



2005 Sensitive Plant Survey Results

Valencia Commerce Center



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2005 Sensitive Plant Survey Results

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1.0 INTRODUCTION

The purpose of this report is to document the results of surveys for sensitive plant species within the 532-acre Valencia Commerce Center Site (Commerce Center; VCC) for the 2005 field season. Surveys placed emphasis on the identification of populations of the state-listed endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; SFVS). Any additional sensitive plant species observed were noted.

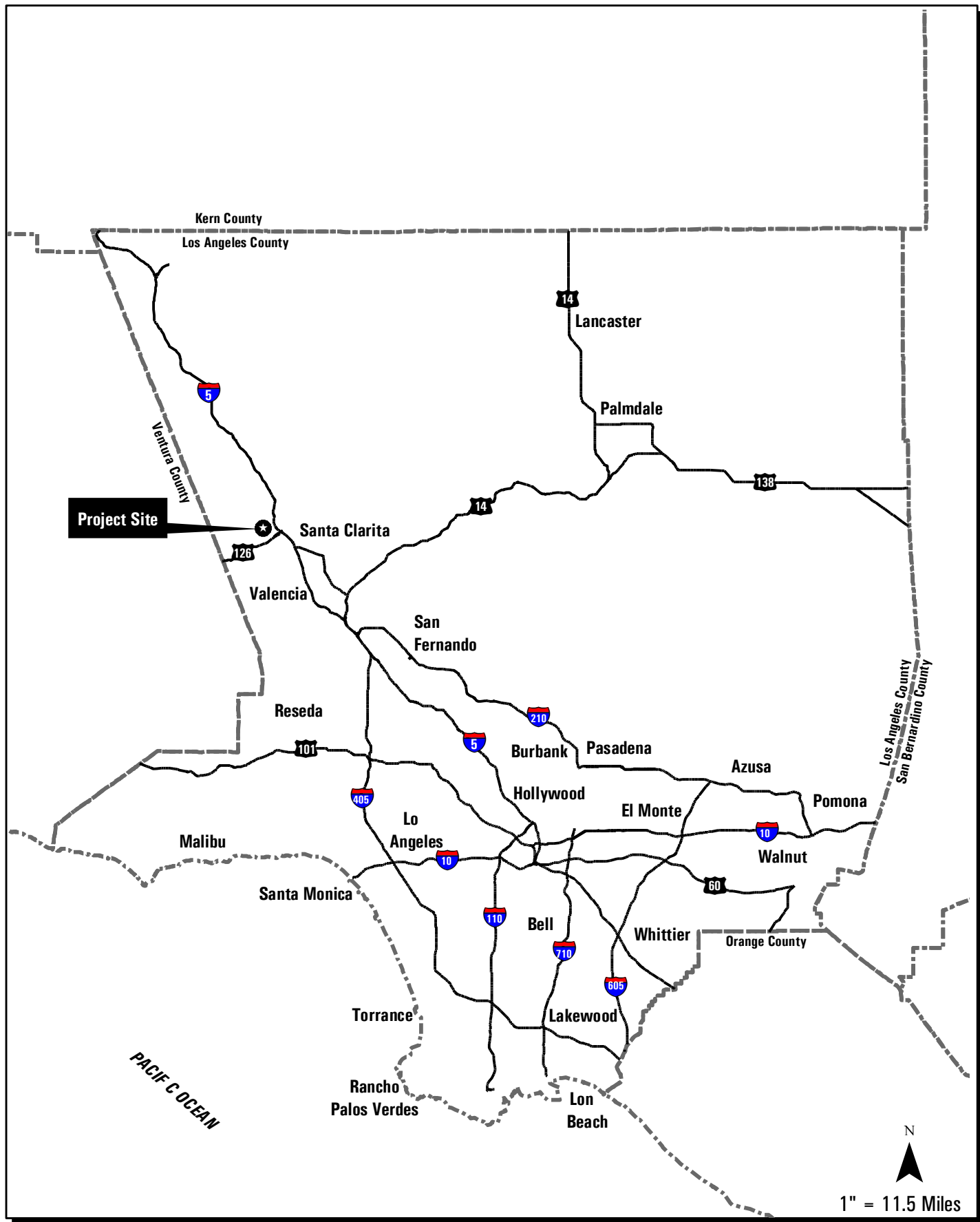
2.0 SITE DESCRIPTION

The study area within the 532-acre VCC is located in an unincorporated portion of the Santa Clara River Valley in northwestern Los Angeles County (*Figure 1*). The Commerce Center Site lies roughly in the northwest corner of the junction of Interstate 5 (I-5) and State Route 126 (SR-126) (*Figure 2*). The northwestern edge of the City of Santa Clarita is located east of I-5 from the study area.

The Commerce Center site is dominated by north/south trending ridges that lie north of Castaic Creek, near the confluence with Hasley Canyon. Site elevations range from just under 1,000 feet above mean sea level (AMSL) in the Castaic Creek bottom to just over 1,500 feet AMSL at the top of the western ridge (*Figure 2*). In addition to the ridges, Castaic Creek and Hasley Canyon wash areas on the project site contain numerous benches and braided channels with associated riparian/wash scrub habitats. The ridges are generally rounded at the top with slopes that vary from steep to gentle.

