-Nipomo Dunes Complex is managed for the protection of the unique dune, beach, freshwater, and estuarine habitats, and for active and passive recreation, including wildlife viewing. General habitat types within the Guadalupe-Nipomo Dunes Complex are described below:

Uplands - Overview

Upland habitats include sandy beach, foredunes, and backdunes. The sandy beach and foredunes are key habitats for three endangered avian species (western snowy plover [*Charadrius nivosus nivosus*], American peregrine falcon [*Falco peregrinus*], and California least tern [*Sterna antillarum browni*]). The foredune and backdune habitats support a diverse mix of flowering plant species compared to other coastal dunes and support a large number of species only found in the Guadalupe-Nipomo Dunes region, several of which are identified as sensitive species (Guadalupe Fund Committee 2001).

Uplands - Sandy Beach

Sandy beach habitat is found along the shore between the intertidal zone and where vegetation becomes established, forming the foredunes or pioneer dunes. There is no vegetation established on the sandy beach. Several invertebrate species (mostly crustaceans and worms) are adapted to the wave action and shifting sands of the intertidal zone and are able to bury themselves quickly or deeply to avoid displacement or permanent burial. The invertebrates that are able to survive the extremes of this habitat attract numerous shorebirds that become most abundant during fall and winter (Guadalupe Fund Committee 2001).

Uplands - Foredunes

Foredunes are the first vegetated terrestrial communities located above the high tide line. Due to the harsh coastal environment, only plants adapted to strong winds, salt spray, and periodic sand burial can grow here. Low-growing plants with deep and/or spreading root systems are typical in the foredune habitat.

There is often a distinct zonation of vegetation within the foredunes. Growing adjacent to the beach are low-growing, salt-tolerant species. These species are often called "pioneer" species and influence the initial formation of dune hummocks (Guadalupe Fund Committee 2001). Away from the immediate shore, as physical conditions become milder, established plants help to hold sand in place and larger, more developed dune hummocks form, which gradually transition to more stabilized backdunes and dune scrub. These larger, more vegetated foredunes support a variety of low-growing perennial species (Guadalupe Fund Committee 2001).

Uplands - Backdunes (Including Active Dunes)

While there is no clear boundary between foredune and backdune vegetation, low-growing forms of common backdune shrub species are often found on the more stabilized vegetated dunes near the shore. In addition, many of the pioneer dune species, such as beach bur (*Ambrosia chamissonis*) and beach evening primrose (*Camissoniopsis cheiranthifolia*), are commonly found in the understory or between shrubs in dune scrub habitats some distance from the beach. In general, the backdunes within the Guadalupe-Nipomo Dune Complex are characterized by large sand dunes supporting dune scrub vegetation (Guadalupe Fund Committee 2001).

The shrub-dominated backdune plant communities are interspersed with active unvegetated dunes (i.e., open sand habitats) and low-lying areas (i.e., swales) dominated by grass-like plants and other low herbs, sometimes accompanied by trees or large shrubs such as willows (*Salix* spp.) and cottonwoods (*Poplar* spp.). The open sand habitats are large unvegetated areas where accelerated sand movement and exposure to the wind and other elements create a hostile environment for plant establishment (Guadalupe Fund Committee 2001).

Aquatic and Transitional Habitats

Aquatic habitats are open or closed bodies of water (e.g., wetlands), whereas transitional habitats span the boundary between wetland and upland habitats. Within this general habitat type, two sub-habitats occur at the Guadalupe-Nipomo Dune Complex: dune swale habitats and Santa Maria River floodplain habitats (Guadalupe Fund Committee 2001; see below).

Aquatic and Transitional Habitats - Dune Swale Habitats

Dune swales are low places among the dunes that are moist and support vegetation that is distinct from the dune scrub or open sand of the surrounding dunes. Conditions are moister primarily because of the shallow water table, although other factors may contribute, including reduced wind and insolation, drainage from upslope areas, and the greater retention of water in the soil due to the accumulation of fine sediments and organic matter. Dune swales provide a range of habitats, depending primarily on depth to the water table. Habitats encountered in



The Santa Maria River is located approximately 450 feet north of the Upper Area site. The Santa Maria River provides both aquatic and transitional habitats.

dune swales include small lakes or ponds, marshes, willow scrub/woodlands, mesic swale communities, and upland dune scrub (Guadalupe Fund Committee 2001).

Aquatic and Transitional Habitats - Santa Maria River Floodplain Habitats

Migration of the river channel within its present floodplain has increased the diversity of vegetation and wildlife habitats, as former segments of the river channel have been cut off and are undergoing succession. The habitats found within the Santa Maria River Floodplain can be classified as follows: Estuary/Lagoon/Riverine Habitats; Scirpus Marsh/Ponds; Intermittently Flooded Marsh; Willow Scrub/Woodland; and Mesic Floodplain Communities (Guadalupe Fund Committee 2001).

3.3.2.2 Biological Resources at the Project Site

The Project Site, including Site D, Site 2, the Road Site, and the Upper Area, is characterized by a combination of active coastal dunes which range from unvegetated to sparsely vegetated, and stands of denser native vegetation (coastal dune scrub). These habitats have been influenced by past uses including permitted exploratory drilling as well as ongoing quarry activity by the Gordon Sand Company, located approximately 300 feet to the east of the Upper Area.

In the sparsely vegetated dunes, dominant species consist of pioneers of dune stabilization including yellow sand verbena (*Abronia latifolia*), beach bur, sea rocket (*Cakile maritima*), and crisp monardella (*Monardella undulata* ssp. *crispa*). Non-native vegetation (e.g., iceplant [*Carpobrotus edulis*]) is widely distributed across the Project Site but was found to occur in low densities during the February 2014 reconnaissance survey.

Dominant shrub or subshrub species in the coastal dune scrub community include dune lupine (*Lupinus chamissonis*), mock heather (*Ericameria ericoides*), and seaside woolly sunflower (*Eriophyllum staechadifolium*). Common herbaceous species include beach bur, sea rocket, shrubby phacelia (*Phacelia ramosissima* var. *austrolittoralis*), beach evening-primrose, yarrow (*Achillea millefolium*), and Indian paintbrush (*Castilleja affinis* ssp. *affinis*). The perennial shrubs and subshrubs of the existing coastal dune scrub form an interlocking root system that stabilizes the sand. This habitat contains greater species diversity than open sand and foredunes. The soils contain more organic matter, retain more water, are more fertile, and have a lower salt content than the soils of the active coastal dunes and foredunes. As the dominant shrubs grow, the stabilized areas expand to create favorable conditions for the increased spread of additional plants. A thin fragile layer of mosses and lichens develops over time and delicately binds the surface sand together. This soil resists invasion by non-natives, but is easily broken up by foot, wildlife, and vehicle traffic (Holland et al. 1995). When vegetation is removed, this process is disrupted and the impacted area



The Gordon Sand Company is a commercial sand mining operation that includes a sand screening and processing facility as well as an access road and sand collection pits. Access to the site is provided by a remnant unpaved road.

reverts to active dunes; it may take many years for coastal dune scrub to reestablish and in some cases it may not reestablish at all.



Observations during the February 2014 site reconnaissance survey suggest that the larger-particle-size gravel has helped anchor windblown seeds and assisted native vegetation establishment and expansion in the dunes. As documented in the Restoration Work Plan (AECOM 2010), between 2002 and 2008 vegetation had proliferated substantially on Site 2 and the Upper Area, as well as on numerous scattered mobile sand mounds that have established across Site D. Stands of native vegetation, including sensitive plant species (see discussion below), are present along the edges of the Road Site, particularly in the western area. Between 2008 and 2010 the dune topography had changed considerably due to the additional deposition of wind-blown sand, particularly in the Upper Area (FLx 2010). Based on the AMEC Environment & Infrastructure, Inc. (AMEC) reconnaissance survey and examination of aerial photography, it appears that topography has continued to change and native vegetation has continued to establish and expand since 2010.

