



An Employee-Owned Company

July 23, 2025

Mr. Justin Garcia
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Reference: Post-survey Notification of 2025 Crotch's Bumble Bee Focused Surveys for the Zeiders Road Project
(RECON Number 10420)

Dear Mr. Garcia:

This letter provides the California Department of Fish and Wildlife (CDFW) with the results of the habitat assessment and focused surveys for the California Endangered Species Act (CESA) Candidate Crotch's bumble bee (*Bombus crotchii*) conducted for the Zeiders Road Project (project). The focused surveys are authorized through a Memorandum of Understanding (MOU; CDFW 2024) issued on May 17, 2024, by CDFW to Principal Investigator Wendy Loeffler (SC-182980003-19036-001). Other Independent Researchers authorized under the MOU include Alex Fromer (SC-192680001-19268-001), Anna Leavitt (SC-191060005-19106-001), Elizabeth Procsal (SC-190350007-19036-001), and Kathryn (Kayo) Valenti (SC-202320002-20245-001) with RECON Environmental, Inc. (RECON).

1.0 Project Location

The project is located west of Interstate 215 in the southern portion of the city of Menifee, California (Figure 1). The project is within Section 22, Township 06 South, Range 03 West of the U.S. Geological Survey (USGS) 7.5-minute topographic map, Romoland quadrangle (Figure 2; USGS 1979). More specifically, the project is in assessor parcel number 384-150-001 and in between Zeiders Road and Howard Road (Figure 3). The project site covers 21.45 acres.

2.0 Methods

A habitat assessment and focused surveys for Crotch's bumble bee were conducted in accordance with the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023) and the MOU (CDFW 2024).

2.1 Habitat Assessment

The habitat assessment consisted of a database search and three site visits, conducted concurrently with focused surveys, to evaluate the likelihood of Crotch's bumble bees to occur within and adjacent to the project site.

Prior to the site visits, historical and current records of Crotch's bumble bee occurrences within one mile of the project site were evaluated by consulting the California Natural Diversity Database (CNDDDB; CDFW 2025) and the community science data platform iNaturalist (2025).

RECON conducted a habitat assessment for foraging, nesting, and overwintering habitat concurrently with focused surveys on June 16, July 1, and July 15, 2025, consistent with the Colony Active Period of Crotch's bumble bee within the South Coast region (April through August). The habitat assessment was conducted on-foot by meandering throughout the survey area and recording potential foraging, nesting (e.g., bare ground, rodent burrows), and/or

overwintering resources (e.g., leaf litter, woody forest edge); documenting general plant diversity; and estimating the absolute percent cover of nectar sources. The percent cover of nectar sources over the entire site fell within the following cover ranges: 0-1 percent, 1-5 percent, 6-15 percent, and 26-50 percent (Figure 4).

2.2 Focused Surveys

A total of three survey visits were conducted concurrent with the habitat assessment site visits. The surveys were conducted within a final survey area that encompassed 18.37 acres of suitable Crotch's bumble bee habitat (see Section 3.1 and Figure 4). The surveys were conducted on warm, sunny days, with low wind; began no earlier than one hour after sunrise; and were completed at least two hours before sunset. Survey dates, surveyors, times, and weather conditions are provided in Table 1 below.

Table 1 2024 Crotch's Bumble Bee Survey Dates, Personnel, Times, and Conditions					
Date	Survey #	Surveyor(s)	Start Conditions	End Conditions	Acres per Hour per Person
6/16/2025	1	Chelsea Polevy, Elizabeth Procsal	9:30 a.m.; 86°F; winds 0-1 mph; 0% cloud cover	1:15 p.m.; 97°F; winds 2-6 mph; 0% cloud cover	2.4
7/1/2025	2	Chelsea Polevy, Elizabeth Procsal	8:30 a.m.; 75°F; winds 0-2 mph; 0% cloud cover	12:00 p.m.; 91°F; winds 2-5 mph; 0% cloud cover	2.3
7/15/2025	3	Elizabeth Procsal, Wendy Loeffler	8:20 a.m.; 74°F; winds 0-1 mph; 0% cloud cover	11:37 a.m.; 86°F; winds 2-6 mph; 0% cloud cover	2.9
°F = degrees Fahrenheit mph = miles per hour					

Foraging surveys were conducted at a surveyor rate of 2 to 3 acres per hour, which meets the survey protocol maximum rate of one person-hour of searching per 3 acres of suitable habitat (this does not include the time for capture or photographic documentation).