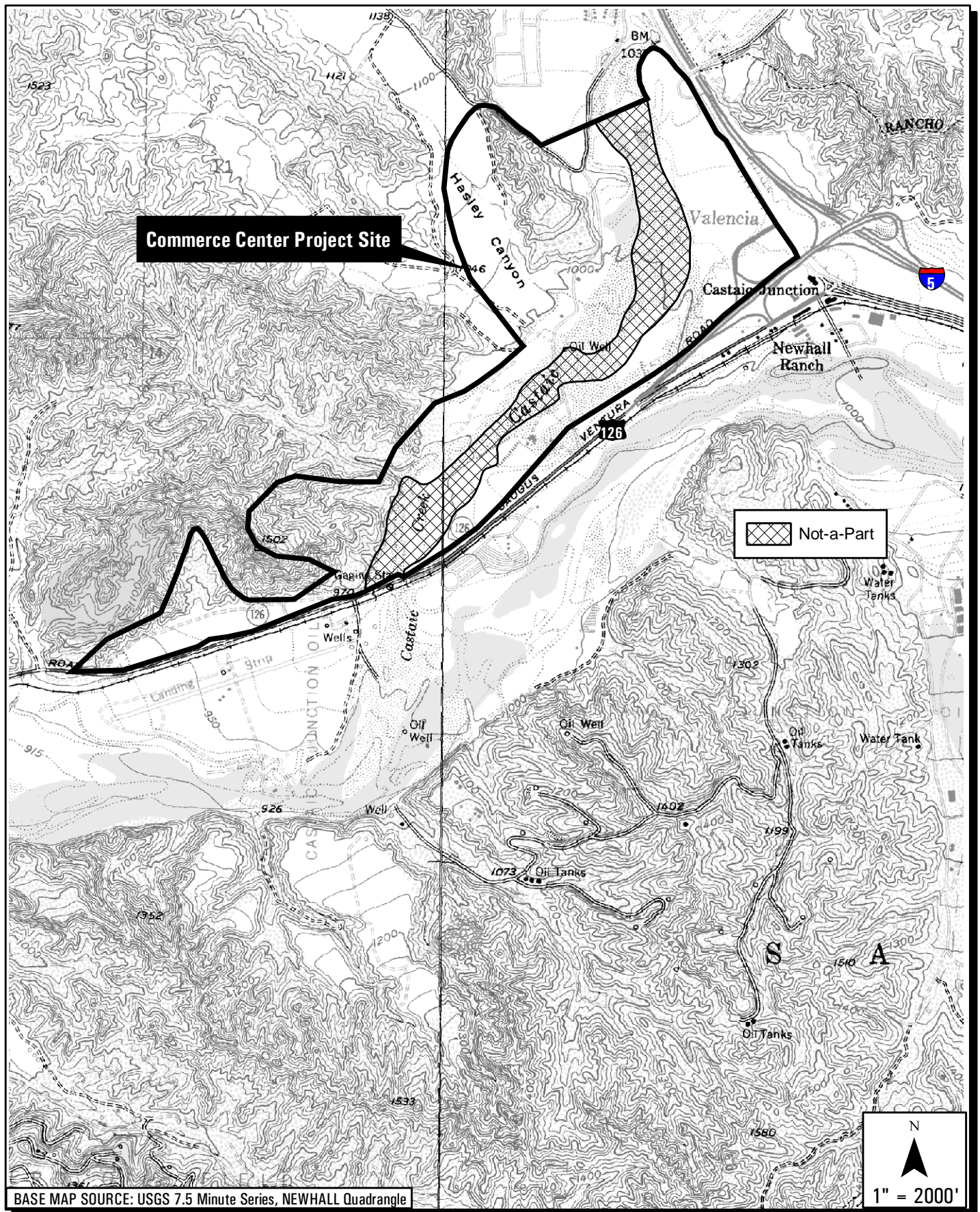
2.1 Plant Communities and Land Covers

Dudek conducted a sensitive plant survey in the study area. Native and naturalized habitats within the Commerce Center study area include representative examples of those plant communities found in the Santa Susana, Topatopa, and Liebre mountains and the Santa Clara River and Castaic Creek ecosystems. Upland habitats dominate the landscape within the study area (*e.g.*, California sagebrush, California buckwheat and California grasslands series); however, Hasley Canyon does support a variety of riparian plant communities (*e.g.*, arroyo willow, Fremont cottonwood, and mulefat scrub series.)



Valencia Commerce Center
Regional Map

FIGURE
1



Valencia Commerce Center
Vicinity Map

FIGURE
2

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Historically, Newhall Land (Newhall) leased out portions of the study area for sand and gravel production, cattle grazing, and agricultural operations; only agricultural operations are currently ongoing. All of these activities have had a noticeable effect on much of the natural habitat onsite (*i.e.*, scrub habitats have been displaced by non-native grasslands). Southern California Edison and Southern California Gas Company have distribution lines and access roads within easements onsite also.

2.2 Geology and Soils

Geologically, the study area is located within the Transverse Range geomorphic province of southern California in the eastern portion of the Ventura depositional basin. This basin “was produced by tectonic downwarping in the geologic past to produce a large-scale synclinal structure in which a thick sequence of Cenozoic sediments has accumulated. These sediments have been lithified into a sequence of sedimentary rock that has subsequently been uplifted, tilted, and tectonically deformed (Allen E. Seward 2002, 2004).” The Holser fault traverses the site (Allan E. Seward 2002, 2004).

3.0 METHODS AND SURVEY LIMITATIONS

Data regarding botanical resources present on the project site were obtained through a review of the pertinent literature, field reconnaissance, and focused surveys for sensitive species, all of which are described below.

3.1 Literature Review

General floristic and sensitive botanical resources present or potentially present on the Entrada site were identified through a literature search using the following sources: the California Natural Diversity Database for the Newhall, Santa Susana, Oat Mountain, Mint Canyon, San Fernando, Green Valley, Warm Springs Mountain, Whitaker Peak, Cobblestone Mountain, Piru, Simi, Thousand Oaks, and Val Verde quadrangle maps (CDFG 2004b); 2002 and 2003 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area (Dudek 2002, 2004a); 2003 Sensitive Plant Survey Results for Valencia Commerce Center, Castaic Mesa, Isola and Ventura Homestead Sites, Magic Mountain Entertainment Center (Entrada) Site, Castaic Junction Site, and Salt Creek (Dudek 2004b-g); 2004 Sensitive Plant Survey Results for Valencia Commerce Center, Entrada Site, Legacy, and Newhall Ranch Specific Plan Area (Dudek 2004h-k); *Biological Resource Assessment of the Proposed Santa Susana Mountains/Simi Hills Significant Ecological Area* (PCR, November 2000); CalFlora (University of California, Berkeley, May