The Project Site contains suitable habitat for a number of vertebrates including birds (numerous resident and migratory species including American peregrine falcon and brown pelican [*Pelecanus occidentalis*] in addition to western snowy plover and California least tern), amphibians (including western spadefoot toad [*Spea hammondi*]), reptiles (including silvery legless lizard [*Aniella pulchra*] and coast horned lizard [*Phrynosoma blainvillii*]), and mammals. Additionally, over 400 species of invertebrates have been identified in the area (Sheridan 1994). The native vegetation in the Project Site provides habitat for native wildlife species that require cover and protection from the sea breeze. Predation and harassment of native wildlife by common ravens, gulls, coyotes, raccoons, shrikes, humans, and other predators may be reduced due to the cover that the vegetation provides.

Wetlands and Other Waters of the United States

A wetland delineation has not been conducted at the Project Site; however, no wetlands are known to occur within or adjacent to Site D, Site 2, the Road Site, or the Upper Area. According to the National Wetlands Inventory (U.S. Fish and Wildlife Service [USFWS] 2014) the nearest potential wetland habitat occurs approximately 100 feet to the northeast of the Upper Area and is associated with the Santa Maria River Floodplain. Additional wetland habitat occurs further north within the banks of the Santa Maria River.

Sensitive Natural Communities

The California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS) have identified several native plant communities that are rare and/or diminishing within California. Although some of these communities represent important biological resources and may be unique to California, they are not legally protected. Regardless, substantial losses of some of these plant communities may be considered significant under CEQA. Plant communities that are considered sensitive by CDFW within a 5-mile radius of the Project Site are Central Foredunes, Central Dune Scrub, Valley Needlegrass Grassland, and Maritime Chaparral (CDFW 2014). Central Foredunes and Central Dune Scrub occur within the Project Site (CDFW 2014). Additionally the Project Site is located within Environmentally Sensitive Habitat (ESH) designated by the County (see Figure 3.3-1; County of Santa Barbara 2014).

Special-Status Species

Special-status species include plants and wildlife in the categories listed below.

- Species listed or proposed for listing as threatened or endangered under the Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register (FR) [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under the ESA.
- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA).
- Species that are candidates for possible future listing as threatened or endangered under CESA.
- Animal species of special concern to CDFW.
- Animals fully protected in California (California Fish and Game Code, Section 3511 [birds], Section 4700 [mammals], Section 5050 [amphibians and reptiles], and Section 5515 [fish]).
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines, Section 15380).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.).
- Plants considered by the CNPS to be “rare, threatened, or endangered in California” (California Rare Plant Rank [CRPR] 1B and 2) (CNPS 2014).
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (CRPR 3 and 4 [plants on these lists may be included as special-status species on the basis of local significance or recent biological information]) (CNPS 2014).

Special-Status Plants

Vegetation surveys of the Project Site were conducted by FLx in 2008 and 2010. During the 2008 surveys no federally or state-listed threatened or endangered plant species were documented; however, five sensitive plant species were documented (FLx 2008):

- **Crisp monardella (*Monardella crisper*), CRPR 1B.2.** Crisp monardella was observed most frequently, and was scattered to common at all four sites (Site D, Site 2, Upper Area, and Road Site).
- **Blochman's leafy daisy (*Erigeron blochmaniae*), CRPR 1B.2.** Blochman's leafy daisy was present at all four locations; however, it was rare at Site D.
- **Blochman's groundsel (*Senecio blochmaniae*), CRPR 4.2.** Blochman's groundsel was present at all four locations; however, it was rare at Site D.
- **Suffrutescent wallflower (*Erysimum insulare ssp. suffrutescens*), CRPR 4.2.** Suffrutescent wallflower was common along the Road Site, but was rare or absent elsewhere.
- **Dunedelion (*Malacothrix incana*), CRPR 4.3.** Dunedelion was rare and found only at Site D.

The 2008 FLx vegetation survey was updated in 2010. Since the original FLx survey in 2008, the dune topography had changed considerably due to shifting sands, particularly in the Upper Area (FLx, 2010); however, the same sensitive species were documented.

Further, during the 2014 site reconnaissance survey conducted by AMEC, four of the five previously recorded sensitive plant species were observed. Similar to what was documented during the FLx surveys (FLx 2008, 2010), crisp monardella was observed most frequently, and was relatively common at the four gravel sites. Blochman's groundsel was widely scattered at all the sites. Suffrutescent wallflower was common along the Road Site, and was rare in the southern portion of Site 2. Dunedelion was rare and found only along the Road Site and at Site D. As described in the FLx 2010 report (FLx 2010), at the time of the 2010 surveys Blochman's leafy daisy was scattered in the Upper Area, along the Road Site, and Site 2, and it was rare at Site D. This species was not observed during the reconnaissance survey in 2014, likely due to the very low rainfall conditions. However, based on the presence of this species during both the 2008 and 2010 surveys, it is very likely that this species continues to occupy the Project Site.

In addition to these five species, 11 additional species were identified as having been previously documented within 5 miles of the Project Site. These species as well as their potential for occurrence at the Project Site are described below in Table 3.3-1.

Special Status Wildlife

One special status wildlife species, the federally threatened and CDFW species of special concern western snowy plover, has been documented as occurring within the Project Site as recently as the early and mid-2000s. Additionally, California least tern have also been documented near the Project Site as recently as 2004. Several other special status wildlife species could potentially occur within the Project, based on their known ranges and available habitat, these species, and their potential for occurrence, are described below in Table 3.3-2.

Table 3.3-1. Potentially Occurring Special-Status Plant Species

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
Beach spectaclepod <i>Dithyrea maritima</i>	--/ST/1B.1	March - May	Coastal dunes; Coastal scrub	Unlikely to Occur. Observations of this species were recorded in the CNDDDB as recently as 2003. However, these observations were made approximately 1 mile southwest of the Project Site along foredune habitat. This species was not documented in any of the vegetation surveys conducted at the Project Site.
Black-flowered figwort <i>Scrophularia atrata</i>	--/--/1B.2	March - July	Closed-cone coniferous forest; Chaparral; Coastal dunes; Coastal scrub; Riparian scrub	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species in the vicinity of the Project Site have not been recorded in the last 15 years.
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/1B.1	April - June	Rock, often clay, or serpentinite; Coastal bluff scrub; Chaparral; Coastal scrub; Valley and foothill grassland	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Blochman's groundsel <i>Senecio blochmaniae</i>	--/--/4.2	May - October	Coastal dunes	Present. Documented during the 2008 and 2010 FLx Surveys. Scattered at Site D, Site 2, Road Site, and Upper Area.
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	--/--/1B.2	June - August	Coastal dunes; Coastal scrub	Likely to Occur. Documented during the 2008 and 2010 surveys. Common at the Road Site, scattered at Site 2 and the Upper Area, and rare at Site D.

Table 3.3-1. Potentially Occurring Special-Status Plant Species (Continued)

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
Coastal goosefoot <i>Chenopodium littoreum</i>	--/--/1B.2	April - August	Coastal dunes	Unlikely to Occur. Observations of this species within the vicinity of the Project were recorded as recently as 2010. However, these observations were made approximately 2.5 miles north of the Santa Maria River.
Crisp monardella <i>Monardella undulata</i> <i>ssp. crispa</i>	--/--/1B.2	April - August	Coastal dunes; Coastal scrub	Present. Documented during the 2008 and 2010 surveys. Common at Site D, Site 2, Road Site, and Upper Area.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>dauidsonii</i>	--/--/1B.2	April - October	Alkaline; Coastal bluff scrub; Coastal scrub	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Dunedelion <i>Malacothris incana</i>	--/--/4.3	January - October	Coastal dunes; Coastal scrub	Present. Documented during the 2008 and 2010 surveys. While this species is absent at Site 2 and the Upper Area, it is rare at Site D and the Road Site.
Gaviota tarplant <i>Deinandra increscens</i> <i>ssp. villosa</i>	FE/SE/1B.1	May - October	Coastal bluff scrub; Coastal scrub; Valley and foothill grassland	Unlikely to Occur. Observations of this species were recorded in the CNDDDB as recently as 2002. However, these observations were made approximately 4 miles southeast of the Project Site.