Prior to conducting the surveys, vials and nets were sterilized according to the methods described in the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023) and the MOU (CDFW 2024). During each survey, surveyors walked large meandering transects that incorporated patches of floral resources to capture bumble bees with a net from blooms, avoiding damaging the flower, when possible. No bumble bees were observed during the surveys, so no capture was conducted.

Concurrently with foraging surveys, areas with potential nesting resources, identified during the habitat assessment, were systematically walked to try and detect nest activity (i.e., high levels of bee movements from a given location). Other pollinators and/or other bee use was also noted during the surveys.

3.0 Results

3.1 Habitat Assessment

No Crotch's bumble bee individuals have been reported within the vicinity of the project site (i.e., 2 miles) based on a historical and recent records search. Two vegetation communities/land cover types occur on site: field croplands and residential/urban/exotic (see Figure 4). The field croplands land cover type is composed of recently disked agricultural

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fields within the project site and off-site improvement areas and surrounds a private residence on-site. Scattered ruderal species were observed and include Sahara mustard (*Brassica tournefortii*), nettle-leaf goosefoot (*Chenopodium murale*), and short-pod mustard (*Hirschfeldia incana*). The residential/urban/exotic land consists of a private residence and associated paved and dirt roads, including Zeiders Road and Howard Road. Peruvian pepper (*Schinus molle*) and Russian olive (*Elaeagnus angustifolia*) trees occur around the home.

Based on the results of the habitat assessment, approximately 3 acres of the total project site were excluded based on the development on the site (e.g., residential structure and access roads) or lack of floral resources. This resulted in a final survey area that encompassed 18.37 acres of suitable Crotch's bumble bee habitat (see Figure 4).

The majority of observed nectar cover for the whole Crotch's bumble bee survey area can be categorized as 0-1 and 1-5 percent cover at the time of the surveys. Within the site, only a small number of scattered nectar sources were flowering and included species such as dog fennel (*Anthemis cotula*), Jimsonweed (*Datura wrightii*), clustered tarweed (*Deinandra fasciculata*), hairy leaved sunflower (*Helianthus annuus*), short-pod mustard, stinknet (*Oncosiphon piluliferum*), radish (*Raphanus sativus*), and horse nettle (*Solanum elaeagnifolium*). A portion of the site south of the residence supported 6-15 percent cover of nectar resources, and a small patch of horse nettle located on the southwest corner of the residence was determined to be 26-50 percent cover.

Representative photographs of the survey area are included in Attachment 1.

Potential nesting resources for Crotch's bumble bee, including old mammal burrows and bare ground, were observed throughout the survey area. Overwintering resources are not currently well documented or defined (CDFW 2023). However, based on the information available, the survey area supports very limited habitat that could potentially support overwintering of future queens (gynes).

3.2 Focused Surveys

No Crotch's bumble bees were detected during this survey effort. Additionally, no bumble bees (*Bombus* sp.) were observed within the survey area; however, butterflies, honeybees (*Apis mellifera*), Valley carpenter bee (*Xylocopa californica*), and various wasp species were observed on nectar resources.

If you have any questions concerning the contents of this post-survey letter, please contact Beth Procsal at (619) 308-9333, extension 111, or by email at bprocsal@reconenvironmental.com.

Sincerely,



Callie Amoaku
Environmental Program Manager/Senior Biologist

CJA:sh

Attachment

cc: Hillary Sardiñas, California Department of Fish and Wildlife
Kyle Rice, California Department of Fish and Wildlife
Hans Sin, California Department of Fish and Wildlife
Mary Lanier, McKenna Lanier Group, Inc.
Paul Mayer, Pemcor Properties, Inc.

References Cited

California Department of Fish and Wildlife (CDFW)

2023 Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. June 6.

