

July 27, 2010

Mr. Andrew Keller
Southern California Edison
2244 Walnut Grove Avenue, G01 Quad 3A
Rosemead, California 91770

VIA EMAIL AND OVERNITE EXPRESS
Andrew.Keller@sce.com

Subject: Results of the Riverside Fairy Shrimp Habitat Assessment Survey for the Presidential Substation Project, Ventura County, California

Dear Mr. Keller:

This Letter Report presents the findings of a Habitat Assessment for the Riverside fairy shrimp (*Streptocephalus woottoni*), a federally listed Endangered species on the Presidential Substation Project site (hereafter referred to as the "Project site"), located in the Cities of Thousand Oaks and Simi Valley, and in unincorporated Ventura County, California (Exhibit 1). The Project site is located on the U.S. Geological Survey's (USGS's) Thousand Oaks and Simi 7.5-minute quadrangle maps (Exhibit 2). The purpose of the Habitat Assessment was to determine if suitable habitat is present for the fairy shrimp on the Project site.

PROJECT DESCRIPTION

The Project will consist of a new substation and a new 66-kilovolt (kV) subtransmission line route. In addition, the Project will include the removal of approximately 89 distribution poles and 9 subtransmission poles located within existing rights-of-way, and their replacement with approximately 66 subtransmission poles to accommodate the new 66-kV subtransmission line that would feed the Project from 2 existing 66-kV subtransmission lines. Construction of the new subtransmission line would occur within approximately 3.5 miles of existing right-of-way.

METHODS

BonTerra Consulting Botanist Jeff Crain (Permit # TE-047998-1) conducted the Habitat Assessment on June 3, 2010. The survey area includes an Alternative Substation Site, the land the substation is located on (Day parcel), and a 50-foot buffer on either side of the Proposed Subtransmission Line Route (Exhibit 3). Per Southern California Edison (SCE), the survey area did not include the Proposed Substation Site (Humkar parcel) due to access issues.

BACKGROUND

Fairy shrimp are members of the Order Anostraca that are restricted to inland (i.e., non-marine), non-flowing, primarily ephemeral waters (Eriksen and Belk 1999). They produce embryonated resting eggs called "cysts" that allow them to persist in ephemeral waters. These cysts are viable in conditions such as drying, freezing, or digestion by animals. This characteristic allows them to be distributed between pools over great distances. The cysts hatch under appropriate environmental conditions for a particular species.



Riverside Fairy Shrimp (*Streptocephalus woottoni*)

The Riverside fairy shrimp was listed as an Endangered species on August 3, 1993 (USFWS 1993). The distribution of this species is among the most restricted ranges for any of the fairy shrimp on the west coast. They are known from Ventura, Los Angeles, Orange, western San Diego and Riverside Counties and immediately south of the international border in Baja California, Mexico (USFWS 2005), and they are found only in pools that are generally deep (greater than 30 centimeters) (Hathaway and Simovich 1996). Development and maturation are much slower in this species than other fairy shrimp, with an average of seven to eight weeks to fully mature (Hathaway and Simovich 1996). Due to this slow development, the minimum duration for inundation of a vernal pool that can support Riverside fairy shrimp is nine to ten weeks (Gonzalez et al. 1996; Hathaway and Simovich 1996).

On April 12, 2005, the USFWS published a Final Rule designating approximately 306 acres of land in Ventura, Orange, and San Diego Counties as critical habitat for the Riverside fairy shrimp (USFWS 2005). Portions of the survey area are located in a designated Critical Habitat Area for this species (Exhibit 3).

SITE DESCRIPTION

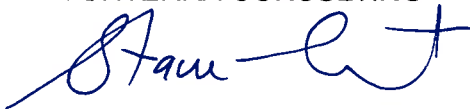
Vegetation types within the survey area include coastal sage scrub, disturbed coastal sage scrub, non-native grassland, marsh, oak woodland, California walnut woodland, agriculture, ornamental/developed, ruderal, and disturbed. The soil types within the survey area include Cibo clay, Calleguas-Arnold complex, Cropley clay, Gilroy clay loam, Gilroy very rocky loam, Hambright very rocky loam, Linne silty clay loam, Mocho loam, San Andreas sandy loam, San Benito clay loam, and Vina loam.

SURVEY RESULTS

The Riverside fairy shrimp inhabits deep, long-lived pools in seasonal grasslands, some of which are interspersed among chaparral or coastal sage scrub vegetation (Eriksen and Belk 1999). Riverside fairy shrimp have been reported within the Project area (CDFG 2010); however, ponded areas or areas containing suitable habitat for the fairy shrimp were not observed within the survey area and protocol surveys are not recommended. Therefore, Riverside fairy shrimp is not expected to occur in the survey area.

If you have any comments or questions, please call Stacie Tennant or Jeff Crain at (714) 444-9199.

