

**SUPPLEMENTAL BIOLOGICAL REPORT
FOR THE INDIGO ENERGY FACILITY
PROPOSED GAS LINE EXTENSION**

This supplemental report summarizes the results of field surveys and record search conducted as part of the Indigo Energy Facility's proposed gas line extension.

Biological surveys on the entire project site were conducted in Spring and Fall 2000. Surveys were conducted for the purposes of (1) describing local vegetative communities, (2) identifying the presence of special-status species on or near the project site that could be affected by project construction or operation, (3) analyzing impacts to those species from the project, and (4) providing recommendations for developing suitable mitigation and/or compensation measures to eliminate or minimize project impacts to special biological resources. This report summarizes the results of the surveys. Survey results will be provided to resource agencies for compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), federal and state endangered species acts (FESA and CESA, respectively), and the California Native Desert Plants Act (CNDPA). These agencies include the California Energy Commission (CEC), United States Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG).

ENVIRONMENTAL SETTING

The project site is located at north terminus of 19th Avenue, east of Indian Avenue, north of Interstate 10 (I-10) in the City of Palm Springs in Eastern Riverside County and the natural gas line extends south of Interstate 10. The gas line is sited along an unused dirt road that is intermittently adjacent to the Whitewater, Triad and Westwind windfarms. An industrial park is adjacent to the portion immediately north of the freeway and a residential and business area along Indian Avenue lies within 0.7 miles east. South of the freeway, the route intersects a transmission line corridor.

Survey techniques were designed to evaluate biological resources associated with the project, with an emphasis on special-status species. Special-status species include species that are formally listed as threatened or endangered, candidate species, state and federal Species of Concern and plants from Lists 1A, 1B, and 2 of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 1994). Such species have been determined to be uncommon in at least some portions of their range and/or their viability is questionable due to past and foreseeable impacts. Frequently, they have an inherently limited geographic range and/or limited habitat. Species listed as threatened or endangered are protected from further threats to their viability by federal and state law; the remaining species are protected under CEQA by the statement that "a species not included in any listing in subsection

(c) shall nevertheless be considered to be rare or endangered if the species can be shown to meet the criteria in subsection (b)” (CEQA Guidelines §15380, Subsection d).

SURVEY AREA

The project site is defined as that area that may be disturbed during construction and operation of the project. This includes the gas pipeline right-of-ways (ROW). A 100-foot-wide ROW was assumed for the gas pipeline. The survey area, where plant and wildlife surveys were conducted, included both the project site and an adjacent buffer area. The purpose of surveying buffer areas was to refine the identification of populations of special-status animals (primarily) that could be affected by construction activities and/or facility operation (i.e., those whose home ranges could intersect the project site). Hence, the width of the buffer survey area was based on the home range diameters of those animals that could reasonably be affected by the project, in this case, flat-tailed horned lizard. Average flat-tailed horned lizard home ranges have been reported as 6.7 acres (Muth and Fisher 1992) or a diameter of 540 feet. As such, intensive buffer surveys extended to 500 or 600 feet from the edges of all facilities.

Surveys also complied with CEC’s requirement of an examination of biological resources for 1000 feet each side of the ROW for linear facilities.

PRE-SURVEY INVESTIGATIONS

Prior to conducting field surveys, all existing information on special-status wildlife species that could occur in the project survey area was obtained and a list of target species was developed. This process consisted of a review of all relevant literature, including, but not limited to, previous technical reports, management plans, status reports, maps, and other data from the California Natural Diversity Data Base (CNDDB), California Native Plant Society (CNPS), CDFG, BLM, USFWS.

