



July 11, 2018

Mr. Tal Shoshan, CEO
c/o T-Rose Investments, LLC
3880 E. Ebony
Ontario, CA 91761

SUBJECT: Results of a Habitat Suitability Evaluation, ±2.76-acre Site, City of Rancho Cucamonga, San Bernardino County, California

Dear Mr. Shoshan:

This letter report presents findings of a reconnaissance-level survey conducted to generally evaluate the suitability of a ±2.76-acre site to support the federally-listed endangered Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*-DSFF).

Introduction

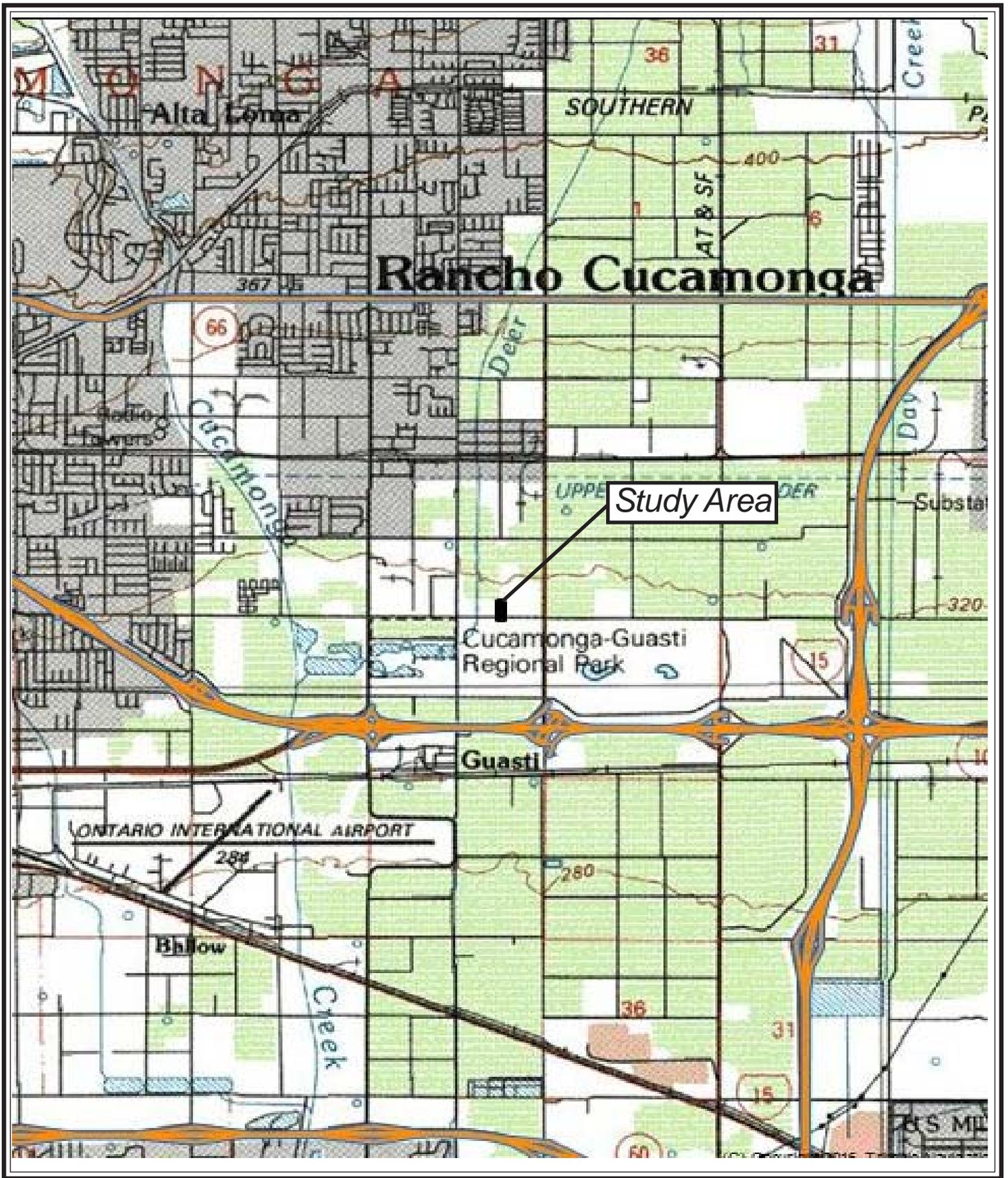
The subject ±2.76-acre site is regionally located in the City of Rancho Cucamonga, San Bernardino County, California (**Plate 1**). More specifically, the site is located north of 4th Street, east of Hermosa Avenue, west of Center Avenue, and south of Trademark Street; Township 1 South, Range 7 West, Section 14 on the "Guasti" USGS 7.5-minute quadrangle map (**Plate 2**). **Plate 3** provides an aerial photograph of the site. In order to meet the environmental documentation and review requirements, potentially occurring sensitive biological resources must be addressed to demonstrate the applicant's conformance to California Environmental Quality Act (CEQA) and the federal Endangered Species Act (Act) of 1973, as amended. As such, this report is intended to provide biological information to the applicant and reviewing agencies in support of the environmental review process.