Sincerely,
BONTERRA CONSULTING



Stacie A. Tennant
Senior Project Manager



Jeffrey S. Crain
Botanist/Restoration Ecologist

Enclosures: Exhibit 1 – Regional Location
Exhibit 2 – USGS Quadrangle
Exhibit 3 – Local Vicinity

REFERENCES

- California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database. Records of Occurrence for USGS Thousand Oaks and Simi 7.5-minute Quadrangles. Sacramento, CA: CDFG, Natural Heritage Division.
- Eriksen, C. and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas.* Eureka, CA: Mad River Press, Inc.
- Gonzalez, R.J., J. Drazen, S. Hathaway, B. Bauer, and M. Simovich. 1996. Physiological Correlates of Water Chemistry Requirements in Fairy Shrimps (Anostraca) from Southern California. *Journal of Crustacean Biology* 16: 286–293. Lawrence, KS: The Crustacean Society.
- Hathaway, S.A. and M.A. Simovich. 1996. Factors Affecting the Distribution and Co-Occurrence of Two Southern Californian Anostracans (Branchiopoda), *Branchinecta sandiegonensis* and *Streptocephalus woottoni*. *Journal of Crustacean Biology* 16: 669–677. Lawrence, KS: The Crustacean Society.
- U.S. Fish and Wildlife Service (USFWS). 2005 (April 12). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Riverside Fairy Shrimp (*Streptocephalus woottoni*); Final Rule. *Federal Register* 70(69): 19153–19204. Washington, D.C.: USFWS.
- . 1996 (April 19). *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods.* Washington, D.C: USFWS.
- . 1993 (August 3). Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. *Federal Register* 58(147): 41384–41392. Washington, D.C.: USFWS



Regional Location

Presidential Substation Project

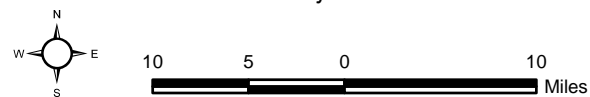
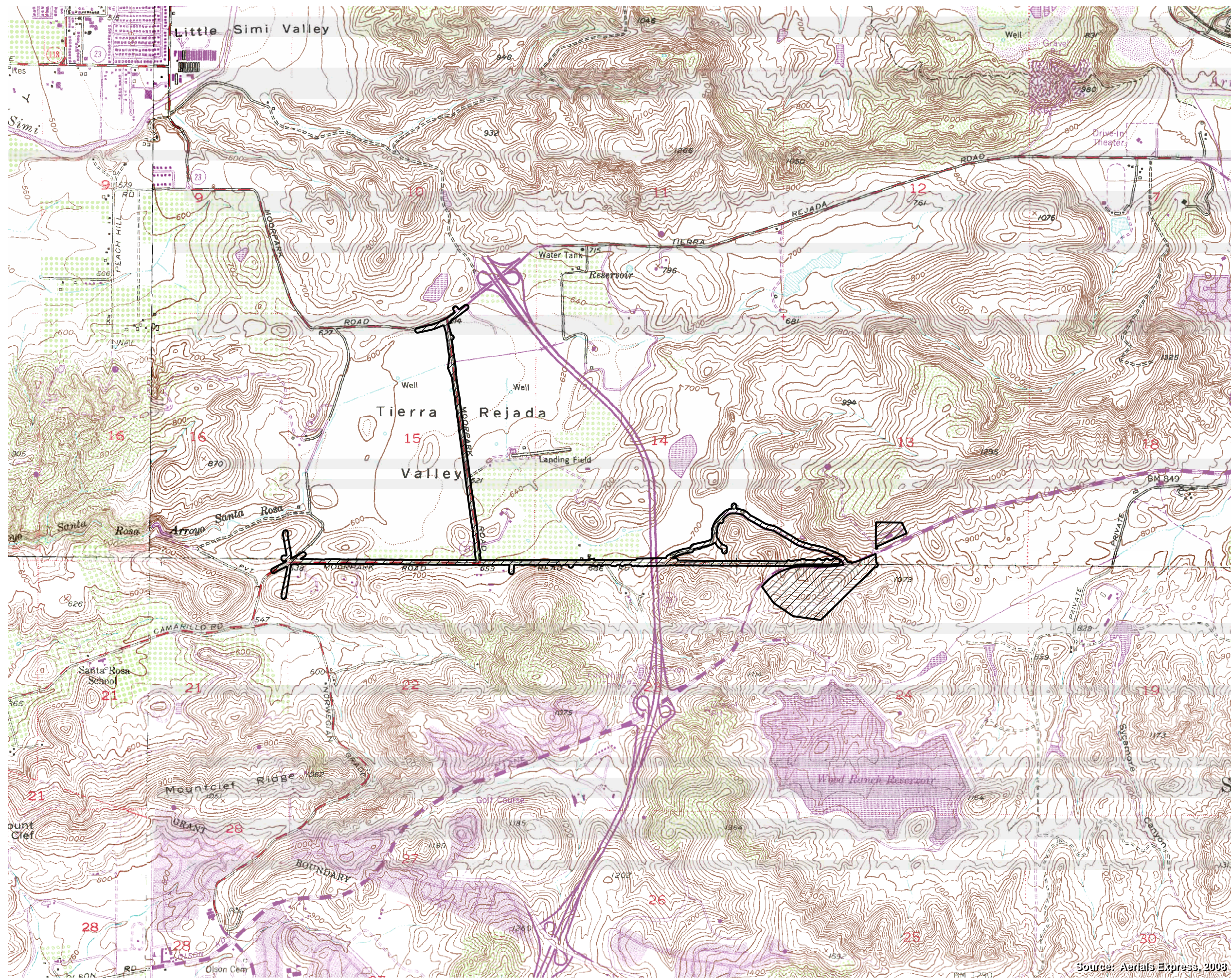