2024 Memorandum of Understanding. Research on Crotch's Bumble Bee in California. May 17.

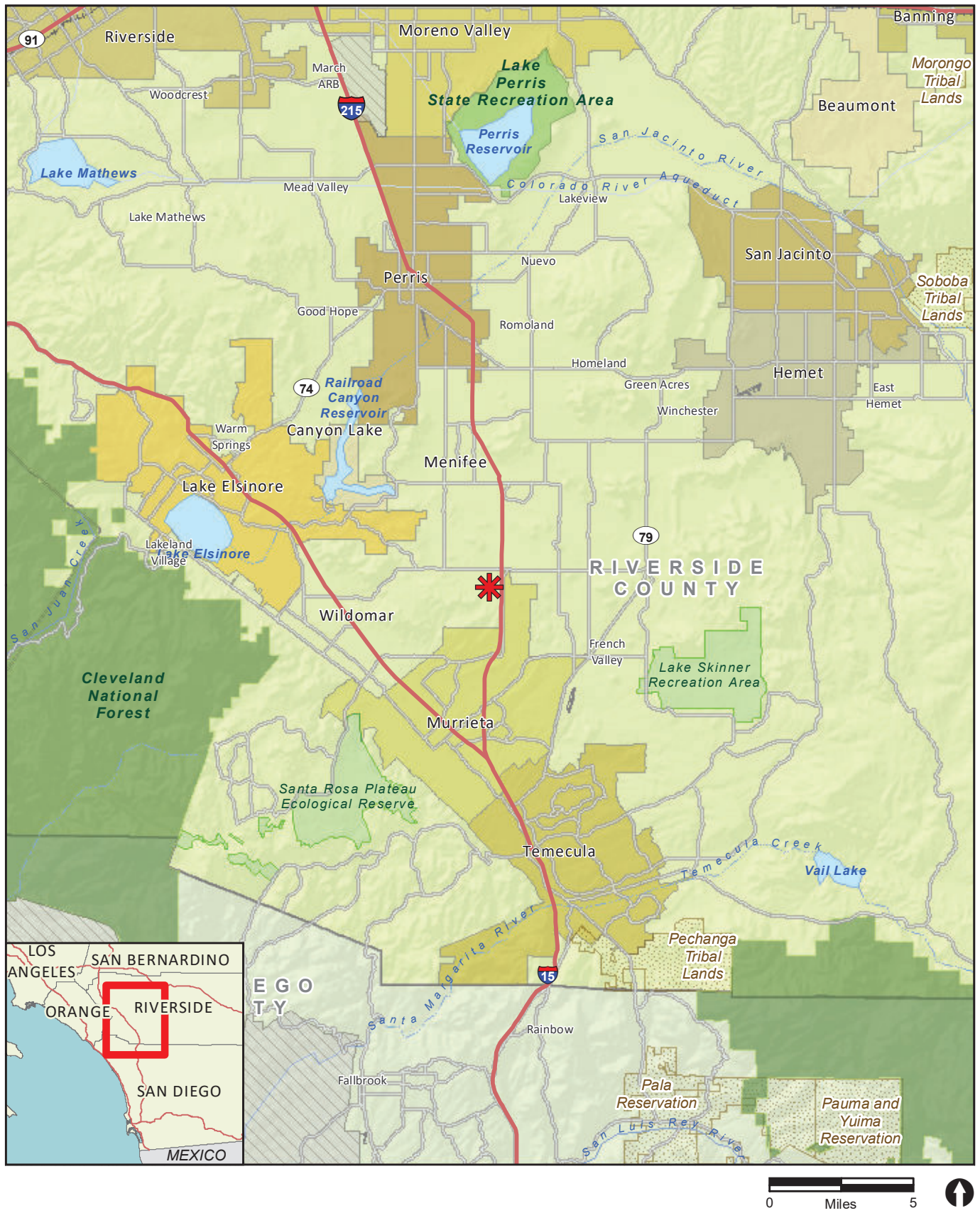
2025 California Natural Diversity Database, a Natural Heritage Program. Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. Accessed June 6.

iNaturalist

2025 iNaturalist. <https://www.inaturalist.org>. Accessed May.

