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8 August 2014

Farouk Kubba
7021 Leonard Street
Carlsbad, Ca 9201

**Re: Report on Focused Protocol Surveys for Least Bell's Vireos, Highlands Project Site, San Marcos, California**

Dear Mr. Kubba,

This report presents the results of eight focused presence/absence surveys that I recently conducted for the state and federally endangered Least Bell's Vireo *Vireo belli pusillus*.

Available census data indicate that the Least Bell's Vireo (LBV) population in Southern California increased from an estimated 300 pairs in 1986 to 1,346 pairs in 1996. Its breeding habitat is restricted to mature willow riparian woodland. Most frequently, it occupies extensive areas that combine an understory of dense young willows, or mulefat with a canopy of tall willows. The most critical structural component is a dense shrub layer 0.6 - 3.0 meters above ground. The vireo's decline was due to loss of riparian habitat combined with nest parasitism by the Brown-headed Cowbird *Molothrus ater*, which lays its eggs in vireo nests consequently reducing the vireo's reproductive success. Thanks to extensive trapping and removal of cowbirds from vireo habitat, the species has enjoyed an astounding increase since 1996, with some estimates suggesting that the population has increased nearly 9000% since the species was listed as endangered.

The surveys were conducted within the upper reaches of Auga Hedionda Creek. The area is located northeast of the northern terminus of Las Posas Road, north of Highway 78 in the City of San Marcos (Figures 1 and 2). The approximate USGS coordinates of the site are 33°10'N, 117°11'W as determined on-site by Global Positioning System (GPS) receiver (San Marcos 7.5 minute series USGS quadrangle, see Figure 3). The survey site is bordered on the north, west, and south by undeveloped Diegan Coastal Sage Scrub and on the east by low density rural residential and agricultural properties.

The survey route followed the alignment of Auga Hedionda Creek as it passed through willow oak woodland, eucalyptus woodland, willow scrub, a dried up pond/detention basin, and a narrow strip of ruderal land at the northern terminus.

The site was surveyed eight times in conformance with current presence/absence USFWS protocol guidelines. The surveys were conducted by slowly walking routes within and adjacent to the site (see Survey Route Map, Figure 4), listening for songs, whisper songs, scolds, calls, and also observing. No taped vireo vocalizations were played during the surveys. Weather conditions and time of day were appropriate for the detection of Least Bell's Vireos (Table 1).

## TABLE 1

## SCHEDULE OF LEAST BELL'S VIREO SURVEYS AND CONDITIONS

| Date | Time (hours) | Temperature (°F) | Wind Speed (mph) | Cloud Cover (%) |
|---|---|---|---|---|
| 4/28/14 | 0715-0900 | 66-68 | 0-2 NW | 0 |
| 5/09/14 | 0800-1000 | 68 | 0 | 100 |
| 5/19/14 | 0645-0830 | 64-66 | 0-3 SW | 0 |
| 5/30/14 | 0915-1100 | 68-72 | 0 | 100-50 |
| 6/09/14 | 0730-0930 | 66 | 0 | 100 |
| 6/19/14 | 0945-1015 | 68 | 0-3 SW | 100-0 |
| 6/30/14 | 0815-1015 | 66-68 | 0-6 NW | 100-25 |
| 7/10/14 | 0700-0900 | 65-68 | 0 | 100 |

No Least Bell's Vireos were detected during the focused surveys. Habitat on the site is currently not appropriate for Bell's Vireo, which requires mature riparian woodland with a well developed understory and extensive protective cover. The site was previously surveyed for LBV in 1999, 2002, and 2004. A single individual LBV was sighted in late July 2004. It was assumed this bird was a migrant because the species was not detected during seven earlier protocol level surveys in 2004, and was not detected during 1999 or 2002.

The site has undergone dramatic changes since the 2004 surveys. At that time there was a large man-made pond within Agua Hedionda Creek that was full of water and surrounded by freshwater marsh habitat. Tall willow *Salix* sp. trees occurred both upstream and downstream from the pond. Biological reports prepared around the same time noted extensive riparian woodland. It is likely that the pond and woodland were fed primarily by a leak in a Vista Irrigation District flume near the very headwaters of Agua Hedionda Creek. This leak was apparently stopped several years ago, and the resulting absence of water has caused the pond to dry up and most riparian vegetation to die. There are currently no surviving willows upstream of the pond. Based on a Wetland Delineation conducted on the site in June 2014, there are no longer any jurisdictional wetlands on the site.

Thank you very much for the opportunity to conduct this work and prepare this report. Please contact me if you need any additional information or clarification.