Selected Species Overview

The U.S. Fish and Wildlife Service (FWS) listed the DSFF as an endangered species on September 23, 1993. This species is only known to occur in association with Delhi sand deposits (FWS 1997), primarily on twelve disjunct sites within a radius of about eight miles in the cities of Colton, Rialto, and Fontana in southwestern San Bernardino and northwestern Riverside counties. However, recent survey data (1997-03) indicates that DSFF occur in low numbers in Ontario, and also in sub-optimal habitat conditions. The DSFF is restricted to the Colton Dunes, which covers approximately 40 square miles. More than 95 percent of the formerly known habitat has been converted to human uses or severely affected by human activities, rendering it apparently unsuitable for occupation by the species (Smith 1993, FWS 1997 in Kingsley 1996).

General Habitat Characteristics

Areas containing sandy substrates with a sparse cover of perennial shrubs and other vegetation constitute the primary habitat requirements for *Rhaphiomidas* flies (FWS 1997). Potential habitat for the DSFF is typically defined as areas comprised of sandy soil (Delhi series) in open areas commonly dominated by three indicator plant species: California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californica*), and telegraph weed (*Heterotheca grandiflora*). Annual bur-sage (*Ambrosia acanthicarpa*), Rancher's fireweed (*Amsinckia menziesii*), autumn vinegar weed (*Lessingia glandulifera*),