Table 3.3-1. Potentially Occurring Special-Status Plant Species (Continued)

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
La Graciosa thistle <i>Cirsium scariosum</i> var. <i>loncholepis</i>	FE/ST/1B.1	May - August	Mesic, Sandy; Cismontane Woodland; Coastal dunes; Coastal scrub; Marshes and swamps (brackish); Valley and foothill grassland	Unlikely to Occur. This species has federally designated critical habitat within the vicinity of the Project Site and was documented as recently as 2010 within the banks of and north of the Santa Maria River. However, this species has not been documented within the Project Site.
San Luis Obispo monardella <i>Monardella undulata</i> <i>ssp. undulata</i>	--/--/1B.2	May - September	Coastal dunes; Coastal scrub (Sandy)	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Sand mesa manzanita <i>Arctostaphylos rudis</i>	--/--/1B.2	November - February	Sandy; Chaparral (maritime); Coastal scrub	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Short-lobed boomrape <i>Orobanche parishii</i> ssp. <i>brachyloba</i>	--/--/4.2	April - October	Coastal bluff scrub; Coastal dunes; Coastal scrub	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.

Table 3.3-1. Potentially Occurring Special-Status Plant Species (Continued)

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
Suffrutescent wallflower <i>Erysimum insulare</i> ssp. <i>suffretescens</i>	--/--/4.2	January - July	Coastal bluff scrub; Chaparral (maritime); Coastal dunes; Coastal scrub	Present. Documented during the 2008 and 2010 surveys. Common at the Road Site and rare at Site D and Site 2. This species is absent at the Upper Area.
Surf thistle <i>Cisium rhotophilum</i>	--/ST/1B.2	April - June	Coastal bluff scrub; Coastal dunes	Not Expected. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.

Status Definitions:

Federal Status

FE = Listed as endangered under the federal ESA.

FT = Listed as threatened under the federal ESA.

State Status

ST = Listed as threatened under CESA.

SE = Listed as endangered under CESA.

CNPS Rare Plant Rank

1B.1 = Plants that are seriously endangered in California.

1B.2 = Plants that are fairly endangered in California.

4.2 = A watch list of plants with limited distribution and that are moderately threatened in California

4.3 = A watch list of plants with limited distribution and that are not very threatened in California

Potential for Occurrence:

Present = Documented during the 2014 reconnaissance survey.

Likely to Occur = Documented in a previous survey of the Project Site, including surveys conducted by FLx in 2008 and 2010, or recorded on the CNDDDB within a 5-mile radius of the Project Site within the last 15 years.

Unlikely to Occur = Not documented in the surveys conducted by FLx in 2008 and 2010, but suitable habitat and/or recorded occurrences may be nearby.

Not expected = There is no habitat on the Project Site, and even if the Project Site were to revert to a "natural" state, the species would not be expected to occur because of other constraints (e.g., the Project Site is outside of the current known distribution of the species, there is no habitat and/or recent recorded occurrences nearby).

Sources: CDFW 2014; CNPS 2014; FLx 2008, 2010; AECOM 2010; AMEC 2014.

Table 3.3-2. Potentially Occurring Special-Status Wildlife Species

Common/ Scientific Name	Legal Status		Other Status	Habitat Requirements	Potential for Occurrence
	Federal	State			
Birds					
Swainson's hawk <i>Buteo swainsoni</i>	--	ST	--	Nest in trees near grasslands but also use sage flats and agriculture intermixed with native habitat	Not Expected. Swainson's hawks have not been observed on the Project Site. While this species has been recorded approximately 4 miles northwest of the Project Site, suitable habitat is not present.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT	--	SSC	Inhabits barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat	Likely to Occur. Western snowy plover nests have been documented within the Project Site in 2001, 2002, 2003, and 2004. Additional nests have been observed within the immediate vicinity of the Upper Area in 2006, 2007, and 2008.
California least tern <i>Sternula antillarum browni</i>	FE	SE	FP	Inhabits seacoasts, beaches, bays, estuaries, lagoons, lakes and rivers and breeds on sandy or gravelly beaches and banks of rivers or lakes	Likely to Occur. Least terns have been documented at Rancho Guadalupe Dunes County Park as recently as 2004. However, predation and harassment by common raven may deter their presence at the Project Site.
Burrowing owl <i>Athene cucularia</i>	--	--	SSC	Occurs in dry, open areas with no trees and short grass	Unlikely to Occur. Burrowing owls have not been observed on the Project Site. While this species has been recorded in the CNDDDB as recently as 2006 this observation was made approximately 1 mile north of the Santa Maria River in more densely vegetated habitat. Additionally, soils within the Project Site are not stable enough to support burrow habitat.

Table 3.3-2. Potentially Occurring Special-Status Wildlife Species (Continued)

Common/ Scientific Name	Legal Status		Other Status	Habitat Requirements	Potential for Occurrence
	Federal	State			
Amphibians					
California red-legged frog <i>Rana draytonii</i>	FT	--	SSC	Occurs in meadows or damp grasses and breeds in slow-moving or standing deep ponds, pools, and streams and prefers tall vegetation such as grasses, cattails, and shrubs	Not Expected. Observations of this species within the vicinity of the Project Site have been recorded as recently as 2005. However, this species is closely associated with water. Consequently, it would be unlikely to encounter this species in dune habitat within the Project Site.
Reptiles					
Silvery legless lizard <i>Anniella pulchra pulchra</i>	--	--	SSC	Occurs in moist warm loose soil with plant cover, particularly in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces	Likely to Occur. Silvery legless lizards have not been observed on the Project Site. While this species has been recorded in the CNDDDB as recently as 2008, these observations were made within or to the north of the Santa Maria River. However, habitat suitable for this species occurs within the Project Site.
Two-striped garter snake <i>Thamnophis hammondi</i>	--	--	SSC	Generally found around pools, creeks, cattle tanks, and other water sources often in rocky areas	Unlikely to Occur. Two-striped garter snakes have not been observed on the Project Site. While this species has been recorded in the CNDDDB as recently as 2008, these observations were made within or to the north of the Santa Maria River. No suitable aquatic habitats required by the species are present on site.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--	--	SSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains	Likely to Occur. Coast horned lizards have not been observed on the Project Site. While this species has been recorded in the CNDDDB as recently as 2008, these

Table 3.3-2. Potentially Occurring Special-Status Wildlife Species (Continued)