TABLE 1

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING ON THE INTERGEN OCOTILLO PROJECT SITE

Common Name	Scientific Name	Listing Status			Flowering/ Greatest Activity	Habitat Associations
		Federal	State	Other	Period in Area	
Mammals						
American Badger	<i>Taxidea taxus</i>	--	SC		March through October	Occupies many habitats, including open grasslands and deserts
Coachella Valley Round-tailed Ground Squirrel	<i>Spermophilus tereticaudus chlorus</i>	SC	SC		March through October	Desert scrub, often sandier sites
Big Free-tailed Bat	<i>Nyctinopmops macrotis</i>	--	SC		April through September	Rocky areas; roosts in crevices in cliffs
Pallid Bat	<i>Antrozous pallidus</i>	--	SC		April through September	Roosts in rock crevices in cliffs, bridges, buildings; rarely in caves and mines
Pocketed Free-tailed Bat	<i>Nyctinopmops femorosaccus</i>	--	SC		April through September	Roosts in rock crevices
Spotted Bat	<i>Euderma maculatum</i>	SC	SC		April through September	Cliffs and canyons in arid lowlands to lower coniferous forests
Townsend's Big-eared Bat	<i>Corynorhimus townsendii townsendii</i>	SC	SC		April through September	Desert scrub to Pinyon-Juniper Woodland; roosts in buildings, caves
Western Mastiff Bat	<i>Eumops perotis</i>	SC	SC		April through September	Steep, rocky canyons; roosts in cliffs, buildings
Yuma Myotis	<i>Myotis yumanensis yumanensis</i>	SC	SC		April through September	Closely associated with water; roosts in caves, mines, old buildings

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TABLE 1
(CONTINUED)

Common Name	Scientific Name	Listing Status			Flowering/ Greatest Activity Period in Area	Habitat Associations
		Federal	State	Other		
			Birds			
Burrowing Owl	<i>Athene cucularia</i>	SC	SC		Spring	Open areas; nests in subterranean burrows, often constructed by mammals
California Horned Lark	<i>Eremophila alpestris actia</i>	--	SC		Spring, Fall	Open desert habitats
LeConte's Thrasher	<i>Toxostoma lecontei</i>	--	SC		Spring	Mojave Desert and Sonoran Desert scrubs; especially with yuccas
Loggerhead Shrike	<i>Lanius ludovicianus</i>	SC	SC		Spring	Desert scrub habitats, especially those with vertical structure
American Peregrine Falcon		--	E			
Northern Harrier	<i>Circus cyaneus</i>	--	SC		Spring	Open habitats; nests in shrubby open land and marshes
Ferruginous Hawk	<i>Buteo regalis</i>	SC	SC		October - April	Dry, open country; possible winter resident
Golden Eagle	<i>Aquila chrysaetos</i>	--	SC		Spring	Open country; nests in large trees in open areas or cliffs
Merlin	<i>Falco columbarius</i>	--	SC		October - April	Open country; nests in trees, cliffs, on ground; possible winter resident
Prairie Falcon	<i>Falco mexicanus</i>	--	SC		Spring	Dry, open country, including arid woodlands; nests in cliffs
Short-eared Owl	<i>Asio flammeus</i>	--	SC		October - April	Open habitats; nestson ground and roosts on ground, low poles
Black-tailed Gnatcatcher	<i>Polioptila melanura</i>	--	--		Spring	Shrubs and small trees in desert

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Crissale Thrasher	<i>Toxostoma lecontei</i>	--	SC	Spring	Desert riparian, wash habitats with dense vegetation
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TABLE 1

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Common Name	Scientific Name	Listing Status			Flowering/ Greatest Activity	Habitat Associations
		Federal	State	Other	Period in Area	
Reptiles						
Flat-tailed Horned Lizard	<i>Phrynosoma mcalli</i>	--	SC; Protect ed		March – November	Coachella Valley – fine-sandy flats and washes
Desert Tortoise	<i>Gopherus agassizii</i>	T	T		March 15-June 15; some summer, fall activity	Many desert Habitats below approximately 4000 feet in elevation; not playas
Northern Red-diamond Rattlesnake	<i>Crotalus ruber ruber</i>	SC	--		March - November	In desert occurs near base of mountains in brushy and gravelly/rocky areas
Chuckwalla	<i>Sauromalus obesus</i>	SC	--		March - November	Mojave and Sonoran deserts; rock outcrops
Coachella Valley Fringe-toed Lizard	<i>Uma inornata</i>	T	E		March - November	Coachella Valley; restricted to windblown sand
Rosy Boa	<i>Lichanura trivirgata</i>	SC	--		March - November	Rocky uplands and canyons, often near streams
Invertebrates						
Coachella Valley Jerusalem Cricket	<i>Stenopelmatus calhualaensis</i>	SC	--		March - November	Dunes
Plants						
Arizona Spurge	<i>Chamaesyce arizonica</i>	--	--	CNPS 2 RED 2-1-1	March- April	Sonoran Desert Scrub; sandy flats