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2002); U.S. Fish and Wildlife Service (USFWS 1999); California Department of Fish and Game (CDFG 2002); *Inventory of Rare and Endangered Plants of California* (CNPS 2001); *Vascular Flora of the Liebre Mountains, Western Transverse Ranges, California* (Boyd 1999); *Checklist of Rare Ventura County Plant Species* (Magney 2002); *A Flora of the Santa Barbara Region, California* (Smith 1976); *A Flora of the Santa Monica Mountains* (Raven *et al.* 1986); *Biology of the San Fernando Valley Spineflower, Ahmanson Ranch, Ventura County, California* (Glenn Lukos Associates, Inc. and Sapphos Environmental, Inc. 2000); *Report to the Fish and Game Commission on the Status of San Fernando Valley Spineflower* (CDFG 2001); *Biota Report, Newhall Ranch Specific Plan* (RECON and Impact Sciences, Inc. 1996); and herbarium specimens from Rancho Santa Ana Botanic Garden (RSA) and the University of California, Riverside (UCR) Herbarium. General information regarding vegetation communities was obtained from Holland (1986) and Sawyer and Keeler-Wolf (1995). Plant species nomenclature follows Hickman (1993).

3.2 Field Reconnaissance Methods

Botanical surveys were conducted by FLx sub-consultants Anuja Parikh and Nathan Gale. All surveys were conducted on foot. Resumes for survey personnel are provided in *Appendix A*.

Botanical surveys of the site were conducted in April and May of 2005 in accordance with the schedule provided in *Table 1*. Approximately 140 person-hours (14 person-days) were spent conducting botanical surveys within the study area. The biologists were able to observe reference populations of the state-listed endangered San Fernando Valley spineflower and other sensitive species in order to develop a search-image prior to conducting surveys of the project site. Surveys focused on the identification and location of SFVS. Additional sensitive plant species observed during SFVS surveys, including California Native Plant Society (CNPS) List 1B and 4 species, were also recorded.

Latin and common names of plants follow *The Jepson Manual* (Hickman 1993) or other recent published taxonomic treatments. Where not listed in Hickman (1993), common names were taken from Abrams (1923). Where not found in this reference, a variety of sources were used (*e.g.*, Dale 1986, Roberts 1998).

Surveys for SFVS were focused in open areas of California sage brush-purple sage series, California buckwheat and California annual grasslands (Sawyer and Keeler-Wolf 1995) on ridgelines, slopes, and escarpments with a southern, southwestern, or southeastern exposure based on information gathered during surveys for SFVS populations on the Newhall Ranch

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TABLE 1
Survey Schedule & Personnel
Valencia Commerce Center Plan Area

Date	Biologists	Purpose
April 21, 2005	FLx (Anuja Parikh , Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species
April 22, 2005	FLx (Anujah Parikh, Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species
April 23, 2005	FLx (Anujah Parikh, Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species
April 25, 2005	FLx (Anujah Parikh, Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species
April 26, 2005	FLx (Anujah Parikh, Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species
April 27, 2005	FLx (Anujah Parikh, Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species
May 02, 2005	FLx (Anujah Parikh, Nathan Gale)	Focused surveys for SFVS; other sensitive plant species noted as observed. and other sensitive plant species

project site during 2002, 2003 and 2004; information contained in the report prepared by Glenn Lukos Associates, Inc. and Sapphos Environmental, Inc. (2000); the status report prepared for the Fish and Game Commission (CDFG 2000); and conversations with Rick Reifner, the botanist who rediscovered SFVS at Ahmanson Ranch in 1999.

While surveying in the field and mapping SFVS, a four-meter (m) rule was used to separate polygons for mapping purposes. This distance is a heuristic mapping tool based on the topography, vegetation, detectability of the plants, the general accuracy of the GPS, and time constraints. This heuristic criterion is not specifically tied to SFVS biology (*i.e.*, reproductive biology, seed dispersal) and thus is not intended to reflect reproductively isolated sub-populations, the total extent of the SFVS seed bank, or any other feature of the species life history.

The outer perimeter of each spineflower polygon was searched in one continuous direction until returning to the starting point, with plants being located within at least every one to four meters along the boundary, and points were stored with a Trimble GPS (that has sub-meter accuracy) manually to form the boundaries of the polygon. GPS points were taken within at least every one to four m. The various spineflower polygons were given a unique identifier (*i.e.*, numbers and/or letters) in the field. Field data sheets were completed for each of the spineflower polygons that include data on site conditions (*i.e.*, plant number estimates, associated species) (Appendix C). Polygons were analyzed in the lab and delineated based on a four m minimum convex polygon rule (*i.e.*, all polygons within four m of each other are joined using GIS software

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(e.g., ArcGIS, AutoCAD), then delineated as one polygon with the outer boundary represented by a minimum convex polygon.

A modified magnitude scale was used to arrive at an estimate of the number of spineflower individuals (or other sensitive species when observed) within each polygon. After mapping the boundaries of the polygon, the number of individuals were counted/ estimated in a rectangular “sample estimation area” (to account for the “clumped” nature of this species), which is a subset of the total polygon. The sample estimation area was between 200 centimeters squared (10 by 20 cm) and two m² (one m by two m) depending on various factors regarding the polygon (e.g., size of the polygon, plant densities, variations in plant densities within the polygon). The number of subsets within the total polygon was determined and added/multiplied, resulting in a total estimate of the number of individuals of the polygon (e.g., 4x125=500, 8x12=96, 9x100=900). This number was then rounded to the nearest magnitude or multiple of a magnitude (e.g., 500; 100; 1,000). This should provide accurate estimates of the number of plants within each polygon while eliminating a false sense of accuracy.