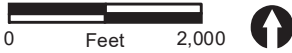
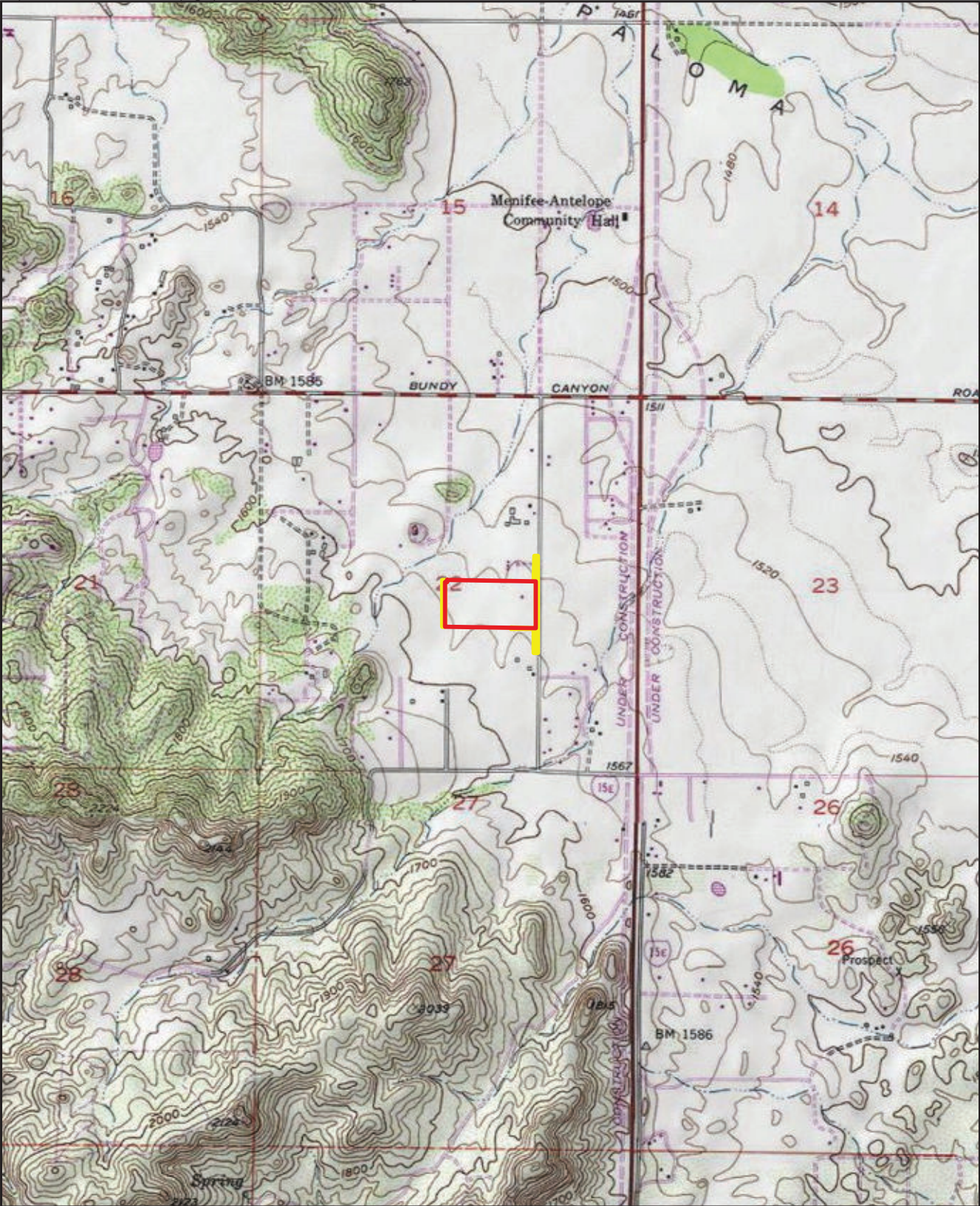
U.S. Geological Survey

1979 7.5-minute topographic map, Romoland quadrangle.