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Coachella Valley Milk-vetch	<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	E	--	CNPS 1B RED 2-2-3	February – May	Coachella Valley, sandy sites, often disturbed
Little San Bernardino Mountains Gilia	<i>Gilia maculata</i>	SC	--	CNPS 1B RED 3-2-3	April – May	Mojave Desert and Sonoran Desert scrubs; sandy sites

TABLE 1

(CONTINUED)

Common Name	Scientific Name	Listing Status			Flowering/ Greatest Activity	Habitat Association
		Federal	State	Other	Period in Area	
Foxtail Cactus	<i>Escobaria vivipara</i> var. <i>alversonii</i>	SC	--	CNPS 1B RED 2-2-2	May-June	Creosote bush scrub; gravelly sites
Triple-ribbed Milk-vetch	<i>Astragalus tricarinatus</i>	E	--	CNPS 1B RED 3-1-3	February – May	Sonoran Desert Scrub, Joshua Tree Woodland; rocky canyons and slopes
Slender Woolly-heads	<i>Nemacaulis denudata</i> var. <i>gracilis</i>	--	--	CNPS 2 RED 2-2-1	March - May	Dunes

KEY

E	Federal/State Endangered
T	Federal/State Threatened
SC	Federal/State Species of Concern
Protected	Permit required for take
CNPS 1 B	Plants that are rare or endangered in California and elsewhere
CNPS 2	Plants that are rare or endangered in California, but more common elsewhere

RED Code:

Rarity (R)	1 – Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
	2 – Occurrence confined to several populations or to one extended population

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Endangerment (E)

3 – Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported

1 – Not endangered

2 – Endangered throughout its range

Distribution (D)

1 – More or less widespread outside California

2 – Rare outside California

3 – Endemic to California

FIELD SURVEYS

Surveys were conducted from 12-18 April, 27 June-2 July, and 27-28 September 2000. The April survey was scheduled to coincide with the blooming period of special-status, annual plants, although all other special-status species were also sought. During that survey, the gas line right-of-way (ROW) and areas where extensive surface disturbance could occur were surveyed as these were project areas that could result in the greatest impacts to plants. June surveys were conducted to better coincide with increased activity levels of flat-tailed horned lizard during warmer months (i.e., consistent with agency protocol survey standards [Foreman 1997]) and the accumulation of sign both of desert tortoise and flat-tailed horned lizard. Surveyed areas during June primarily included buffer areas. During both the June and September surveys, all special-status plants were also sought.

One-hundred percent of the project area was surveyed by walking adjacent, parallel transects. Transect widths were consistent with agency protocols for flat-tailed horned lizard (Foreman 1997), in that 4-foot transect widths alternated with approximately 35-foot widths. (The narrower transects enable observers to concentrate on finding scat.) An important deviation from the agency protocols is that our transects were contiguous – i.e., in every 40-foot width, a 35-foot transect and an adjacent 4-foot transect was walked. Such a technique also permitted the adequate survey for sign (e.g., individuals, dens, burrows, scat, tracks, pellets, skeletal remains) of other special-status species.