Polygons for other sensitive species were mapped with the GPS unit or by drawing polygons directly onto a 200-scale (one inch=200 feet) topographic base overlaid onto an aerial photograph provided by Psomas (2002, 2003), or by a combination of the two. Professional judgment and experience were used to delineate these polygons based on the detectability of the species, topography, and vegetation. Perennial sensitive plants were mapped at a 10- to 20- m scale due to their population dynamics (including seed dispersal and pollination range), observability, habit, habitat limitations, and mapping accuracy. Information regarding the mapping for each sensitive species is included in the sections below (*Sections 4.2.1 through 4.2.6*).

3.2.1 Sensitive Plant Species

Sensitive plant species are those species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes. This designation includes those species listed by the state and federal government as threatened or endangered, those species proposed for state and/or federal listing or candidates, those plant species found on Lists 1A, 1B or 2 of the *CNPS Inventory of Rare and Endangered Plants of California* (CNPS 2001; *Inventory*) or CNPS online inventory (<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>), and those plant species which are found on the list of “Threatened and Endangered Species and Species of Concern, Los Angeles County” (<http://www.losangelesalmanac.com/topics/Environment/ev14b.htm>). CNPS List 3 or List 4

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species, which have a lower level of sensitivity, were included in discussions only when incidentally encountered during the field surveys.

3.2.2 Survey Limitations

Surveys were conducted in the spring of 2005. The timing of the surveys was coincident with the blooming period for SFVS and other early blooming annual species. This maximized the potential for detection of SFVS and other sensitive plants during the survey effort.

Surveys for SFVS were concentrated on south-facing slopes in areas of suitable habitat. All surveys were conducted during daylight hours under weather conditions which did not preclude observation of sensitive plant species (*e.g.*, surveys were not conducted during heavy fog or rain).

4.0 RESULTS OF SURVEYS

4.1 Botany – Floral Diversity

The study area is situated at the nexus of the Transverse, Coast, and Sierra Nevada ranges; the Mojave Desert; and coastal plains (Hickman 1993). Ecotone areas such as this are often characterized by higher biological diversity than similar-sized areas within the core of a physiographic region (Boyd 1999). As such, a high diversity of plant species is expected during a year of at least average rainfall amounts for the area.

Approximately 342 plant species were identified within the Valencia Commerce Center study area. Of these, 262 species (77 percent) are native to the region and 80 species (23 percent) are non-native. The cumulative list of plant species identified on the site in 2002, 2003, 2004 and 2005 is provided as *Appendix B*.

4.2 Sensitive Plant Species

Sensitive plant species observed within the study area during the course of 2005 surveys include: San Fernando Valley spineflower, slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), island mountain mahogany (*Cercocarpus betuloides* var. *blancheae*), and everlasting (*Gnaphalium* sp. *nova*). These and other sensitive species that have the potential to occur within the Commerce Center site, based on the presence of suitable habitat and soils, are listed in *Table 2*. The sensitive species listed in *Table 2* are

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confined primarily to those species listed by the state and federal government as threatened or endangered, those species proposed for state and/or federal listing or candidates, and those plant species found on Lists 1A, 1B, or 2 of the *CNPS Inventory of Rare and Endangered Plants of California* (CNPS 2001).

The species observed during the 2005 field surveys are discussed in greater detail below. A number of species found on CNPS Lists 3 or 4 also have the potential to occur onsite (e.g., *Acanthomintha obovata* ssp. *cordata*, *Calochortus catalinae*, *C. clavatus* var. *clavatus*, *Mucronea californica*); however, due to their relatively low sensitivity level, CNPS Lists 3 or 4 plants are only discussed in the following sections if they were observed in the study area.

Figure 3 depicts the locations of SFVS, and *Figures 4* and *5* depict the locations of slender mariposa lily, everlasting, and Coulter's goldfields on the Commerce Center site during 2005. Information regarding the mapping and recorded characteristics of the sensitive species is included in the sections below (*Sections 4.2.1* through *4.2.7*).