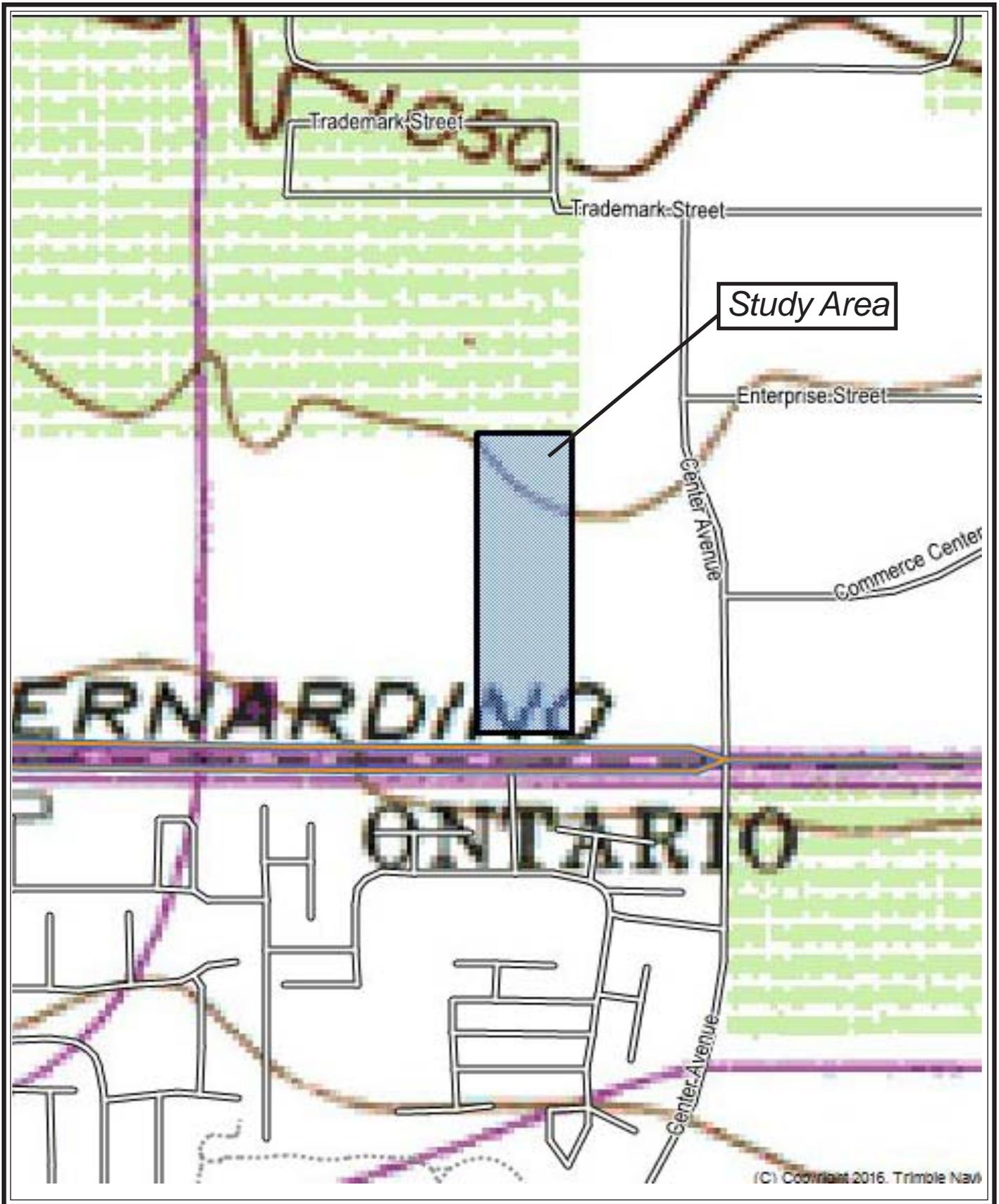
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plate 1