Common/ Scientific Name	Legal Status		Other Status	Habitat Requirements	Potential for Occurrence
	Federal	State			
					observations were made on within or to the north of the Santa Maria River. However, habitat suitable for this species occurs within the Project Site.
Fish					
Tidewater goby <i>Eucyclogobius newberryi</i>	FE	--	SSC	Inhabit the fresh-saltwater interfaces (e.g., tidal bays, coastal lagoons) in shallow and still brackish water where salinity is less than 10 to 12 parts per thousand	Not Expected. There is no aquatic habitat within the Project Site, sensitive fish species in this area are known to occur in the Santa Maria River.
Arroyo chub <i>Gila orcuttii</i>	--	--	SSC	Primarily occurs in warm streams which are typically muddy during the winter and clear in the summer	Not Expected. There is no aquatic habitat within the Project Site, sensitive fish species in this area are known from the Santa Maria River.
<p>Status Definition:</p> <p>Federal Status FE = Listed as endangered under the federal ESA. FT = Listed as threatened under the federal ESA.</p> <p>State Status ST = Listed as threatened under CESA. SE = Listed as endangered under CESA.</p> <p>Other Status SSC = California Department of Fish and Wildlife Species of Special Concern FP = California Department of Fish and Wildlife Fully Protected Species</p> <p>Potential for Occurrence: Present = Documented during the 2014 reconnaissance survey. Likely to Occur = Recorded on the CNDDDB within a 5-mile radius of the Project Site within the last 15 years. Unlikely to Occur = The Project Site currently does not have any suitable habitat because of human-related impacts and uses, but suitable habitat and/or recorded occurrences may be nearby. Not expected = There is no habitat on the Project Site, and even if the Project Site were to revert to a "natural" state, the species would not be expected to occur because of other constraints (e.g., the Project Site is outside of the current known distribution of the species, there is no habitat and/or recent recorded occurrences nearby).</p> <p>Sources: CDFW 2014; FLx 2008, 2010; AECOM 2010; AMEC 2014.</p>					

Western Snowy Plover. In addition to the gravel's contributory effect on the development of native dune vegetation, the gravel material has been used by ground-nesting western snowy plovers in the construction of their nests, as documented by federally authorized western snowy plover monitors. In 2002 and 2003, Persons (2004) performed biological monitoring at the Project Site while soil sampling was conducted at the Project Site. During this time, one western snowy plover nest with eggs was observed in 2002 on gravels on the level bench above the Gordon Sand Company facility in the northwest part of the Upper Area, but the eggs failed to hatch. Five nests containing eggs were observed on gravels in this area again during the 2003 season, of which two actually hatched. Another nest was observed on gravels in Site D, north of the Gordon Sand Company sand pit, and one was observed from a distance on the pit haul road in the pit area, but none of the eggs in these nests hatched. One nest was also noted during the 2001 season by an employee of the Center for Natural Lands Management in gravels on Site D area near the northern part of the Project Site.



Nesting western snowy plovers were documented at the Project Site in 2001, 2002, 2003, and 2004. While no nesting plovers were documented within the Project Site in 2006, 2007, or 2008, nesting plovers were documented in close proximity to the Upper Area. Photograph courtesy of USFWS.

Persons also conducted biological monitoring during the 2004 breeding season, during which time plovers were observed on only three of 18 surveys, and only in the Upper Area, where three nests were found (refer to Figure 3.3-1). One nest was successful, hatching two young while the other two failed due to predation of eggs, at least one by common ravens (*Corvus corax*). Additionally, monitoring conducted by SRS Technologies indicated that no plover nesting occurred within the Project Site in 2006. The nearest documented nest was approximately 500 feet to the northwest of the Upper Area. Further, no nests were found on the Project Site during the 2007 and 2008. The nearest known nest during this period was documented approximately 300 feet west of Site D in 2008, though several plover scrapes were noted on the Site D in both years, and three and four nests were noted in the 2007 and 2008 seasons, respectively (Applegate 2008; AECOM 2010). Suitable plover nesting habitat was observed during the 2014 reconnaissance survey at Site D, Site 2, the Road Site, and the Upper Area, although the areas along the Road Site appear to be the least favorable based on previous surveys and the presence of denser vegetation.

California Least Tern. During the 2002 and 2003 biological monitoring (Persons 2004), no California least terns were observed on the Project Site. Further, during the 2003 season, the resident California least terns left the Guadalupe Dunes Preserve Area, presumably due to predation and harassment by common ravens. In 2004, a small number of terns arrived at Rancho Guadalupe Dunes County Park in mid-June and established a breeding colony in the foredunes just inland of the beach (Persons 2004; AECOM 2010). While no tern occurrences have been documented since this time in the vicinity of the Project Site, this area still provides suitable nesting habitat for this federally and state-listed endangered species.



California least terns have not been documented at the Project Site; however, nesting terns were known to occur in Rancho Guadalupe Dunes County Park as recently as 2004. Photograph courtesy of the USFWS.

3.3.3 Regulatory Setting

3.3.3.1 Federal

Federal Endangered Species Act

Under the federal ESA, it is unlawful to “take” any species listed as threatened or endangered. “Take” is defined as actions intended to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” An activity is defined as a “take” even if it is unintentional or accidental. Take provisions under the federal ESA apply only to listed fish and wildlife species under the jurisdiction of USFWS and/or the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project “may affect” or result in take of a listed species.

When a species is listed, USFWS and/or NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or NMFS is required for projects that include a federal action or federal funding if the project would modify designated critical habitat.

Clean Water Act Section 404

Under Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States, which are those waters that have a connection to interstate commerce, either directly via a tributary system or indirectly through a nexus identified in USACE regulations. In nontidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high-water mark (OHWM) of a water body or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line (HTL) or, where adjacent wetlands are present, beyond the HTL to the limit of the wetlands.

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions.” Waters of the United States essentially include any body of water not otherwise exempted that displays an OHWM.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that would result in a “take” of migratory birds, their eggs, feathers, or nests. “Take” is defined in the MBTA to include any attempt at hunting, pursuing, wounding, killing, possessing, or transporting by any means or in any manner any migratory bird, nest, egg, or part thereof. More than 800 species of birds are protected under the MBTA. Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

3.3.3.2 State

California Endangered Species Act

Under CESA, it is unlawful to “take” any species listed as rare, threatened, or endangered. “Take” under CESA means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project would result in “take” of a listed species.

California Code of Regulations, Sections 1600–1616

CDFW, through provisions of Sections 1600–1616 of the California Code of Regulations, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and the conveyance of at least ephemeral flows. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW also has jurisdiction over any riparian habitat areas associated with a river, stream, or lake. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat would automatically include any wetland areas. CDFW has not defined wetlands for jurisdictional purposes. Wetlands not associated with a lake, stream, or other regulated area are generally not subject to CDFW jurisdiction.

California Fish and Game Code Sections 3503, 3503.5, and 3513—Protection of Birds, Nests, and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit. Section 3513 states that it is unlawful to take or possess any migratory nongame bird, as designated in the MBTA, or any part of such migratory nongame bird.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) preserves, protects, and enhances endangered and rare plants in California. Specifically, it prohibits import, take, possession, or sale of any native plant designated by the CDFW Commission as rare or endangered, except under certain circumstances designated by the act.

Clean Water Act Section 401

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a Section 404 permit. The Regional Water Quality Control Board (RWQCB) regulates these

activities and issues water quality certifications for those activities requiring a Section 404 permit. In addition, the RWQCB has authority to regulate the discharge of “waste” into waters of the state pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

3.3.3.3 Local

The Santa Barbara County Comprehensive Plan (inclusive of mandatory and optional Elements) addresses the conservation, development, and use of natural resources. Consistency with these policies is discussed in Section 3.7, *Land Use and Planning*.

3.3.4 Environmental Impact Analysis

This section discusses the potential biological resources impacts associated with the Proposed Project.

3.3.4.1 Thresholds of Significance

CEQA Guidelines

Appendix G of the CEQA Guidelines states that a project is considered to have a significant impact on biological resources if it is found to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, and coastal areas) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

CEQA Section 15206 states that a project is of statewide, regional, or areawide significance if it has the potential to affect sensitive wildlife habitats substantially, including riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and threatened species, as defined by CEQA Section 15380. CEQA Section 15380(d) further provides that a plant or animal species may be treated as rare or endangered even if it is not on one of the official lists (e.g., if it is likely to become endangered in the foreseeable future).

