

EXHIBIT C.1
LEAST BELL'S VIREO SURVEY REPORT



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July 1, 2008

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2008 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Report for the Proposed Orange Grove Project

Permit Number: TE-037508-1

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state endangered least Bell's vireo (vireo). The surveys were conducted by TRC in 2008 (spring, breeding) for the proposed Orange Grove Energy Power Plant Project (project) located near Pala, in San Diego County, California. The areas surveyed are located in northeastern San Diego County east of Interstate 15, south of State Route 76, and west of the Pala Casino along the San Luis Rey River. Surveys were conducted to determine the presence/absences of vireo.

SURVEY LOCATIONS

Surveys were conducted on and up to 250 feet surrounding the proposed project site and on either side of the project linear routes (See Map 1 and Map 2). Only suitable vireo habitat was surveyed. Elevation in the survey areas was approximately 300 feet above sea level. Surveys were conducted in two separate areas where riparian habitat is located within 250 feet of the project route. According to the U.S. Fish and Wildlife Service's online Critical Habitat Mapper Portal (visited June 27, 2008 from <http://criticalhabitat.fws.gov/>) all of the areas surveyed for this project fall within designated least Bell's vireo critical habitat.

Survey Area 1 Location

Located south of State Route 76 and along the north side of the San Luis Rey River, the area surveyed included appropriate southern cottonwood-willow riparian forest within the survey corridor for the linear portion of the project route (see LBV Survey Area 1 – Map 1). This survey area is within T9S/T10s, R2W of the U.S. Geological Survey (USGS) Pala 7.5-minute quadrangle.

Survey Area 2 Locations

Survey Area 2 is located north of Survey Area 1 on the north side of the San Luis Rey River and along the southern shoulder of State Route 76 in more marginal habitat, consisting of southern coast live oak riparian forest with some elements of southern cottonwood-willow riparian forest found (see LBV Survey Area 2 – Map 2). This survey area is within T9S, R2W of the U.S. Geological Survey (USGS) Pala 7.5-minute quadrangle.

PLANT COMMUNITIES

All appropriate riparian vegetation found on and within the 250 feet of the proposed project site and linear routes was surveyed. Approximately 6.7 acres of good quality southern cottonwood-willow riparian forest was surveyed (Survey Area 1 – Map 1) and approximately 3.7 acres of moderate quality southern coast live oak riparian forest (with some elements of southern cottonwood-willow riparian forest) was surveyed (Survey Area 2 – Map 2). Dominant plant species observed within Survey Area 1 include western cottonwood (*Populus fremontii*), black willow (*Salix goodingii*), arroyo willow (*Salix lasiolepis*), mule-fat (*Baccharis salicifolia*), mugwort (*Artemisia douglasiana*), ragweed (*Ambrosia* sp.), cattails (*Typha* sp.), and poison oak (*Toxicodendron diversilobum*). Dominant plant species observed within Survey Area 2 include coast live oak (*Quercus agrifolia*), western cottonwood, black willow, toyon (*Heteromeles arbutifolia*), mule-fat, mugwort, ragweed, and poison oak.

METHODOLOGY

Paula Potenza (TRC Biologist) conducted eight presence/absence surveys at least ten days apart for least Bell's vireo from April 14, 2008 to June 23, 2008, according to the *USFWS Least Bell's Vireo Presence/Absence Survey Protocol* for non - NCCP areas (USFWS, 1992). Surveys were conducted on April 14 and 24, 2008; May 4, 14, and 24, 2008; and June 3, 13, and 23, 2008. Because Paula Potenza is not permitted to conduct vireo nest surveys, no taped calls were played and vireos were often not followed so that any nest or nesting behavior was not affected. Vireos were typically identified by calls/songs and by sight and were watched and followed only until identification and locations were confirmed.

All surveys were conducted between approximately 7:00 a.m. and 11:00 a.m. Weather conditions during the surveys consisted of temperatures from 58 to 76 degrees Fahrenheit, winds from 0 to 5 miles per hour, and cloud cover from 0 to 100 percent. Surveys were either not conducted or were halted during periods of excessive heat, wind, rain, fog, or other inclement weather. Taped vocalizations were not used to locate vireos. Surveys were conducted by slowly walking survey routes along the edges and through the riparian vegetation where possible and no more than 3 linear kilometers or 50 hectares of vireo habitat were surveyed on a single survey day.

RESULTS

Least Bell's vireo pairs exhibiting territorial behavior were observed in appropriate riparian habitat in Survey Area 1 (Map 1). No least Bell's vireos were observed in Survey Area 2 (Map 2). A total of eight vireos were observed; seven adult vireos (three pairs and one single male) and one juvenile vireo (with one of the adult pairs) were observed during the eight protocol-level surveys (see LBV Survey Area 1 – Map 1). However, no nests were located or searched for during the surveys and no leg bands or markers were observed on any of the vireos encountered. In addition, brown-headed cowbirds (*Molothrus ater*) were observed during all eight surveys of Survey Area 1.