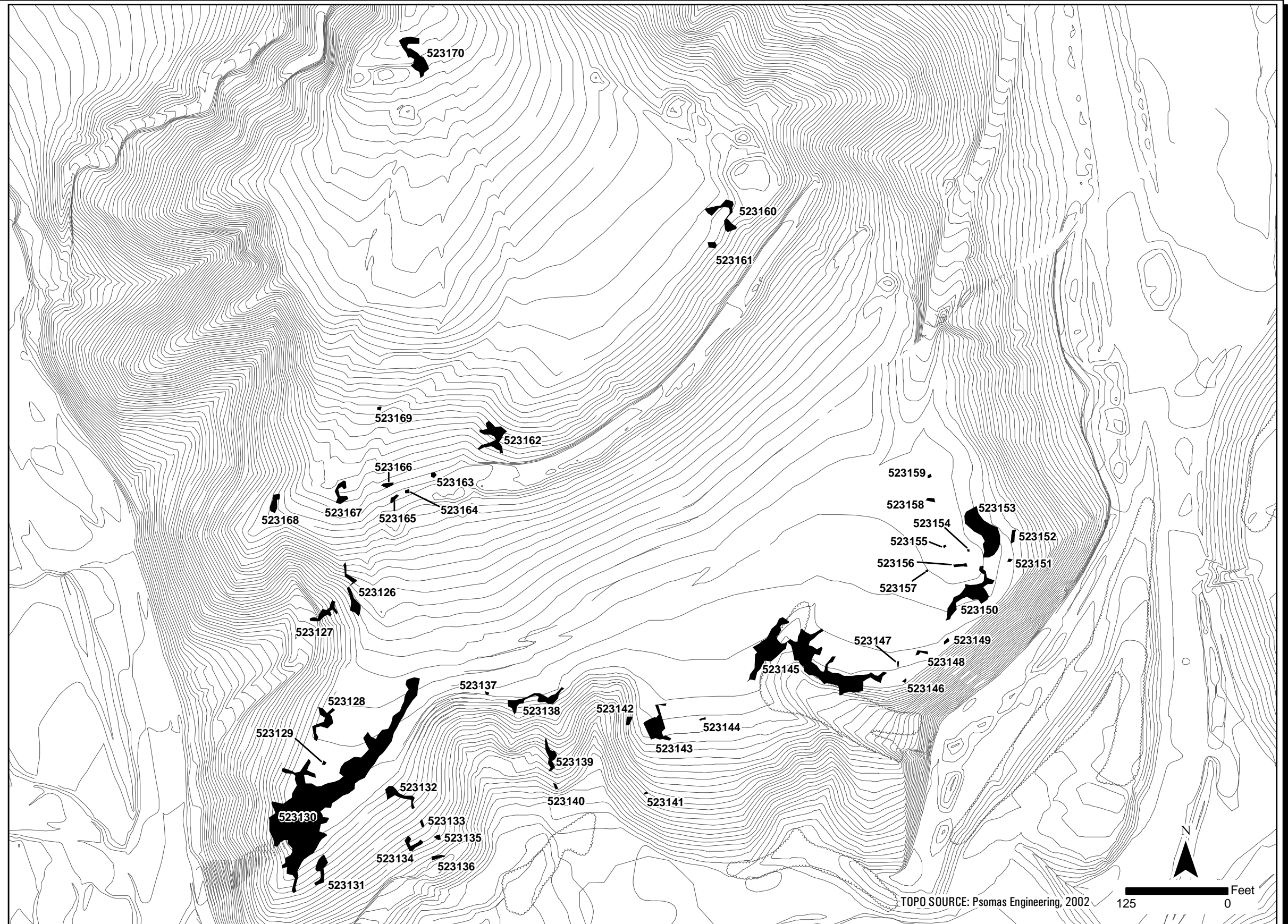
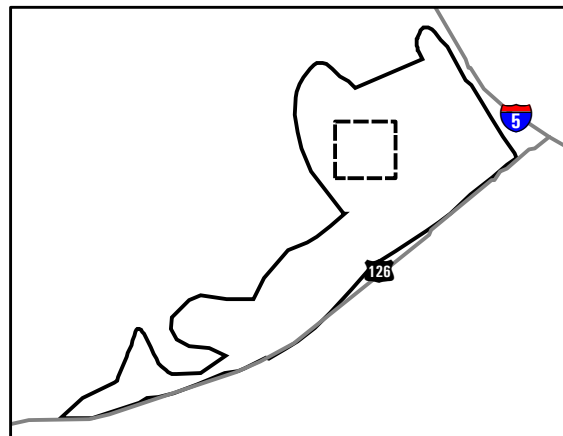
4.2.1 San Fernando Valley Spineflower (*Chorizanthe parryi* var. *Fernandina*)

San Fernando Valley spineflower is state-listed as endangered, a candidate for federal listing, and a CNPS List 1B species. Until its rediscovery in 1999 at Laskey Mesa on Ahmanson Ranch in Ventura County, it was thought to be extinct. A review of information of historic occurrence of SFVS in the CNDDDB indicate that it was previously thought to occur in sandy to gravelly soils of washes, riverbeds, and upland areas primarily on the margins of the San Fernando Valley at the base of the Santa Susana Mountains, San Gabriel Mountains, and the Simi Hills. Munz (1974) provides distribution information to include Orange and San Diego Counties.

Forty-five (45) polygons were identified in the northeastern portion of the survey area. These polygons are depicted in *Figure 3*. Labels for each of the polygons in *Figure 3* correlate with those in *Table 3*, which contains estimates for the numbers of individuals within each polygon.

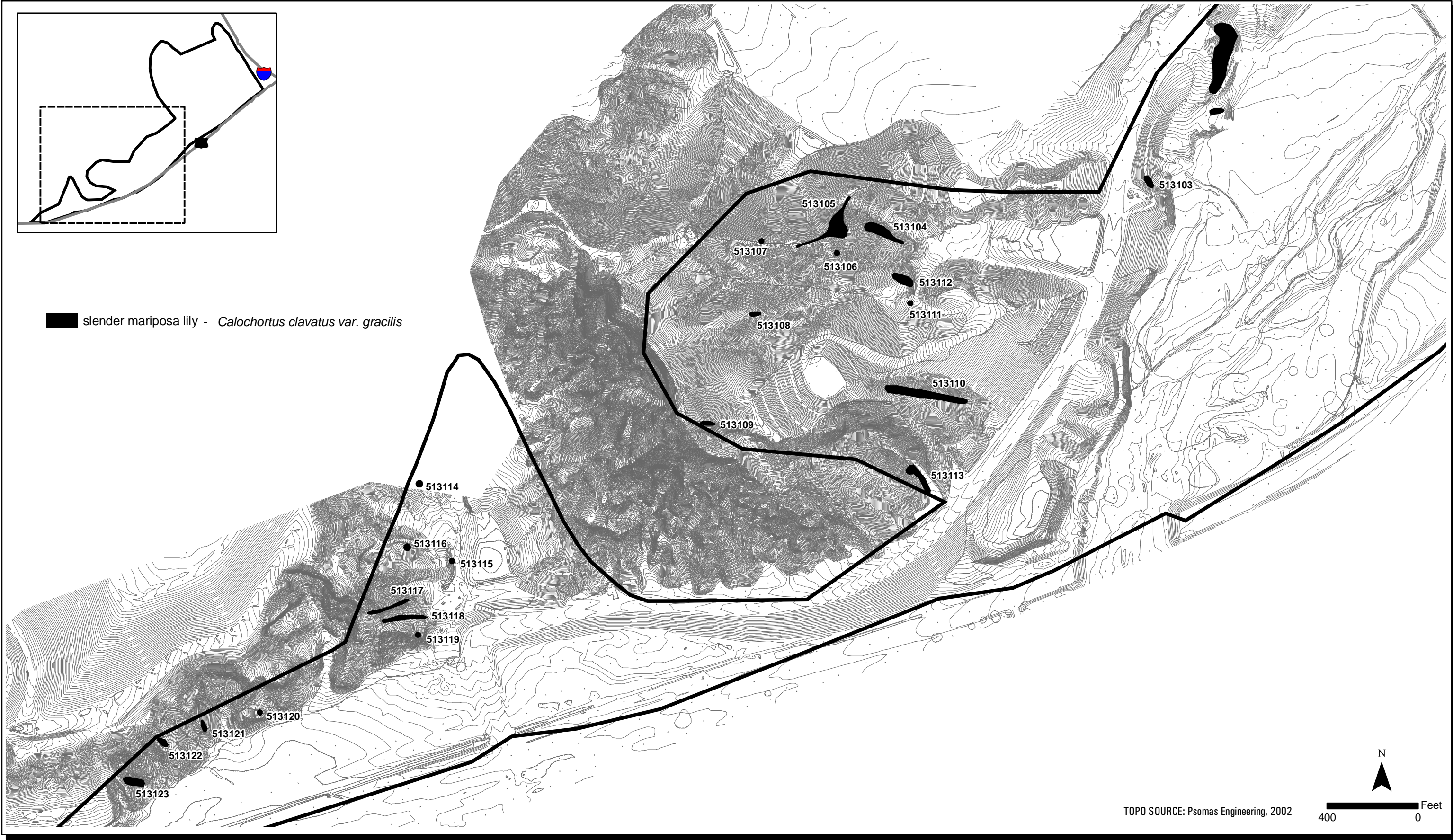
Most of the SFVS were found on slopes with a south/southeast facing component in habitat ecotonal between California sagebrush and grasslands, and California buckwheat and grasslands. Elevations of the SFVS polygons on this site range from approximately 1,070 to 1,160 feet AMSL. Vegetative cover in the area of SFVS occurrences ranged from 40 to 90%, but was more commonly between 60 and 70%. The soil type for all mapped SFVS occurrences on the project site consisted of clay loams. The size of the occurrence polygons ranges from eight to