Buffer transects alternated between 50-foot-wide transects and the center 4 feet of the adjacent 50-foot-wide transect. In other words, over each 100-foot-width out to 500 or 600 feet, approximately 55 feet were intensively surveyed. Beyond 500 feet, a single meandering transect was typically walked at 1200 feet, primarily to assist in assessing tortoise presence and impacts. According to USFWS guidelines for sampling desert tortoises (USDI 1992), buffer transects (or “zone of influence” transects) are single, 33-foot-wide transects conducted at 100, 300, 600, 1200, and 2400 feet from project area borders. As such, the intensive transects to 500 feet and a single transect at 1200 feet adequately assessed tortoise abundance in the area and project impacts to tortoises.

On all surveys, all sign (e.g., individuals, dens, burrows, scat, tracks, pellets, skeletal remains) of target species was recorded and their characteristics (e.g., size, recency, gender associations) noted. While the buffer areas were surveyed primarily to identify potential impacts to mobile species, target plants were also sought for general biological information and conservation. The survey area was photo-documented and described relative to: topography; drainage type; soils; substrate; aspect-dominant, common and occasional plant species; plant cover; and anthropogenic disturbances. Hourly ambient air

temperatures at one yard and 0.5 inches above ground surface, plus soil surface temperatures, wind speed, and cloud cover, were recorded to determine whether surveys were in the temperature range specified for flat-tailed horned lizard protocol surveys (Foreman 1997). While the surveys targeted special-status species, an inventory was also kept of all plant and animal species observed or detected during the survey. All plant communities were described in detail and mapped; densities were estimated visually.

In the absence of definitive species sign, species presence was assumed wherever suitable habitat existed and habitat at these sites was rated as to its quality. For several species of special-status bats that could occur in the area, special habitat features that could be attractive, such as caves, mines, bridges and tanks, were mapped. All sightings of raptor nests and individuals within one-half mile of the proposed pipeline route were also recorded.

In addition to special-status wildlife and plant species, trees and cacti protected by the CNDPA were counted on all potential areas of surface disturbance. The CNDPA allows removal of these plants under permits issued by the county agricultural commissioner or sheriff. Species observed on the project area that are subject to permitting were limited to barrel cactus. Individuals were segregated into two size groups for assessment of potential salvage (smaller individuals are more easily moved): <0.5 m tall and > 0.5 m tall.

These protocols were approved by the following agencies prior to conducting surveys:

- CDFG (K. Nichol and T. Newkirk, Palm Springs office, pers. comm. to A. Karl, 7 April 2000)
- Bureau of Land Management (BLM) (Joel Shultz, Palm Springs office, 13 April 2000)
- USFWS (D. McAller, USFWS Carlsbad Field Office, pers. comm. to A. Karl, 7 April 2000).

The survey team was led by a biologist with both a general and specific knowledge of local biological taxa, habitats, and target species. Three other biologists with varying levels of experience, including one with extensive desert tortoise experience, comprised the remainder of the team. Prior to starting the surveys, less experienced field personnel were familiarized with the species in question through reviews of field guides (e.g., Munz and Keck 1968, Stebbins 1985, Hickman 1993), comparisons to similar species, and discussions of relevant microhabitats, and/or behaviors. Known populations of special-

status plants were also visited prior to starting surveys to further educate team members, but negligible primary production negated the usefulness of this technique.

SPECIAL-STATUS SPECIES AND HABITATS OBSERVED

Wildlife and Plant Species

No evidence of any special-status species were observed during the surveys. No evidence of plants protected by the CDNPA were observed during the surveys.

POTENTIAL FOR OTHER SPECIAL-STATUS SPECIES

4.2.1 Wildlife and Plant Species That Were Not Observed but May Be Affected by Project Construction and Operation

It is possible that 20 other special-status species from Table 1 inhabit the proposed gas line route; however, no evidence of these species was observed during surveys, possibly due to their rarity, behavior, or poor germination or growth as a result of poor rainfall in the winter of 1999-2000. For nearly all of these species, except special-status plants, impacts would be negligible. Each is discussed in detail below.