Regional Site Location

2.76-acre Site



Study Area

Trademark Street

Trademark Street

Enterprise Street

Center Avenue

Commerce Center

ERNARDINO

ONTARIO

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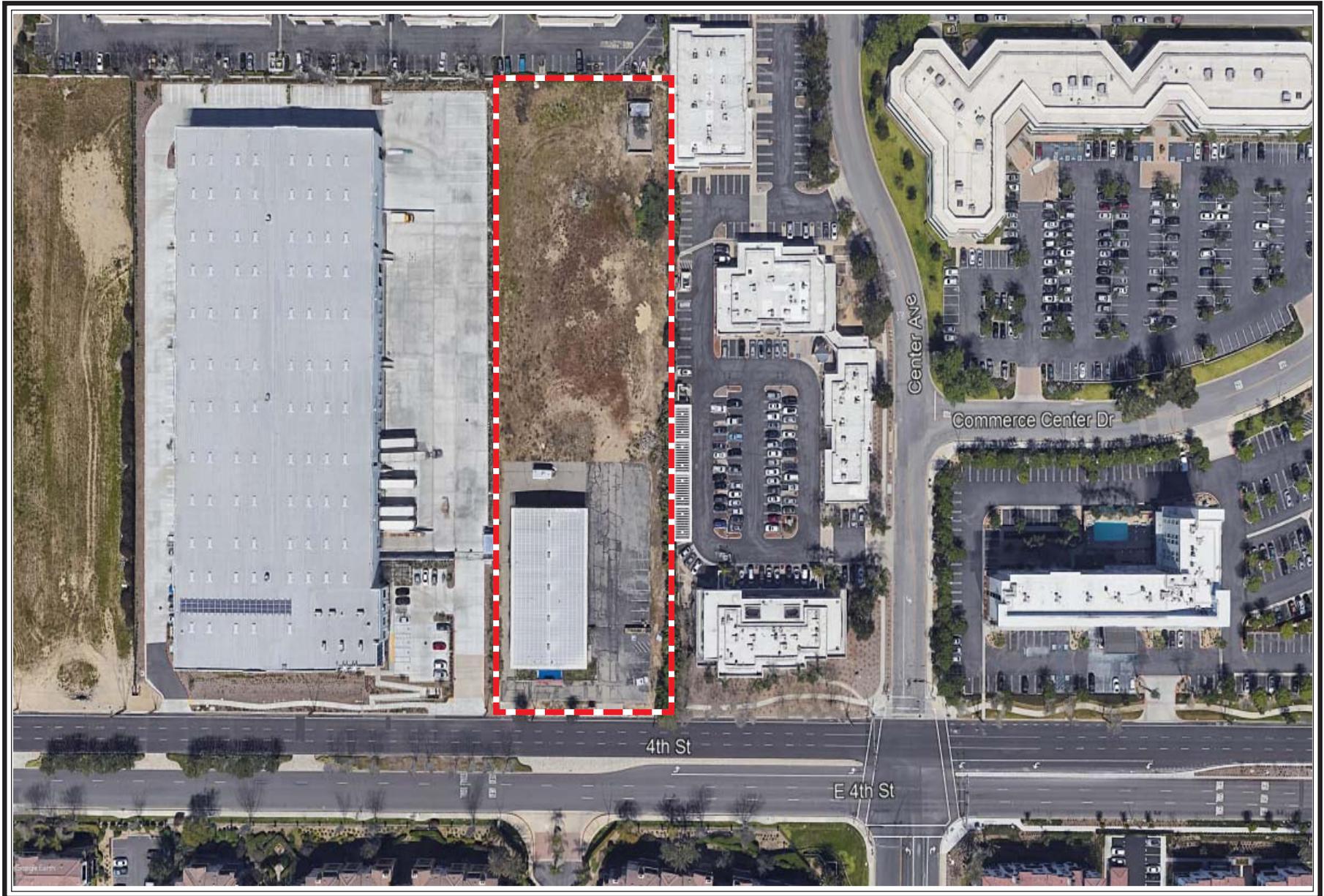
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plate 2

Site Vicinity

2.76-acre Site



--- = Study Area

sapphire eriastrum (*Eriastrum sapphirinum*), primrose (*Oenothera* sp.), and Thurber's buckwheat (*Eriogonum thurberi*) are also commonly present at occupied DSFF sites. In addition, insect indicator species such as *Apiocera* and *Nemomydas* are also typically associated with occupied DSFF habitat. It is also important to note that the presence or absence of indicator species does not determine presence/absence of DSFF. Rather, these indicator species exhibit a strong correlation to habitats occupied by DSFF. A gradient of habitat suitability exists for DSFF, composed of varying degrees of both natural and artificial conditions.