County of Santa Barbara Environmental Thresholds and Guidelines

The *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (County of Santa Barbara 2008) indicates that the determination of impact is done on a case-by-case basis. Because of the complexity of biological resource issues, substantial variation can occur between cases. An assessment of impacts must account for both short-term and long-term impacts. Thus, the assessment must account for items such as immediate tree removal and longer-term, more subtle impacts, such as interruption of the natural fire regime or interference with plant or animal propagation. Disturbances to habitats or species may be significant, as determined by substantial evidence in the record (not public controversy or speculation), if they affect significant resources in the following ways:

1. Substantially reduce or eliminate species diversity or abundance.
2. Substantially reduce or eliminate the quantity or quality of nesting areas.
3. Substantially limit reproductive capacity through losses of individuals or habitat.
4. Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources.
5. Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes).
6. Substantially interfere with natural processes, such as fires or floods, upon which the habitat depends.

There are many areas in the County where little or no importance is given to a habitat, and it is presumed that disruption would not create a significant impact. Examples of areas where impacts on habitat are presumed to be insignificant include the following:

1. Small areas of non-native grassland where wildlife values are low.
2. Individual non-native trees or stands that are not used by important animal species such as raptors or monarch butterflies.
3. Areas of historical disturbance, such as intensive agriculture.
4. Small pockets of habitats that are already significantly fragmented or isolated and degraded or disturbed.
5. Areas of primarily ruderal species, resulting from pre-existing man-made disturbance.

In addition to the criteria listed above, the following questions and factors are used in assessing the significance of project impacts on biological resources:

1. Size.
 - How much of the resource in question both on and off the Project Site would be affected (percentage of the whole area and the square footage and/or acreage)?
 - How does the area or species that would be affected relate to the remaining populations off the Project Site (percentage of the total area or species population, either quantitatively or qualitatively)?
2. Type of Impact.

- Would it adversely indirectly affect wildlife (e.g., light, noise, barriers to movement)?
- Would it remove the resource or cause an animal to abandon the area or a critical activity (e.g., nesting) in that area?
- Would it fragment the area's resource?

3. Timing.

- Would the impact occur at a critical time in the life cycle of an important plant or animal (e.g., breeding, nesting, flowering periods)?
- Would the impact be temporary or permanent? If temporary, how long would the resource take to recover?
- Would the impact be periodic and short in duration but one that would recur again and again?

Section D of the *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (County of Santa Barbara 2008) includes habitat-specific impact assessment guidelines, which provides additional impact assessment guidelines specific to several biological communities to determine whether impacts would be significant. The following summarizes the thresholds applied to different habitat types throughout the County. Of those types, wetlands and riparian habitats occur in the vicinity of the project area and those guidelines are included below.

1. **Wetlands.** The following types of project-created impacts may be considered significant:

- Projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or would threaten the continuity of wetland-dependent animal or plant species.
- Substantial interruption of wildlife access, use and dispersal in wetland areas.
- Impacts to the hydrologic functions of wetlands systems, such as the quantity and quality of run-off, etc.
- Substantial alteration of tidal circulation or decrease of tidal prism in coastal salt marsh habitats.
- Adverse hydrologic changes (e.g., altered freshwater input), substantial increase of sedimentation, introduction of toxic elements or alteration of ambient water temperature in coastal salt marshes.
- Indirect impacts from construction activities near coastal marshes such as noise and turbidity on sensitive animal species, especially during critical periods such as breeding and nesting.
- Disruption of wildlife dispersal corridors in coastal salt marshes.
- Disturbance or removal of substantial amounts of marsh habitats.
- Direct removal of a vernal pool or vernal pools complex.
- Direct or indirect adverse hydrologic changes in vernal pool habitats such as altered freshwater input, changes in the watershed area or run-off quantity and/ or quality, substantial increase in sedimentation, introduction of toxic elements or alteration of ambient water temperature.

- Disruption of larger plant community (e.g., grassland) within which vernal pool occurs, isolation or interruption of contiguous habitat which would disrupt animal movement patterns, seed dispersal routes or increase vulnerability of species to weed invasion or local extirpation.
2. **Riparian Habitats.** The following types of project-created impacts may be considered significant:
- Direct removal of riparian vegetation.
 - Disruption of riparian wildlife habitat, particularly animal dispersal corridors and/or understory vegetation.
 - Intrusion within the upland edge of the riparian canopy (generally within 50 feet in urban areas, within 100 feet in rural areas, and within 200 feet of major rivers listed in the previous section), leading to potential disruption of animal migration, breeding, etc. through increased noise, light and glare, and human or domestic animal intrusion
 - Disruption of a substantial amount of adjacent upland vegetation where such vegetation plays a critical role in supporting riparian-dependent wildlife species (e.g., amphibians), or where such vegetation aids in stabilizing steep slopes adjacent to the riparian corridor, which reduces erosion and sedimentation potential.
 - Construction activity which disrupts critical time periods (nesting, breeding) for fish and other wildlife species.

3.3.4.2 1982 Final EIR Impacts

The 1982 Final EIR identified several impacts to biological resources associated with the Husky Oil Project. Two of these were considered significant and unavoidable:

- **Impact 1982-BIO-1.** Project implementation could impact a small breeding least tern colony if construction and/or drilling are/is conducted between mid-April and early September.
- **Impact 1982-BIO-2.** Degradation of the dune ecosystem could result from project-related impacts such as introduction of exotic vegetation and use of chemical or oil-based stabilizers.

These impacts in the 1982 Final EIR were primarily related to construction and operation of oil exploration equipment. Mitigation measures included in the 1982 Final EIR to reduce these impacts included “adherence to all applicable policies set forth in the County LCP including restrictions on noise generating activities during the least tern breeding season” and “establishment of a monitoring program of the least tern colony during phased development of the project.” The residual impact was described as “incremental but significant fragmentation of the dune ecosystem by roads, pads, and related structures.”

As described in Section 1.5, *Supplemental Environmental Impact Report*, during the time between the publication of the 1982 Final EIR and the publication of the NOP for the SEIR, baseline conditions have changed at the Project Site. The 1982 Final EIR, per CEQA guidelines, accurately described impacts based on a reasonably foreseeable worst-case scenario; however, following certification of the EIR, Island B and Island C, which were included in the 1982 Final EIR impact analyses were not constructed; only Site D was constructed and used for exploratory drilling operations. For this

reason, and as a result of the partial removal of the gravel under the 96-CDP-010 as well as the unforeseeable establishment of sensitive dune species, many of the impacts as described in the 1982 Final EIR did not occur. As described in the existing setting, no least terns have been documented in the vicinity of the Project Site since 2004. The role of the Husky Oil operations, the Gordon Sand operation, and other industrial activities in the surrounding vicinity are unclear, however, other factors that could have driven least terns away include predation and harassment by common ravens, as well as industrial-type noise. Currently, while no individuals have been documented within recent history, there is potential habitat for least terns within the Project Site. Consequently, under the 1982 Final EIR Impact 1982-BIO-1 was considered significant and unavoidable (Class I); however, following the change in baseline conditions, this impacts would now be considered less than significant after mitigation (Class II), see analysis related to California least terns below in Impact ALT1-BIO-3.

Some exotic plant species are currently known to exist at the project site, including iceplant and Veldt grass (*Ehrharta calycina*) (see Table 3.3-4). It is probable that the abundance of these species have increased since preparation of the 1982 Final EIR and that the Husky Oil operations, as well as other activities such as Gordon Sand operations, have contributed to their introduction and spread. However, it is unclear if the existence of the remnant gravel that is currently at the site has contributed to this effect.