American Badger

The American badger, a state species of concern, is a relatively large, fossorial mammal with morphological adaptations highly specialized for digging. Badgers are active primarily in the later afternoon and evening, although they may be active above-ground during the day. Food consists primarily of small mammals, including ground squirrels and gophers. Badgers have a relatively broad geographic range and occupy deserts, valleys, foothills, and mountain meadows.

Badgers are not easily habituated to ongoing disturbances, such as windfarms, so it is unlikely that any currently inhabit the plant site area. No individuals should be lost during construction of any facilities because badgers are largely nocturnal, and construction activities should take place during daylight hours.

Bats

The project area lies within the range of seven special-status bat species, although Townsend's big-eared bat has the highest likelihood of occurrence and it is assumed that this species is present on site during some portion of the year. The remaining species are generally more closely associated with rocky or riparian sites. Impacts to bats would be negligible since most roosting habitat occurs offsite.

Coachella Valley Round-tailed Ground Squirrel

The Coachella Valley round-tailed ground squirrel is a state and federal species of concern. This ground squirrel occupies soft- to loose-sandy areas of creosote bush scrub and saltbush scrub. It is a subspecies of round-tailed ground squirrel, which is a southern desert associate, that is limited to the Coachella Valley.

Despite daytime surveys, when round-tailed ground squirrels are active, no vocalizations were heard. Nor were any colonies or individual burrows detected. The only habitat on the site that would be likely to host this subspecies is south of Interstate 10. However, the disturbance there, especially the freeway, is sufficient to have already severely impacted any existing population. No additional effects would be incurred from construction of the fuel line.

American Peregrine Falcon

The American peregrine falcon is a state endangered, fully protected species. This is a falcon of open country, cliffs, and occasionally cities. It breeds from Alaska south to Baja, California, wintering in Baja California, the Gulf of California, and extreme southern California (National Geographic Society 1999). The next is a scrape on a high cliff ledge.

The nearby San Bernardino Mountains offer potential nesting habitat. Foraging would not be appreciably affected by conversion of habitat for the plant site, given the abundance of similar surrounding habitat, most of which is safer due to the absence of wind machines. Nor would nesting habitat be affected or individuals lost during construction. Losses of individuals during project operation, through collisions or electrocution, would not be anticipated to increase over current levels because of the current abundance of transmission lines and wind machines.

Ferruginous Hawk

The ferruginous hawk, a state and federal species of concern, is a winter resident in California and the southwest, into Mexico (National Geographic Society 1999). It forages over open habitat, preying on rodents, rabbits, and other small prey.

The project are constitutes winter foraging habitat for this species. Given the abundance of similar surrounding habitat, most of which is safer due to the absence of wind machines. Nor would individuals be lost during construction. Losses of individuals during project operation, through collisions or electrocution, would not be anticipated to increase over current levels because of the current abundance of transmission lines and wind machines.

Golden Eagle

The golden eagle is a state fully protected species of concern. This species is a common resident of foothill, mountainous, and open country, foraging over deserts, farmland, and prairies for small mammals, snakes, and birds. It is a year-round resident throughout most of western North America. Nesting occurs in cliffs and large trees.

The project area constitutes foraging habitat for this species; no nesting habitat occurs onsite, although the nearby San Bernardino Mountains offer potential nesting habitat. Given the abundance of similar surrounding habitat, most of which is safer due to the absence of wind machines. Nor would nesting habitat be affected or individuals lost during construction. Losses of individuals during project operation, through collisions or electrocution, would not be anticipated to increase over current levels because of the current abundance of transmission lines and wind machines.

Merlin

This state species of concern is a winter resident in California and the far-southern United States into Mexico (National Geographic Society 1999). It inhabits a variety of habitats, nesting in wooded sites in trees, cliffs, or on the ground. Prey includes birds, rodents and large insects.

The project site constitutes winter foraging habitat for this species. Foraging would not be appreciably affected by conversion of habitat for the plant site, given the abundance of similar surrounding habitat, most of which is safer due to the absence of wind machines. Nor would individuals be lost during construction. Losses of individuals during project operation, through collisions or electrocution, would not be anticipated to increase over current levels because of the current abundance of transmission lines and wind machines.