Federal DSFF Recovery Units / Core Reserves

Subregional areas encompassing smaller areas known to be inhabited by the DSFF or encompassing areas that contain restorable habitat for the DSFF have been grouped into three Recovery Units (RUs) by the FWS based on geographic proximity, similarity of habitat, and potential genetic exchange (FWS 1997). The subject site is located within an area designated as the Ontario RU. The Ontario RU historically contained the largest block of the Colton Dunes; however, most lands in this RU have been converted to agriculture, or developed for commercial and residential projects (FWS 1997). The Ontario RU contains several areas that currently support DSFF, and additional areas have been proposed for restoration in the DSFF Recovery Plan. The occupied and/or potentially restorable habitat in the RUs includes only those areas that, at a minimum, contain Delhi Series soils. Further, RUs do not include residential and commercial development, or areas that have been otherwise permanently altered by human actions (FWS 1997). DSFF will continue to exist in the Ontario RU only with land conservation, a cessation of current habitat-degrading land management practices and recreational uses, and/or a restoration or natural reversion of ecologically damaged lands back to an ecological community typical of Delhi sands formations.

Methodology

Literature Search

Documentation pertinent to the biological resources in the vicinity of the site was reviewed and analyzed. Information reviewed included: (1) the Federal Register listing package for the federally listed endangered DSFF; (2) literature pertaining to habitat requirements of DSFF; (3) the California Natural Diversity Data Base (CNDDDB 2018) information regarding sensitive species potentially occurring on the site for the "Guasti" and surrounding USGS 7.5-minute quadrangle maps, and (4) review of available reports from the general vicinity of the project site.

2018 Habitat-Suitability Evaluation

Ecological Sciences conducted a reconnaissance-level field survey on the subject site to evaluate potential habitat for DSFF on March 31 and June 16, 2018. The survey was conducted by Scott Cameron; Principal Biologist of Ecological Sciences, Inc. Mr. Cameron holds a federal permit to conduct focused survey for this species (TE-808642-8). Ecological Sciences biologists have observed numerous DSFF in the field since 1995, and have extensive experience conducting both focused surveys and habitat evaluations for this sensitive taxon. Ecological Sciences is well versed with the biotic characteristics of a range of habitats occupied by DSFF, as well as other sensitive wildlife species potentially occurring in the area. The site was examined on foot by walking a series of meandering transects across the subject property. Dominant plant species and other habitat characteristics present at the site were identified to assess the overall habitat value. Weather conditions included hazy skies, 0-1 breezes, and an ambient temperature of 82-86 °F.

Existing Biological Environment

The site is characterized as an industrial/commercial site that contains an abandoned building, asphalt parking lot, and associated infrastructure in the southern half and disturbed open areas in the northern half. A cell tower structure is located in the northeastern corner of the site. Substrate consists of loamy





View to south



View to east



View to west



View to north

sands with scattered gravel and extensive debris dumping. Existing development surrounds the site. **Plate 3** provides an aerial view of the site and vicinity. **Plates 4a-4b** (previous pages) illustrate existing site conditions at the time of the survey.

Vegetation

Introduced (non-native) plant species recorded on site included foxtail chess (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus mollis*), Mediterranean grass (*Schismus barbatus*), Russian thistle (*Salsola tragus*), fennel (*Foeniculum vulgare*), horehound (*Marrubium vulgare*), short-podded mustard (*Hirschfeldia incana*), golden crownbeard (*Verbesina encelioides*), and tree tobacco (*Nicotiana glauca*). Native species recorded that included turkey-mullein (*Croton setiger*), popcorn flower (*Plagiobothrys* sp.), telegraph weed (*Heterotheca grandiflora*), pygmy weed (*Crassula connata*), common sunflower (*Helianthus annuus*), and mule fat (*Baccharis salicifolia*). Landscaping trees are present along the eastern site periphery.

Wildlife

Common bird species observed during the survey included American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), and house sparrow (*Passer domesticus*). Mammals observed, or of which sign was detected, included desert cottontail (*Sylvilagus audubonii*) and California ground squirrel (*Spermophilus beecheyi*).

General Soils Analysis / Soil Conservation Map Review

A review of soil maps prepared for the area by the Natural Resource Conservation Service (NRCS 2018) Custom Soil Resource Report for San Bernardino County, Southwestern Part, California indicate that the subject site is entirely located within an area mapped entirely as Tujunga loamy sand (TuB).