San Fernando Valley spineflower -
Chorizanthe parryi var. *fernandina*



Valencia Commerce Center
2005 San Fernando Valley spineflower Results

FIGURE
3



Valencia Commerce Center
2005 Sensitive Plant Survey Results

FIGURE
4



Valencia Commerce Center
2005 Sensitive Plant Survey Results

FIGURE
5

2005 Sensitive Plant Survey Results Valencia Commerce Center

TABLE 2
Sensitive Plant Species Observed or Potentially Occurring at the Valencia Commerce Center

Scientific Name	Common Name	Status Federal/State	CNPS List	Primary Habitat Associations/ Life Form/Blooming Period	Presence or Likelihood of Occurrence Onsite
<i>Arenaria paludicola</i>	Marsh sandwort	FE/SE	1B	dense freshwater marsh/perennial herb/May-August	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrences are in the Santa Ana River and in Santa Barbara. Limited suitable habitat onsite in wash/riparian areas; very low likelihood of occurrence within the study area.
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	FE/None	1B	chaparral, coastal sage scrub, grasslands; often on carbonate substrates/perennial herb/March-July	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrence is in the Simi Hills. Suitable habitat exists onsite. Low to moderate likelihood of occurrence within study area.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None	1B	coastal sage scrub and grasslands on alkaline or clay substrate/perennial herb/March-October	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite in wash/riparian areas. Moderate likelihood of occurrence within study area.
<i>Atriplex serenana</i> <i>var. davidsonii</i>	Davidson's saltscale	None/None	1B	coastal bluff scrub and coastal sage scrub on alkaline substrate/annual herb/May-October	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite in wash/riparian areas. Low likelihood of occurrence within the study area.
<i>Baccharis malibuensis</i>	Malibu baccharis	None/None	1B	chaparral, coastal sage scrub, cismontane woodland/deciduous shrub/August	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; closest known populations are in the western Santa Monica Mountains near Malibu. Not expected to occur within the study area.
<i>Berberis nevini</i>	Nevin's barberry	FE/SE	1B	chaparral, coastal sage scrub, riparian scrub, cismontane woodland on sandy or gravelly substrate/evergreen shrub/March-April	Not observed during 2005 field season. CNDDDB records exist for San Francisquito Canyon at confluence with Santa Clara River; suitable habitat present onsite in wash/riparian areas. Moderate likelihood of occurrence within study area.
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	FT/SE	1B	clay substrate openings in chaparral, sage scrub, and grasslands/perennial herb (geophyte)/March-June	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrence is in San Dimas. Suitable habitat present onsite. Low likelihood of occurrence within study area.
<i>Calochortus clavatus</i> <i>var. gracilis</i>	Slender mariposa lily	None/None	1B	chaparral and coastal sage scrub/perennial herb (geophyte)/March-May	Identified in two general areas (predominantly steep, north-facing slopes in California sagebrush) within 39 polygons. Overall onsite population estimate is 997 individuals within occurrence polygons covering 5.0 acres of the site. CNDDDB records for mouth of Pico Canyon.
<i>Calochortus plummerae</i>	Plummer's mariposa lily	None/None	1B	chaparral, coastal sage scrub, cismontane woodland, grasslands on rocky granitic substrate/perennial herb (geophyte)/May-July	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; however, records exist for the Santa Susana Mountains and Simi Hills. Suitable habitat exists onsite. High likelihood of occurrence within study area.
<i>Calochortus weedii</i> <i>var. vestus</i>	late-flowered mariposa lily	None/None	1B	chaparral, cismontane and riparian woodland/perennial herb (geophyte)/ June-August	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; however, habitat similar to where species occurs in eastern Ventura County is present onsite. Moderate likelihood of occurrence within study area.