Finally, the residual impact of incremental but significant habitat fragmentation was based on a reasonably foreseeable worst case scenario at the time the 1982 EIR was certified. Due to partial removal efforts in 1997 as well as long-term unforeseen ecological succession, the fragmentation predicted in the 1982 Final EIR is not apparent in the baseline setting analyzed in this SEIR. Rather, as described in the existing setting, sensitive native plant species have become established and are thriving in areas affected by remnant gravel. Consequently, although this impact, which was based on a reasonably foreseeable worst case scenario, was considered significant and unavoidable (Class I) in the 1982 Final EIR, due to the shift in the existing baseline condition, Impact 1982-BIO-2 would now be considered to be less than significant (Class III).

3.3.4.3 Project Impacts

Implementation of the Proposed Project would not result in any activities that would alter baseline conditions described in Section 3.3.2, *Environmental Setting*. Based on an analysis of previous biological studies conducted at the Project Site and the 2014 reconnaissance survey, the implementation of the Proposed Project would not result in any adverse impacts to biological resources within Site D, Site 2, the Road Site, or the Upper Area. As previously described, it appears that the presence of the gravel in the dunes does not present a significant adverse impact to either dune vegetation or wildlife. Rather, the gravel appears to be beneficial for the establishment and expansion of native dune vegetation (including sensitive plant species), nesting habitat for western snowy plover, and habitat for a variety of other native wildlife species.

Since no potentially significant or unavoidable adverse impacts are expected from leaving the gravel in place, mitigation measures would not be required. However, the monetary contribution (in-lieu fee) for purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 as described in MM REC-1 could indirectly benefit regional biological resources. The optimal property would be located within the north coastal region of the County, in the vicinity of

the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. Consequently, the acquisition of such a property would indirectly preserve a habitat type similar to that within the Project Site, within the northern coastal region of Santa Barbara County.

3.3.4.4 No Project Alternative

Permit Condition #31 of 82-CP-75(cz) and 96-CDP-10 for the drilling project requires removal of all introduced materials to a maximum depth of 15 feet. Removal of the gravel would involve sifting the sand to a depth that is clear of the imported gravel, the majority of which is located 2 to 3 feet below the surface. Sifting of the sand would resemble a small-scale strip mining operation as the sand and gravel material would be removed and transported to a process plant with the clean sand backfilled into the excavated areas.

The No Project Alternative (i.e., the removal of gravel in accordance with permit requirements) would generally result in degradation of the dune ecosystem and specifically result in adverse impacts to biological resources including sensitive species, which are described in detail below.

Impact ALT1-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities.

Implementation of the No Project Alternative would require the excavation and sifting of sand to a depth of at least 2 to 3 feet and in some cases deeper (to a maximum of 15 feet). Consequently, the No Project Alternative would directly remove vegetation occurring within Site D, Site 2, the Road Site, and the Upper Area.

As previously described, the Project Site includes two CDFW sensitive natural communities, Central Foredunes and Central Dune Scrub (CDFW 2014), and at least five known sensitive plant species (FLx 2010; AECOM 2010). Table 3.3-3 summarizes the counts of the individual species within the Project Site that would be impacted by the implementation of the No Project Alternative.

Implementation of the No Project Alternative would result in short-term direct adverse impacts to approximately 19 acres of CDFW sensitive communities as the Project Site would be denuded of vegetation. Additionally, sensitive plant species occurring within Site D, Site 2, the Road Site, and the Upper Area would be directly and adversely impacted over the short-term. Vegetation removal and soil disturbance would also result in additional indirect impacts to wildlife including impacts to nesting and foraging behavior within the Project Site (described further in Impact ALT1-BIO-3).

However, as described in Section 2.5.2.2, *No Project Alternative*, the original applicant (Husky Oil Company) submitted a dune restoration program and revegetation plan to the County per mitigation requirements described in the 1982 Final EIR, which included salvage and transplant of native species prior sand sifting. While removal of sensitive plant species and CDFW sensitive communities would constitute a direct short-term adverse impact, long-term impacts to sensitive plant species and communities would be reduced with adherence to the dune restoration program as well as other mitigation requirements detailed in the 1982 Final EIR. Consequently, impacts to sensitive species and CDFW sensitive communities would be less than significant after mitigation (Class II).

Table 3.3-3. Summary of Sensitive Plant Species Documented During 2010 Vegetation Surveys and Potentially Affected by the No Project Alternative

Common/ Scientific Name	Site D	Site 2	Road Site	Upper Area
Crisp monardella <i>Monardella crisper</i>	171	173	654	165
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	2	14	390	23
Blochman's groundsel <i>Senecio blochmaniae</i>	11	34	41	61
Suffrutescent wallflower <i>Erysimum insulare ssp. suffrutescens</i>	0	0	569	0
Dunedelion <i>Malacothrix incana</i>	0	0	1	0
Notes: It is assumed based on the 2014 reconnaissance survey that sensitive plant species occur in roughly the same number as documented in the FLx 2010 survey. Blochman's leafy daisy was not documented during the 2014 reconnaissance survey; however, this is likely due to very low rainfall conditions. Source: FLx 2010.				

Impact ALT1-BIO-2. Disturbance and removal of environmentally sensitive habitat.

As described in Impact ALT1-BIO-1, implementation of the No Project Alternative would result in the removal of vegetation throughout the approximately 19-acre Project Site. Because the Project Site is located within designated ESH (refer to Figure 3.3-1), implementation of the No Project Alternative would result in direct short-term adverse impacts to ESH resulting from vegetation removal. However, implementation of the dune restoration program and other mitigation measures from the 1982 Final EIR would salvage at least some of the native vegetation within this area and restore native dune habitat to the existing conditions in terms of native species coverage, diversity, and density. Consequently, with implementation of these alternatives, impacts to ESH would be less than significant after mitigation (Class II).

Impact ALT1-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species.

An analysis of previous biological surveys and monitoring reports as well as a recent reconnaissance survey have indicated that there is suitable habitat within the Project Site for western snowy plover as well as California least tern. Additionally, silvery legless lizard and coast horned lizard may also occur within the Project Site; however, although these species have been recorded within 5 miles of the Project Site as recently as 2008, silvery legless lizard and coast horned lizard have not been observed within the Project Site during any of the past biological surveys, including the 2014 reconnaissance survey. Direct short-term impacts to sensitive wildlife from gravel removal under the No Project Alternative would be associated with the disturbance and removal of dune vegetation, including CDFW sensitive communities, during and immediately following gravel removal operations (refer to Impact ALT1-BIO-1).

Disturbance and removal of approximately 19 acres of dune vegetation would potentially result in the displacement or take of common native and/or sensitive wildlife species. While sensitive avian species that could be present, such as western snowy plovers and California least terns, would likely

emigrate from the Project Site during gravel removal activities (potentially abandoning nests), sand excavation may result in the direct take of small mammals, reptiles, invertebrates, and other slow-moving animals that may reside within the Project Site. Additionally, as more mobile wildlife species (e.g., avian species) would be forced to move into adjacent areas in the vicinity (e.g., Santa Maria River floodplain habitat), competition would increase for available resources in those areas. This could result in the loss of additional wildlife species outside of the Project Site, particularly sensitive species that may not be able to survive with increased competition.

Further, sensitive species adjacent to the Project Site (e.g., coastal habitat approximately 2,500 feet to the west) could also be indirectly affected by construction-related noise, which could result in the disruption of foraging, nesting, and reproductive activities. Indirect impacts to sensitive bird species due to construction-related noise may occur throughout the duration of gravel removal activities, which are anticipated to last approximately 5 to 7 months, resulting in abandoned nests or breeding colonies. Potential indirect impacts to wildlife utilizing nearby habitats could also result from increase in human activity; the increased threat of road-kill by vehicle and machinery traffic; deposition of trash and debris; potential exposure to pollutants and hazardous materials (refer to Impact HAZ-1); and increased soil erosion. Additionally, movement of sensitive wildlife through the gravel removal areas would also be temporarily impeded during activities associated with the No Project Alternative.