Survey Area 1 Location

Two singing male least Bell's vireos were first heard and observed during the first survey, on April 14, within the southwestern end of Survey Area 1 along an old dirt road that parallels all and cuts through a small portion of the riparian survey area (see attached Map 1). Both of the two signing males were heard and/or observed during all subsequent surveys in the same general area. These two males were observed counter singing and exhibiting territorial behavior. On at least three different occasions during the surveys a female vireo was observed with each of the males; therefore, it was assumed that these were paired vireos. These two vireo pairs are labeled as Pair 1 and Pair 2 within LBV Survey Area 1 on the attached Map 1. No nest or juveniles were observed with Pair 1 or Pair 2 during the eight surveys. A rough approximation of Pair 1 and Pair 2 territories are depicted as "Area Observed" within LBV Survey Area 1 on the attached Map 1 based on observations of these two male's locations during all eight surveys.

During the second to last survey, on June 13, a third vireo pair was observed southwest of Pair 2 (see Pair 3 within LBV Survey Area 1 on Map 1) and during the last survey, on June 23, a vireo pair with one juvenile was observed near where Pair 3 had been observed on June 13. This pair was likely the same pair as observed on June 13 because of their observed locations; therefore, they were counted as the same pair in the total of vireos observed. Also during the last survey a single male vireo was observed singing within the northeastern end of the survey area (see LBV Survey Area 1 - Map 1). The single male was moving around and eventually moved to the southwest and was lost in heavy riparian vegetation.

Survey Area 2 Location

No least Bell's vireos were observed during the eight surveys conducted in this survey location.

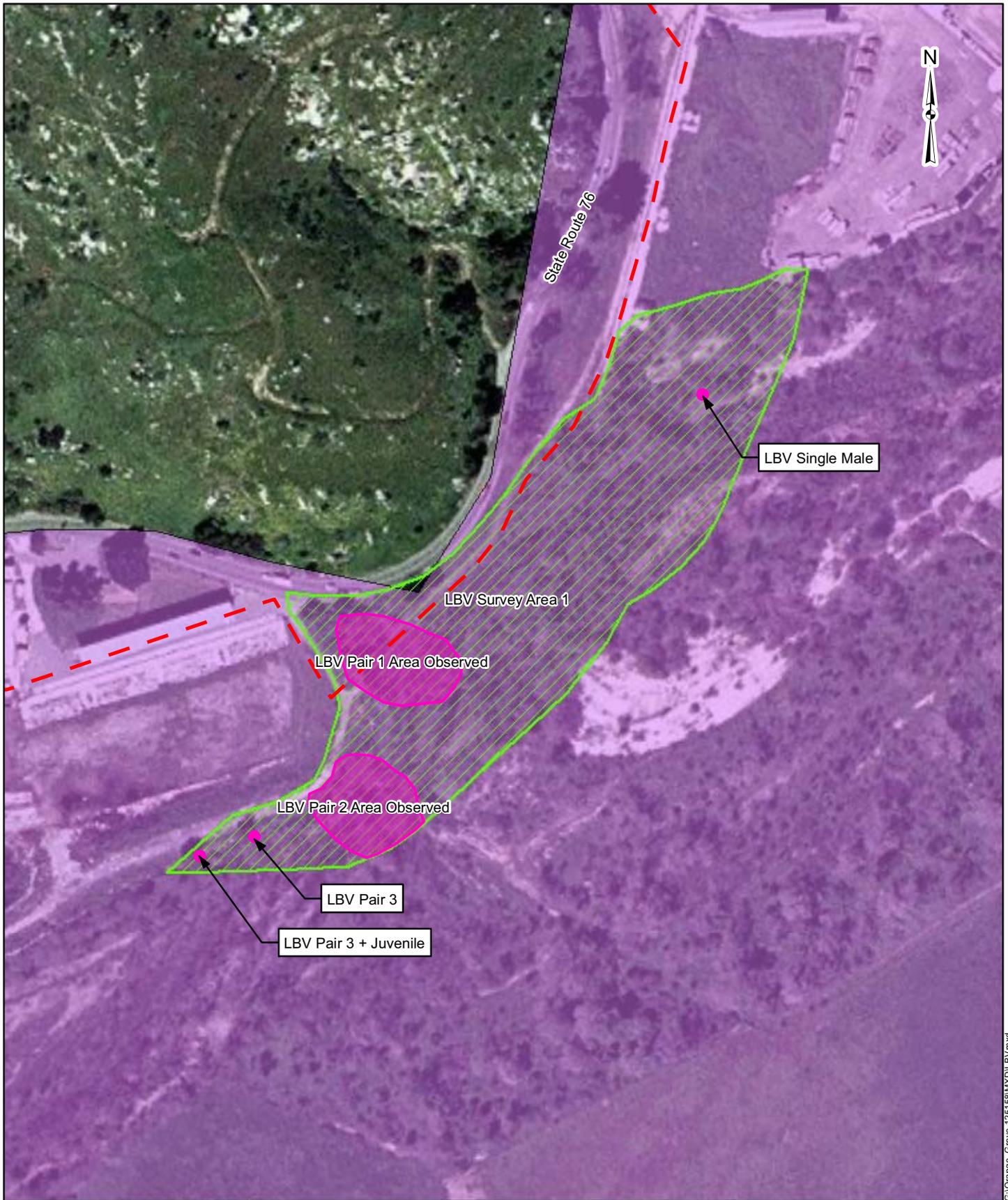
Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