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TABLE 2
Sensitive Plant Species Observed or Potentially Occurring at the Valencia Commerce Center

Scientific Name	Common Name	Status Federal/State	CNPS List	Primary Habitat Associations/ Life Form/Blooming Period	Presence or Likelihood of Occurrence Onsite
<i>Calystegia peirsonii</i>	Peirson's morning-glory	None/None	4	chaparral, coastal sage scrub, cismontane woodland, grassland/perennial herb/May-June	Observed in chaparral, California sagebrush, and buckwheat scrub in the survey area.
<i>Calystegia sepium</i> <i>ssp. binghamiae</i>	Santa Barbara morning-glory	None/None	1A	marshes and swamps/perennial herb/ April-May	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite in wash/riparian areas. Low likelihood of occurrence within study area.
<i>Centromadia</i> [=Hemizonia] <i>parryi</i> <i>ssp. australis</i>	southern tarplant	None/None	1B	mesic edges of marshes in grasslands/annual herb/May-November	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite in wash/riparian areas. Low likelihood of occurrence within study area.
<i>Cercocarpus</i> <i>betuloides</i> var. <i>blancheae</i>	Island mountain-mahogany	None/None	4	chaparral, closed-cone coniferous forest/evergreen shrub/February-May	Not observed within study area during 2005 field season. Occurrences documented from surrounding areas in mixed chaparral. Limited suitable habitat present onsite. Low likelihood of occurrence within study area.
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	FC/SE	1B	coastal sage scrub, sandy soils/annual herb/April-June	Observed in one general area with 45 polygons onsite. Total onsite population estimate is 223,155 individuals within occurrence polygons covering 0.5 acre of the site.
<i>Deinandra</i> [=Hemizonia] <i>minthornii</i>	Santa Susana tarplant	None/SR	1B	chaparral and coastal sage scrub on rocky substrate/deciduous shrub/July-November	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; however, records exist for the Simi Hills and Oat Mountain. Suitable habitat exists onsite. Low likelihood of occurrence within study area.
<i>Delphinium parryi</i> <i>ssp. blochmaniae</i>	dune larkspur	None/None	1B	maritime chaparral, coastal dunes/perennial herb/ April-may	Not observed during 2005 field season although <i>Delphinium parryi</i> spp. <i>parryi</i> was observed within the study area. No likelihood of occurrence.
<i>Dodecahema</i> <i>leptoceras</i>	slender-horned spineflower	FE/SE	1B	alluvial scrub on sandy substrate/annual herb/April-June	Not observed during 2005 field season. Historic CNDDDB records exist for the Newhall or Val Verde quads in alluvial habitat similar to that present onsite in wash/riparian areas. Moderate likelihood of occurrence onsite.
<i>Dudleya</i> <i>blochmaniae</i> var. <i>blochmaniae</i>	Blochman's dudleya	None/None	1B	clay openings in chaparral and coastal sage scrub, grasslands/perennial herb/April-June	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat present onsite. Low to moderate likelihood of occurrence within study area.
<i>Dudleya cymosa</i> ssp. <i>Marcescens</i>	marcescent dudleya	FT/CR	1B	chaparral, often on volcanic substrate/perennial herb (geophyte)/ April-June	Not observed during 2005 field season. No CNDDDB records exist for Newhall and Val Verde quads. No suitable habitat observed in study area.
<i>Dudleya cymosa</i> ssp. <i>Ovatifolia</i>	Santa Monica Mountains dudleya	FT/None	1B	chaparral and coastal sage scrub, often on volcanic substrate/perennial herb (geophyte)/April-June	Not observed during 2005 field season. No CNDDDB records exist for Newhall and Val Verde quads. Suitable habitat present onsite. Low to moderate likelihood of occurrence within study area.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None	1B	coastal bluff scrub, coastal sage scrub, valley and foothill grassland,	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; closest known occurrences are in Calabasas

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TABLE 2
Sensitive Plant Species Observed or Potentially Occurring at the Valencia Commerce Center

Scientific Name	Common Name	Status Federal/State	CNPS List	Primary Habitat Associations/ Life Form/Blooming Period	Presence or Likelihood of Occurrence Onsite
				rocky, often clay substrate/perennial herb/ April-June	and San Dimas. Suitable habitat exists onsite. Low to moderate likelihood of occurrence within study area.
<i>Dudleya parva</i>	Conejo dudleya	FT/None	1B	coastal sage scrub and grassland on rocky, gravelly clays/perennial herb/May-June	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite. Low likelihood of occurrence within study area.
<i>Erodium macrophyllum</i>	Round-leaved filaree	None/None	2	cismontane woodland and grasslands on clay substrate/annual herb/March-May	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; however records exist for Simi Valley, and this plant was observed in the hills east of Castaic Lake in 2003. Suitable habitat present onsite; moderate likelihood of occurrence in study area.
<i>Helianthus nuttallii</i> <i>ssp. Parishii</i>	Los Angeles sunflower	None/None	1A	marshes and swamps/perennial herb/ August-October	Not observed within study area during 2005 field season. A <i>Helianthus</i> population, discovered in 2002 at Castaic Spring, on the south side of the Santa Clara River between Middle Canyon and San Jose Flats, was determined by some experts to be this species, but determined by other experts not to be this species. Based on pollen electron microscopy and chromosome counts, it is likely that the Newhall <i>Helianthus</i> species is a hybrid between <i>H. nuttallii</i> and <i>H. californicus</i> or an intermediate evolutionary step between the two species (Porter and Fraga 2004). No suitable habitat observed in study area.
<i>Horkelia cuneata</i> var. <i>puberula</i>	Mesa horkelia	None/None	1B	chaparral, cismontane woodland, coastal sage scrub on sandy or gravelly substrate/perennial herb/February-December	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat present onsite in wash/riparian areas. Low likelihood of occurrence within study area.
<i>Juglans californica</i>	southern California black walnut	None/None	4	chaparral, cismontane woodland, coastal sage scrub, alluvial scrub/ deciduous tree/March-May	Not observed within study area during 2005 field season. Observed offsite in California sagebrush and chaparral onsite. Suitable habitat present onsite. Low likelihood of occurrence within study area.
<i>Lasthenia glabrata</i> <i>ssp. Coulteri</i>	Coulter's goldfields	FSC/None	1B	Saltwater marsh and swamps, playas, vernal pools/annual herb/February-June	Observed in one location (approximately 670 square feet in size) within the study area during 2005 surveys. The occurrence contains approximately 75 individuals on a manufactured slope. No records of this subspecies are within Los Angeles or Ventura counties.
<i>Malacothamnus davidsonii</i>	Davidson's bush mallow	None/None	1B	chaparral, coastal sage scrub, riparian woodland/ deciduous scrub/June-January	Not observed during 2005 field season. Nearest occurrences are in Van Nuys and Sunland quads. Suitable habitat present onsite. Moderate likelihood of occurrence within study area.
<i>Nama stenocarpum</i>	mud nama	None/None	2	edges of lakes, rivers, ponds, vernal pools/annual/January-July	Not observed during 2005 field season. Moderate likelihood of occurrence on banks of Castaic Creek and Hasley Canyon and other mesic areas onsite. No CNDDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite in wash/riparian areas. Low likelihood of occurrence within study area.