Gravel removal would also potentially result in a reduction in habitat quality for a variety of wildlife species using the Project Site for nesting, foraging, and roosting, and denning opportunities (AECOM 2010). Gravel at the Project Site is likely used by western snowy plovers to stabilize nests and to a lesser extent for egg crypsis.¹ Western snowy plovers have been shown to preferentially breeding habitat characterized by heterogeneous (i.e., mixed) substrates, including gravels (Saalfeld et al. 2012; Colwell et al. 2011). Western snowy plovers have demonstrated higher nesting success on gravel bars than on nearby beaches, characterized by more homogeneous sandy substrates (Saalfeld et al. 2012; Colwell et al. 2011). Consequently, removal of gravel at the Project Site could result in a reduction of habitat quality, particularly for nesting western snowy plovers, which have been known to occur within the Project Site as recently as 2004 (Persons 2004), and within Rancho Guadalupe Dunes County Park as recently as 2008 (AECOM 2010).

However, adherence to the dune restoration program as well as other mitigation requirements detailed in the 1982 Final EIR would reduce impacts associated with this alternative. Condition #21 of 82-CP-75(cz) limits noise levels from major activities at the Project Site during the California least tern breeding season, beginning April 15. Additionally, as described in the 1982 Final EIR gravel removal and restoration activities within the Project would be completed by the start of the western snowy plover breeding season, beginning March 1. If restoration activities within the Project Site must continue past March 1, a biologist would conduct regular site visits to ensure limited impacts to the western snowy plover.

Further, although the removal of gravel from the Project Site may make western snowy plover nesting less likely, western snowy plovers are known to occur throughout the Guadalupe-Nipomo Dune Complex, where they use homogeneous sand substrate for nesting. As removal of the gravel would return the Project Site to a dune habitat type more consistent with the Guadalupe-Nipomo

¹ Egg crypsis is the ability for an organism to hide or avoid detection of an egg. Western snowy plovers can accomplish this through the use of egg-size gravel as a part of their nests. However, gravel at the Project Site is likely less effective for egg crypsis as it is smaller in size than western snowy plover eggs reducing the crypsis effect.

Dune Complex as a whole, gravel removal would not represent a substantial reduction in habitat quality, and impacts would be less than significant after mitigation (Class II).

Impact ALT1-BIO-4. Introduction or spread of non-native vegetation with the Project Site.

As described in Section 3.3.2.2, *Biological Resources at the Project Site*, the Project Site has been influenced by past uses including permitted exploratory drilling as well as ongoing quarry activity by the Gordon Sand Company. As a result, non-native vegetation, including iceplant, is widely distributed across the Project Site; however, these non-native species currently occur in relatively low densities within the Project Site.

Ground disturbing activities occurring under the No Project Alternative would create opportunities for the introduction and/or spread of non-native species within the Project Site. For example, vehicles brought to the Project Site from other areas could also introduce new non-native species if they are not properly washed. Invasive species can out-compete native species for water and space. In addition, soil disturbance associated with the excavation of sand and removal of gravel would also reduce the native seed bank associated with the site further limiting the ability of native plants to reestablish. Consequently, while invasive species currently occur in relatively low densities, the composition of the plant community may shift to favor invasive species which are more tolerant of disturbance and can out-compete native plants.

Additional potential impacts off site include indirect impacts to adjacent vegetation communities resulting from adverse “edge effects,” which could occur along the edges of the gravel removal locations (e.g., removal activities could increase airborne dust particulates over the short-term, which can disrupt the vitality of plants in the vicinity). The introduction of non-native plant species could also adversely affect native plant cover and diversity in the vicinity, depending on the aggressiveness of introduced invasive species (see Table 3.3-4).

However, mitigation measures included in the 1982 Final EIR require the vegetation used for dune stabilization or revegetation to be limited to native plants compatible with the habitat area. This, in conjunction with the dune restoration program, would reduce impacts associated with invasive species to less than significant levels after mitigation (Class II).

3.3.4.5 Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would removal gravel from only the most visually prominent areas within the Project Site. As described in Section 2.5.2.1, *Partial Gravel Removal Alternative*, the purpose of this alternative would be to minimize visual impacts associated with imported gravel located on the surface of the dunes, while also minimizing the amount of construction-related disturbance to vegetated areas. Similar to the No Project Alternatives, permit conditions associated with 82-CP-75(cz) and 96-CDP-010 would apply. As required by Permit Condition #31, all introduced materials in Site D and the western portion of the Road Site would be removed to a maximum depth of 15 feet.

Table 3.3-4. Non-Native Species Known to Occur on the Project Site

Common/ Scientific Name	Cal-IPC Rating
Ripgut grass <i>Bromus diandrus</i>	Moderate
Red brome <i>Bromus madritensis ssp. rubens</i>	High
Sea rocket <i>Cakile maritima</i>	Limited
Iceplant <i>Carpobrotus edulis</i>	High
Narrow-leaved iceplant <i>Conicosia pugioniformis</i>	-
Veldt grass <i>Ehrharta calycina</i>	High
Red-stemmed filaree <i>Erodium cicutarium</i>	Limited
Perennial mustard <i>Hirschfeldia incana</i>	Moderate
Sourclover <i>Melilotus indica</i>	-
Prickly sow thistle <i>Sonchus asper ssp. asper</i>	-
Rattail fescue <i>Vulpia myuros var. hirsuta</i>	-
<p>California Invasive Plant Council (Cal-IPC) Rating:</p> <p>High = These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.</p> <p>Moderate = These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal though establishment is generally dependent upon ecological disturbance. Ecological amplitude and destruction may range from limited to widespread.</p> <p>Limited = These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.</p> <p>Note: Non-native species that do not have a Cal-IPC Rating are not considered invasive by the Cal-IPC. Source: Cal-IPC 2014.</p>	

As demonstrated in Table 3.3-5, relative to the No Project Alternative the Partial Gravel Removal Alternative would reduce impacts to dune habitat by approximately 14.61 acres. Impacts under this alternative, which would be similar to those described for the No Project Alternative are described in detail below.

Table 3.3-5. Differences in Disturbed Area Under the Partial Gravel Removal Alternative

Site Area	Disturbed Area No Project Alternative (acres)	Disturbed Area Partial Removal Alternative (acres)	Difference Under Partial Removal Alternative (acres)
Site D	3.42	3.42	0
Site 2	4.59	0	-4.59
Road Site	2.42	0.89	-1.53
Upper Area	8.49	0	-8.49
Total	18.92	4.31	-14.61

Impact ALT2-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities.

Implementation of the Partial Gravel Removal Alternative would require the excavation and sifting of sand within Site D and the western portion of the Road Site to a depth of at least 2 to 3 feet, and deeper in some cases.

As previously described, Site D and the Road Site include two CDFW sensitive natural communities, Central Foredues and Central Dune Scrub (CDFW 2014), and at least five known sensitive plant species (FLx 2010; AECOM 2010). Table 3.3-6 below summarizes the counts of the individual species within the Project Site that would be impacted by the implementation of the No Project Alternative.