Sincerely,

William T. Everett
Certified Biological Consultant

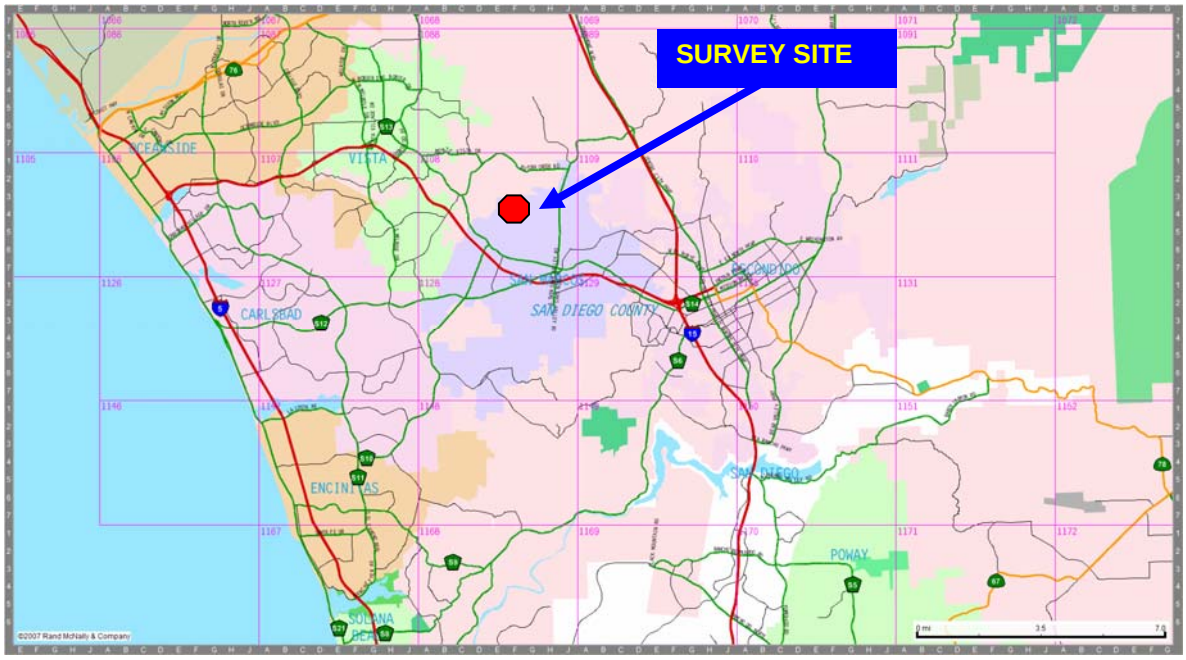


Figure 1. Location of survey site in regional context. Thomas Bros. Map page #1108, F3.