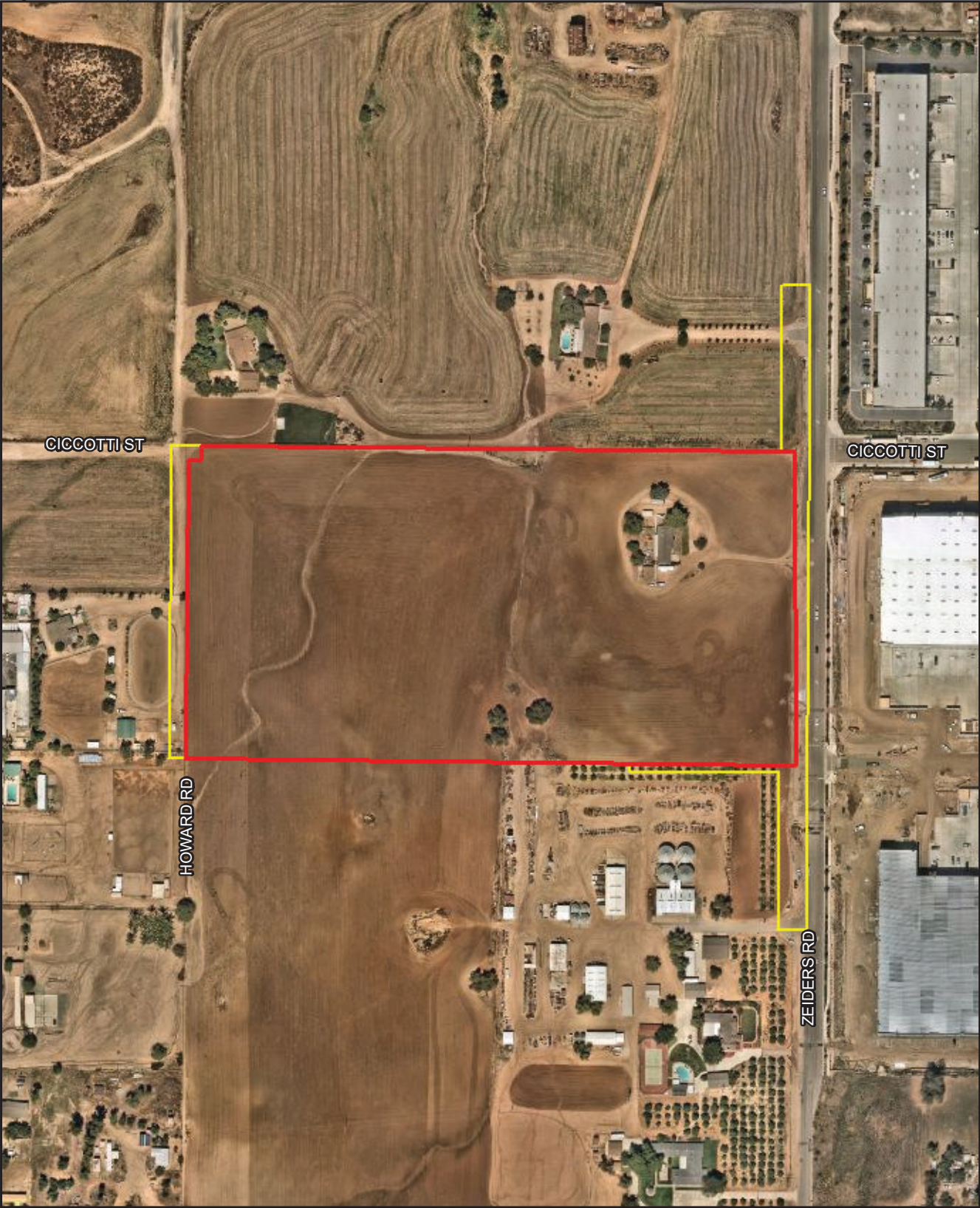
 Project Location

FIGURE 1
Regional Location



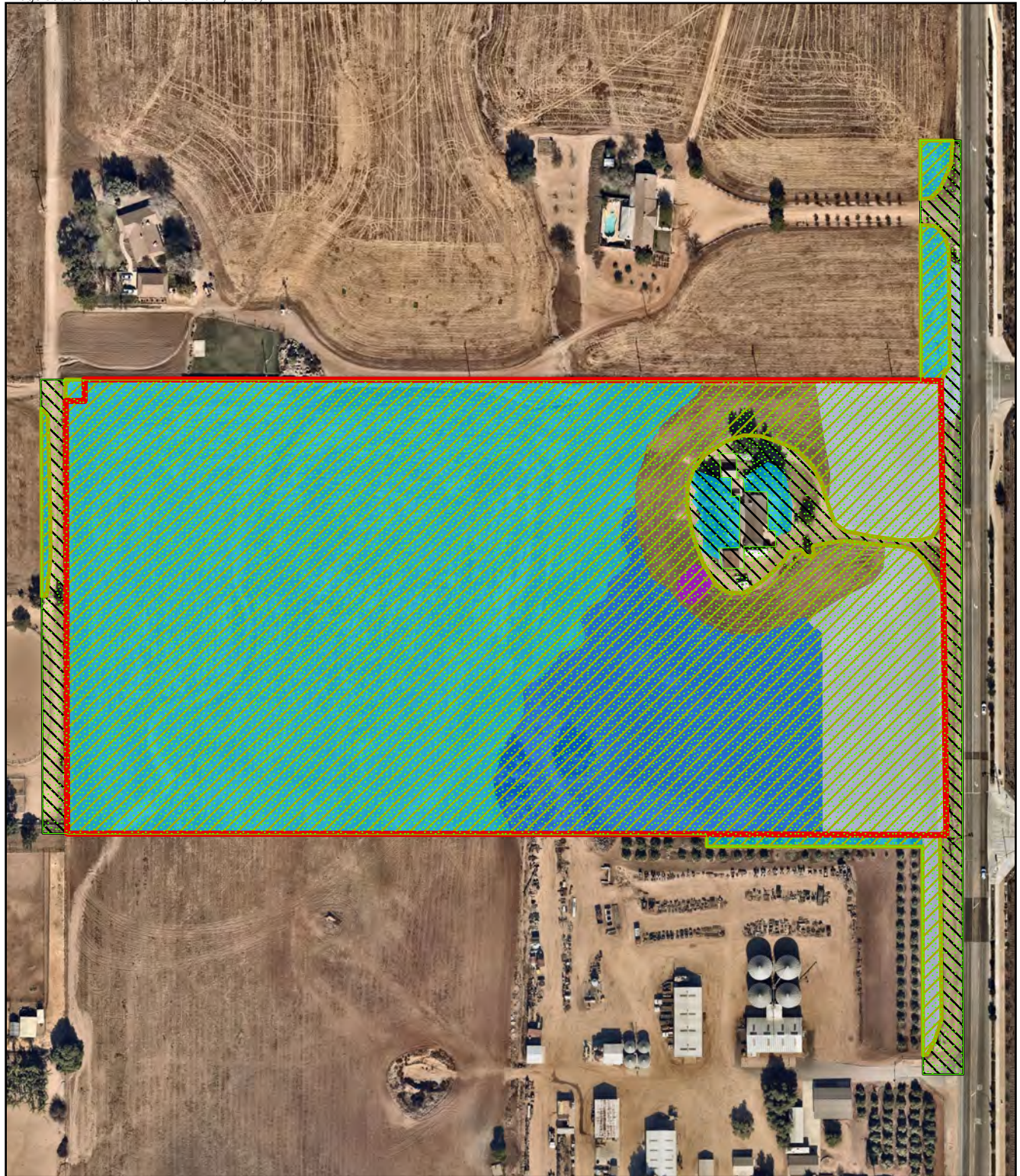
-  Project Boundary
-  Off-site Improvements

FIGURE 2
Project Location on USGS Map



- Project Boundary
- Off-site Improvements

FIGURE 3
Project Location on Aerial Photograph



Project Area



Crotch's Bumble Bee Survey Area

Vegetation Communities



Field Croplands



Residential/Urban/Exotic

Nectar Resource Cover

0-1%

1-5%

6-15%

26-50%

0 Feet 300



FIGURE 4

Crotch's Bumble Bee Habitat
Assessment Results and Survey Area

ATTACHMENT 1

Representative Photographs of the
Crotch's Bumble Bee Survey Area



PHOTOGRAPH 1
Representative Photograph of Floral Resources in Bloom
During the June 16, 2025 Survey



PHOTOGRAPH 2
Representative Photograph of Floral Resources in Bloom
During the June 16, 2025 Survey



PHOTOGRAPH 3
Representative Photograph of Floral Resources in Bloom
During the June 16, 2025 Survey



PHOTOGRAPH 4
Representative Photograph of a Rodent Burrow Complex
Observed During the June 16, 2025 Survey