Prairie Falcon

This state species of concern is a year-round resident of the western United States (National Geographic Society 1999). It inhabits open country, including deserts and prairies, occasionally hunting in woodlands. Prey includes birds, lizards, large insects and rodents. Nesting occurs in cliffs.

The project area constitutes foraging habitat for this species; no nesting habitat occurs onsite, although the nearby San Bernardino Mountains offer potential nesting habitat. Given the abundance of similar surrounding habitat, most of which is safer due to the absence of wind machines. Nor would nesting habitat be affected or individuals lost during construction. Losses of individuals during project operation, through collisions or electrocution, would not be anticipated to increase over current levels because of the current abundance of transmission lines and wind machines.

Short-eared Owl

The short-eared owl, a state species of concern, is an owl of open country, marshes and weedy fields. In the area of the project site, it would most likely occur as a winter resident only (National Geographic Society 1999). Foraging would not be appreciably affected by conversion of habitat for the plant site, given the abundance of similar surrounding habitat. Nor would individuals be lost during construction. Losses of individuals during project operation, through collisions or electrocution, would not be anticipated to increase over current levels because of the current abundance of transmission lines and wind machines.

Arizona Spurge

The Arizona spurge is a CNPS List 2 species. This prostrate to erect perennial of the Euphorbiaceae family grows in sandy flats below 1000 feet. The range extends from the Colorado Desert in southern California east to Texas. No individuals were observed, possibly due to the poor winter rainfall in 1999-2000. Habitat for Arizona spurge occurs on much of the project site, although extensive prior and ongoing disturbance may have already impacted existing populations. If present, some individuals could be lost during construction activities.

Coachella Valley Milk-vetch

The Coachella Valley milk-vetch is a federal endangered and CNPS List 1B plant. This annual or short-lived perennial (Family: Fabaceae) grows in windblown sand in Coachella Valley creosote bush scrub, below 1000 feet. The plant commonly grows in association with disturbance, often at the edge of a road (Karl and Uptain 1985). Herbage is densely hairy and leaflets are widely ovate. Racemes are 11- to 25-flowered and flowers, which bloom from spring, are pink-purple. The pod is greatly inflated, papery, grayish-strigose, and beaked (Hickman 1993).

No individuals were observed either on the project site or in known population sites. The latter is undoubtedly due to the poor winter rainfall in 1999-2000. Marginal habitat for Coachella Valley milk-vetch exists on the project site, primarily in the far southern end of the fuel line alternatives. If present, some individuals could be lost during construction activities. Due to the low habitat quality for the species, impacts to the population and species should be minimal.

Little San Bernardino Mountains Gilia

The little San Bernardino Mountains gilia is a federal species of concern and CNPS List 1B plant. This diminutive annual grows in sandy flats near the San Bernardino Mountains (Hickman 1993). Individual plants are less than 1.5 inches tall and the white-lobes of the flowers are red-spotted at the base.

No individuals were observed either on the project site or in documented population sites (CNDDDB 2000). The latter is undoubtedly due to the poor winter rainfall in 1999-2000. Habitat for Little San Bernardino Mountains gilia exists over much of the project site, although extensive prior and ongoing disturbance may have already impacted existing populations. If present, some individuals could be lost during construction activities.

4.2.2 Wildlife and Plant Species for Which No Habitat Exist on the Project Site

The nine remaining special-status species from Table 1 would not occur on the project site. These include two bird species for which adequate habitat is lacking and their presence would be strictly transient: black-tailed gnatcatcher and crissal thrasher. Adequate habitat is also lacking for chuckwalla, Coachella Valley fringe-toed lizard, rosy boa and Coachella Valley Jerusalem cricket. Foxtail cactus, a highly visible perennial, was not observed on the site. Habitat is lacking for triple-ribbed milk-vetch and slender woolly-heads.

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