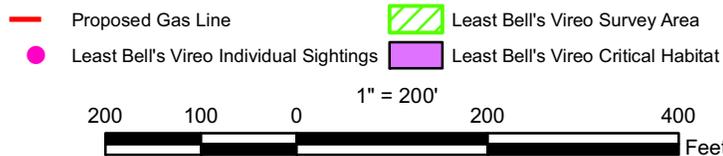


Paula Potenza
Lead Biologist

Attachments

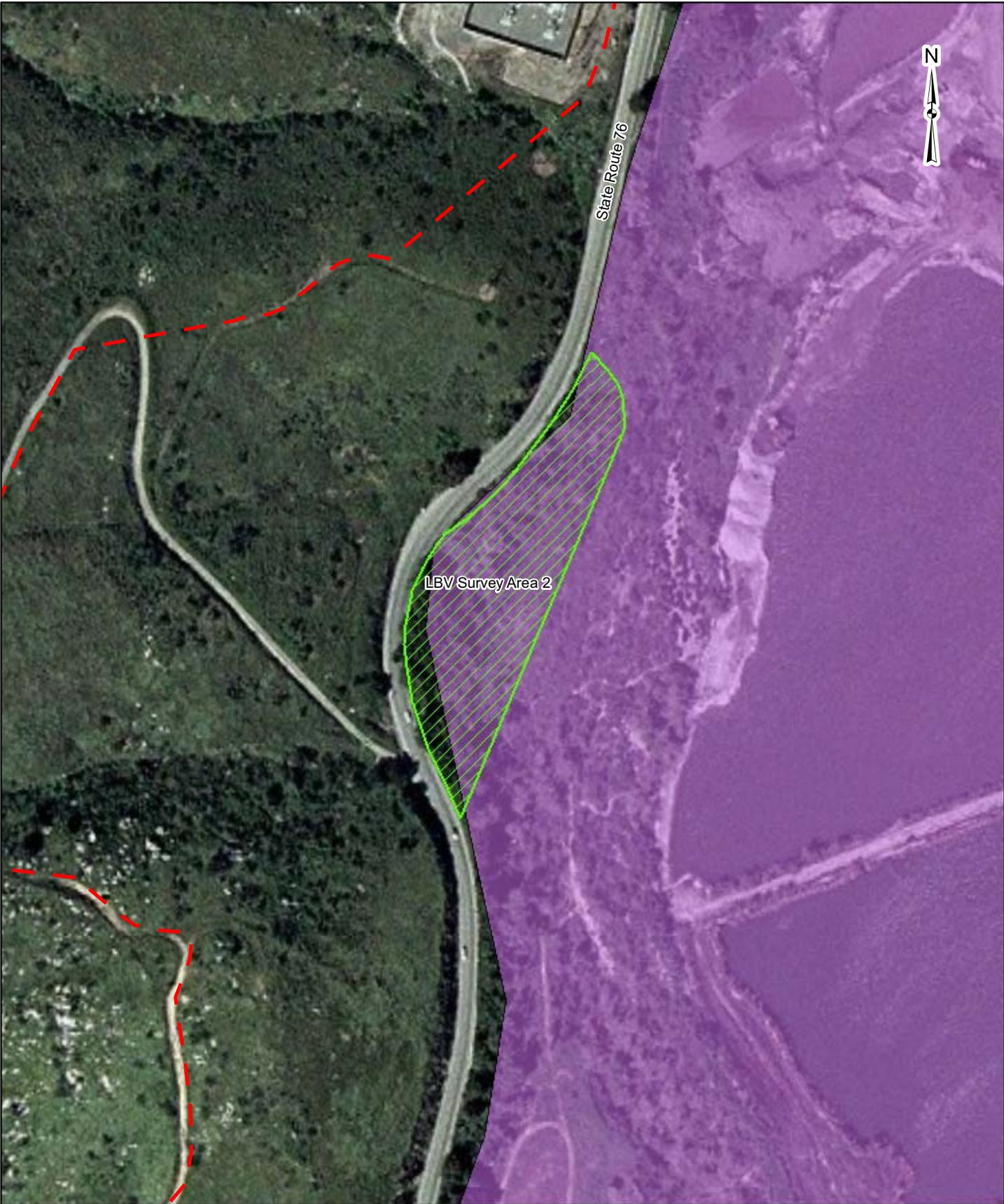


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LBV Survey Area 1
Map: 1
Orange Grove Project

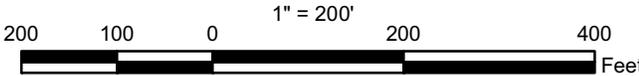




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- Proposed Gas Line
- ▨ Least Bell's Vireo Survey Area
- Least Bell's Vireo Individual Sightings
- Least Bell's Vireo Critical Habitat



LBV Survey Area 2
Map: 2
Orange Grove Project



Source: Aerial photography from ESRI_Imagery_World_2D