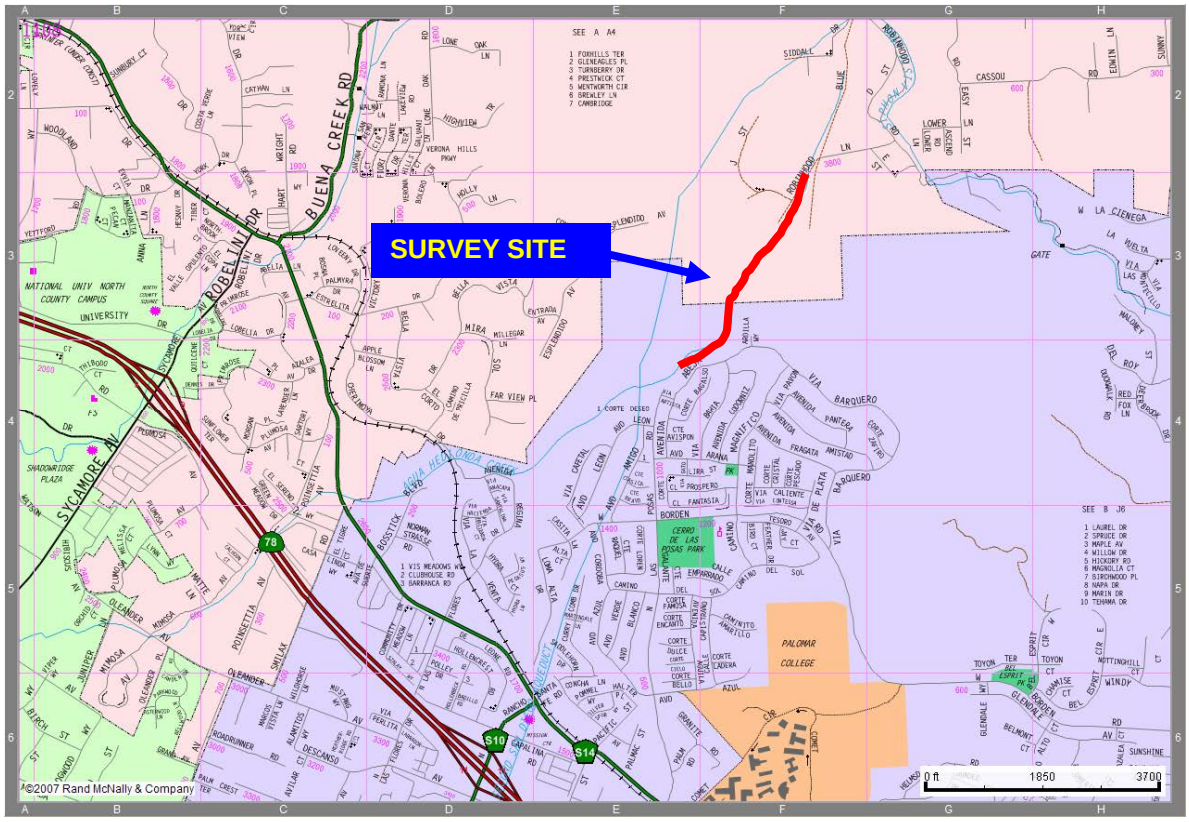


Figure 2. Detail location map of survey site. Thomas Bros. Map page #1108, F3.

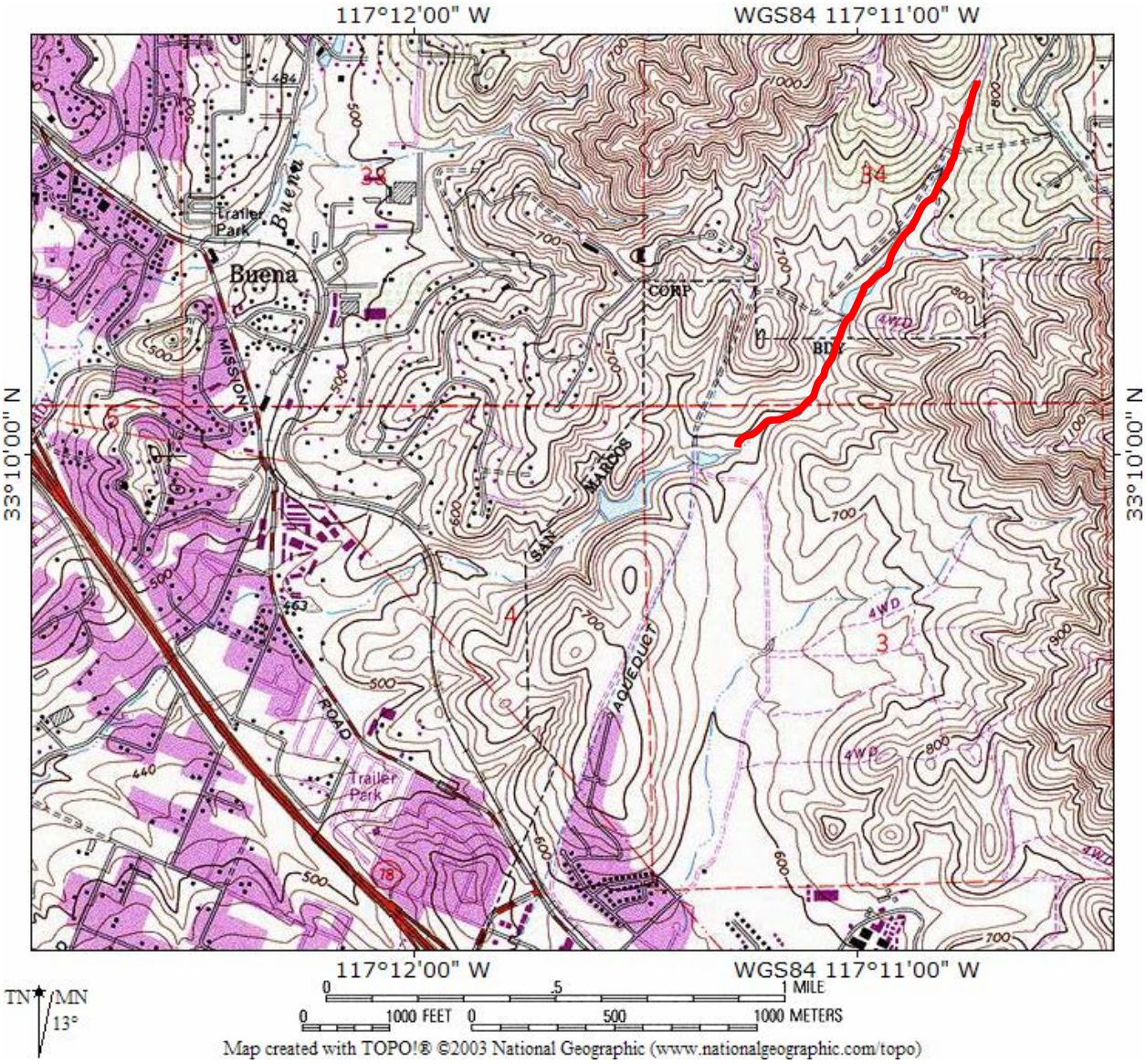


Figure 3. Topographical map showing Survey Route (in red). Taken from USGS San Marcos 7.5 minute series quadrangle.


Figure 4. Survey Route.