Table 3.3-6. Summary of Sensitive Plant Species Documented During 2010 Vegetation Surveys and Potentially Affected by the Partial Gravel Removal Alternative

Common/ Scientific Name	Site D	Road Site
Crisp monardella <i>Monardella crisper</i>	171	654
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	2	390
Blochman's groundsel <i>Senecio blochmaniae</i>	11	41
Suffrutescent wallflower <i>Erysimum insulare ssp. suffrutescens</i>	0	569
Dunedelion <i>Malacothrix incana</i>	0	1
Notes: It is assumed based on the 2014 reconnaissance survey that sensitive plant species occur in roughly the same number as documented in the FLx 2010 survey. Blochman's leafy daisy was not documented during the 2014 reconnaissance survey; however, this is likely due to very low rainfall conditions. Additionally, the FLx surveys did not provide point locations for species documented in the Road Site. As the Partial Gravel Removal Alternative would only remove a fraction of the Road Site (approximately 37 percent) only a fraction of the documented sensitive species would be removed. Source: FLx 2010.		

Implementation of the Partial Gravel Removal Alternative would result in direct short-term adverse impacts to approximately 4.31 acres of CDFW sensitive communities as Site D and the western portion of the Road Site would be denuded of vegetation. Additionally, sensitive plant species

occurring within these areas would also be directly and adversely impacted. However, these impacts would be reduced relative to the No Project Alternative, as approximately 14.31 fewer acres of dune habitat would be disturbed (refer to Table 3.3-5).

Similar to the No Project Alternative, the dune restoration program and revegetation plan previously prepared by Husky Oil Company would be implemented, along with other mitigation measures described in the 1982 Final EIR. While removal of sensitive plant species and CDFW sensitive communities would constitute a direct short-term adverse impact, long-term impacts to sensitive plant species and communities would be reduced with the implementation the dune restoration program and other applicable mitigation measures. Consequently, impacts to sensitive species and CDFW sensitive communities would be less than significant after mitigation (Class II).

Impact ALT2-BIO-2. Disturbance and removal of environmentally sensitive habitat.

As described in Impact ALT2-BIO-1, implementation of the Partial Gravel Removal Alternative would result in the removal of vegetation throughout Site D and the western portion of the Road Site, totaling 4.31 acres. Because the Project Site is located within designated ESH (refer to Figure 3.3-1), implementation of the No Project Alternative would result in direct short-term adverse impacts to ESH resulting from vegetation removal. However, these impacts would be reduced relative to the No Project Alternative as approximately 14.31 fewer acres of dune habitat would be disturbed. Additionally, implementation of the dune restoration program and other mitigation measures described in the 1982 Final EIR would salvage at least some of the native vegetation within this area and restore native dune habitat. Consequently, impacts to ESH would be less than significant after mitigation (Class II).

Impact ALT2-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species.

An analysis of previous biological surveys and monitoring reports as well as a recent reconnaissance survey have indicated that there is suitable habitat within the Project Site for western snowy plover as well as California least tern. Additionally, as previously described, silvery legless lizard and coast horned lizard may also occur within the Project Site. Direct short-term impacts to sensitive wildlife from gravel removal under the Partial Gravel Removal Alternative would be associated with the disturbance and removal of dune vegetation, including CDFW sensitive communities, during and immediately following gravel removal operations (refer to Impact ALT2-BIO-1).

Disturbance and removal of approximately 4.31 acres of dune habitat would potentially result in the displacement or take of common native and/or sensitive wildlife species. While sensitive avian species, such as western snowy plovers and California least terns, would likely emigrate from the affected areas of the Project Site during gravel removal activities (potentially abandoning nests), sand excavation may result in the direct take of small mammals, reptiles, invertebrates, and other slow-moving animals that may reside within the Project Site. Additionally, as more mobile wildlife species (e.g., avian species) would be forced to move into adjacent areas in the vicinity (e.g., Santa Maria River floodplain habitat), competition would increase for available resources in those areas. This could result in the loss of additional wildlife species outside of the Project Site, particularly sensitive species that may not be able to survive with increased competition.

Further, as described for the No Project Alternative potential indirect impacts to wildlife utilizing nearby habitats could also result from increase in human activity; the increased threat of road-kill by vehicle and machinery traffic; deposition of trash and debris; potential exposure to pollutants

and hazardous materials (refer to Impact HAZ-1); and increased soil erosion. Additionally, movement of sensitive wildlife through Site D and the western portion of the Road Site would be temporarily impeded during removal activities.

While the Partial Gravel Removal Alternative would reduce these impacts relative to the No Project Alternative, gravel removal would also potentially result in a reduction in habitat quality for a variety of wildlife species using the Project Site for nesting, foraging, and roosting, and denning opportunities (AECOM 2010). As previously described, gravel at the Project Site is likely used by western snowy plovers to stabilize nests and to a lesser extent for egg crypsis. Consequently, removal of gravel at Site D and the western portion of the Road Site could result in a reduction of habitat quality in these areas, particularly for nesting western snowy plovers, which have been known to occur within the Project Site as recently as 2004 (Persons 2004), and within Rancho Guadalupe Dunes County Park as recently as 2008 (AECOM 2010). However, the most recent western snowy plover observations in the vicinity of the Project Site were recorded within the vicinity of the Upper Area, approximately 1,000 feet northwest of the Road Site.

However, adherence to the dune restoration program as well as other mitigation requirements detailed in the 1982 Final EIR would reduce impacts associated with this alternative. Condition #21 of 82-CP-75(cz) limits noise levels from major activities at the Project Site during the California least tern breeding season, beginning April 15. Additionally, as described in the 1982 Final EIR gravel removal and restoration activities within the Project would be completed by the start of the western snowy plover breeding season, beginning March 1. If restoration activities within the Project Site must continue past March 1, a biologist would conduct regular site visits to ensure limited impacts to the western snowy plover.

Further, although the removal of gravel from Site D and the western portion of the Road Site may make western snowy plover nesting less likely in this area, western snowy plovers are known to occur throughout the Guadalupe-Nipomo Dune Complex, where they use homogenous sand substrate for nesting. As removal of the gravel would return the affected areas of the Project Site to a dune habitat type more consistent with the Guadalupe-Nipomo Dune Complex as a whole, gravel removal would not represent a substantial reduction in habitat quality, and impacts would be less than significant after mitigation (Class II).

Impact ALT2-BIO-4. Introduction or spread of non-native vegetation with the Project Site.

As with the No Project Alternative, vehicles brought to the Project Site from other areas could introduce new non-native species if they are not properly washed, and impacts associated with the introduction or spread of non-native vegetation under the Partial Gravel Removal Alternative would be similar to those described under the No Project Alternative (see Impact ALT1-BIO-4). However, as Project-related ground disturbing activity would be limited to Site D and the western portion of the Road Site (totaling 4.31 acres), opportunities for the introduction and/or spread of non-native species would be reduced slightly as the disturbed area under the Partial Gravel Removal Alternative would be reduced by approximately 75 percent relative to the No Project Alternative.

However, mitigation measures included in the 1982 Final EIR requires the vegetation used for dune stabilization or revegetation to be limited to native plants compatible with the habitat area. This, in conjunction with the dune restoration program, would reduce impacts associated with invasive species to less than significant levels after mitigation (Class II).

Table 3.3-7. Summary of Biological Resources Impacts

Biological Resources Impact	Mitigation Measures	Residual Significance
1982 Final EIR		
Impact 1982-BIO-1: Project implementation could impact a small breeding least tern colony if construction and/or drilling is conducted between mid-April and early September.	MM 1982-BIO-1	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions
Impact 1982-BIO-2: Degradation of the dune ecosystem could result from project-related impacts such as introduction of exotic vegetation, and use of chemical or oil-based stabilizers.	No Mitigation Required	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant (Class III) based on existing baseline conditions
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-2. Disturbance and removal of environmentally sensitive habitat.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-4. Introduction or spread of non-native vegetation with the Project Site.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Partial Gravel Removal Alternative		
Impact ALT2-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-2. Temporary disturbance of environmentally sensitive habitat.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-4. Introduction or spread of non-native vegetation with the Project Site.	MM 1982-BIO-2	Less than Significant after Mitigation (Class II)