Conclusion

Delhi Sands Flower-loving Fly

Based on results of the June 2016 habitat suitability evaluation, existing conditions present at the site are not consistent with those known or expected to support DSFF. No exposed natural or semi-natural open areas with unconsolidated wind-worked granitic soils or dunes are present. Exposure to historic and recurring substrate disturbances have substantial negative effects on potential DSFF habitat and may also prevent potentially suitable DSFF microhabitat soil conditions from developing. Substrate conditions are not consistent with those most often correlated with potential DSFF habitat. Although a few native plant species are present that are often associated with potential DSFF habitat, the context in which these species occur (e.g., scattered within highly disturbed site conditions) does not constitute a native plant community most commonly associated with potential DSFF habitat.

There is no connectivity to the subject site from the nearest known (to us) DSFF population (± 3 miles southeast of the site) due to the presence of existing commercial development that entirely surrounds the site. While this species likely has the capability of dispersing over relatively large distances of seemingly unsuitable habitats under certain circumstances, it would be reasonable to assume (based on our current knowledge of the species) that the likelihood of DSFF dispersing to the subject site from the nearest known off-site occupied site would not be expected despite the fact that variables such as the length, width, and structural characteristics of dispersal corridors are not fully understood. Accordingly, the subject site would not be considered a viable property for preservation or restoration due to its geographic location and current/surrounding land uses which have fragmented potential DSFF habitat in the area.

Under current conditions, the site would be considered prohibitive to DSSF occupation. The underlying soil environment appears to be the most definitive factor of whether an area could potentially support



DSFF. Quality of Delhi soils present within the study area was rated for its potential to support DSFF. The area mapped as Delhi soils was visually inspected and rated based on a scale of 1 to 5, with 5 being the best quality and most suitable habitat in the permitted biologist's judgment:

1. Soils dominated by heavy deposits of alluvial material including coarse sands and gravels with little or no Delhi sands and evidence of soil compaction. *Unsuitable.*
2. Delhi sands are present but the soil characteristics include a predominance of alluvial materials (Tujunga Soils). *Very Low Quality.*
3. Although not clean, sufficient Delhi sands are present to prevent soil compaction. Some sandy soils exposed on the surface due to fossorial animal activity. *Low Quality.*
4. Abundant clean Delhi sands with little or no alluvial material or Tujunga soils present. Moderate abundance of exposed sands on the soil surface. Low vegetative cover. Evidence of moderate degree of fossorial animal activity by vertebrates and invertebrates. *Moderate Quality*
5. Sand dune habitat with clean Delhi sands. High abundance of exposed sands on the soil surface. Low vegetative cover. Evidence (soil surface often gives under foot) of high degree of fossorial animal activity by vertebrates and invertebrates. *High Quality*

Based on the above ratings and existing site conditions, the site would be considered *Unsuitable* for DSFF. In view of the site's highly degraded condition, exposure to long standing disturbances, and analyses of correlative habitat information from a wide range (e.g., relatively disturbed to more natural habitats) of occupied DSFF habitats in the region, the ±2.76-acre site does not contain habitat suitable to support or sustain a DSFF population. It would be contrary to expectation that the FWS would require a focused protocol survey on such a degraded site. No impacts to DSFF are expected and no mitigation is required for less than significant impacts under CEQA.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological survey, and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

Sincerely,

Ecological Sciences, Inc.



Scott D. Cameron
Principal Biologist



References

California Natural Diversity Data Base (CNDDDB). 2018. Online Reports for the “Guasti” and surrounding USGS 7.5-minute quadrangle maps.

Kingsley, Kenneth J. 1996. Behavior of the Delhi Sands Flower-Loving Fly (Diptera: Mydidae), a Little Known Endangered Species. *Ann. Entomol. Soc. Am.* 89(6): 883-891.

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