Exhibit 1





 Project Boundary

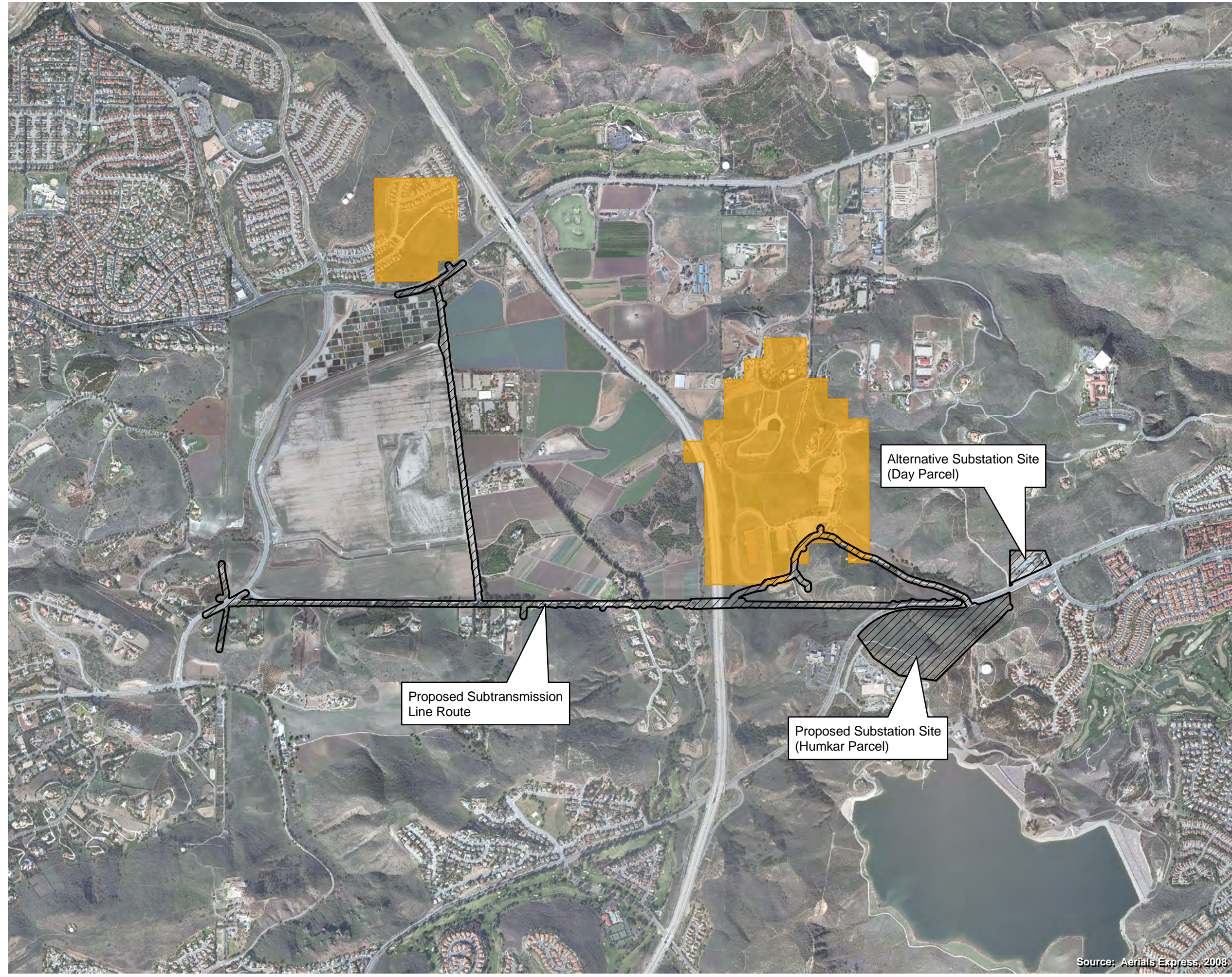
USGS Quadrangle Exhibit 2



Presidential Substation Project

0 2,000 Feet

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Source: Aerials Express, 2003



-  Project Boundary
-  Riverside Fairy Shrimp Critical Habitat 2005F

Local Vicinity Exhibit 3
Presidential Substation Project



Source: Aerials Express, 2008

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