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TABLE 2
Sensitive Plant Species Observed or Potentially Occurring at the Valencia Commerce Center

Scientific Name	Common Name	Status Federal/State	CNPS List	Primary Habitat Associations/ Life Form/Blooming Period	Presence or Likelihood of Occurrence Onsite
<i>Nolina cismontane</i>	chaparral nolina	None/None	1B	chaparral, coastal sage scrub on sandstone or gabbro substrate/perennial shrub/May-July	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite. Low likelihood of occurrence within study area.
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	None/None	1B	chaparral, Joshua tree woodland, Mojavean desert scrub/succulent shrub/ April-June	This variety was identified by Dudek in 2002 within coastal sage scrub at southwest portion of the ridge between Hasley Canyon and Castaic Creek; however, further investigation indicates that the onsite population more closely matches variety <i>racemosa</i> . This species was not mapped in 2005.
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	FE/SE	1B	openings in chaparral and coastal sage scrub, grasslands/annual herb/March-August	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrences are in the Simi Valley. Suitable habitat present onsite. Moderate likelihood of occurrence within study area.
<i>Rorippa gambellii</i>	Gambel's watercress	FE/ST	1B	marsh and swamps (freshwater and brackish)/ perennial herb/April-June	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite in wash/riparian areas. Very low likelihood of occurrence within study area.
<i>Senecio aphanactis</i>	Rayless ragwort	None/None	2	chaparral, coastal sage scrub, cismontane woodland on alkaline substrate/annual herb/January-April	Not observed during 2005 field season. Historic CNDDDB record for Saugus, south of Santa Clara River. Suitable habitat exists onsite. Low likelihood of occurrence within study area.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None	2	chaparral, coastal sage scrub, and playas on alkaline substrate/perennial herb/March-June	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; suitable habitat exists onsite. Moderate likelihood of occurrence within study area.
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	None/None	2	meadows and seeps/perennial herb/fertile January-September	Not observed during 2005 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrence at Point Dume. Limited suitable habitat present onsite. Very low likelihood of occurrence within study area.

Legend

FE: Federally-listed as endangered
 FT: Federally-listed as threatened
 FC: Federal candidate for listing
 SC: State candidate for listing
 SE: State-listed as endangered
 ST: State-listed as threatened
 SR: State-listed as rare

CNPS List 1A: Plants presumed extinct in California
 CNPS List 1B: Plants rare, threatened, or endangered in California and elsewhere
 CNPS List 2: Plants rare, threatened, or endangered in California but more common elsewhere
 CNPS List 3: Plants about which we need more information – a review list
 CNPS List 4: Plants of limited distribution – a watch list

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TABLE 3
**San Fernando Valley Spineflower Summary of
Occurrence Data for the Commerce Center Site**

Polygon Name	Polygon Size (square feet)	Estimated Number of Individuals
523126	359	250
523127	259	200
523128	376	400
523129	18	35
523130	8,724	97,500
523131	289	200
523132	293	500
523133	27	30
523134	159	400
523135	35	100
523136	60	100
523137	16	2
523138	495	1,700
523139	239	750
523140	25	35
523141	11	15
523142	62	13
523143	634	250
523144	18	8
523145	3,761	100,000
523146	15	50
523147	13	2
523148	47	3
523149	29	50
523150	941	10,000
523151	17	30
523152	65	100
523153	1,273	350
523154	8	1
523155	11	2
523156	60	3
523157	9	1
523158	43	100
523159	19	75
523160	423	300
523161	63	200
523162	567	7,000
523163	35	100
523164	24	20
523165	48	50
523166	61	200
523167	218	500
523168	167	300
523169	18	30
523170	694	1,200
Total	20,729	223,155

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approximately 8,724 square feet. The number of individuals within each polygon ranges from 1 individual to approximately 100,000 individuals. A CNDDDB form for this occurrence is included in *Appendix C*.

4.2.2 Slender mariposa lily (*Calochortus clavatus* var. *gracilis*)

Slender mariposa lily has no state or federal status, but is a CNPS List 1B plant. It is typically found in chaparral, coastal sage scrub, and grasslands, often on clay, and/or rocky soils. It has been documented to occur at the mouth of Pico Canyon and other canyons in the vicinity (Newhall Quad; CDFG 2004b). Other varieties of this species are documented from southern California: club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*) and pale mariposa lily (*C. clavatus* var. *pallidus*). The club-haired mariposa lily differs in that it is virtually a serpentine endemic (restricted to serpentine soils) and a very robust species, generally attaining a height of one m. Pale mariposa lily differs in that the petals are a paler yellow, the anthers are paler (yellow to pale purple), and the hairs on the petals are not as knobby or club shaped. Neither the club-haired mariposa lily nor pale mariposa lily is known to have a red line above the nectary on the petal as is the case with the slender mariposa lily.

Multiple polygons were mapped within the study area by drawing boundaries on aerial photograph field maps around the areas that contained the mariposa lily. The *Calochortus* plants were scattered within these polygons, and estimates of the number of flowering individuals (not total number of individuals) were made based on visual estimations. Geophytes like *Calochortus* generally only have a percentage of the plants flower in any given year, and the non-flowering individuals are not as visible.

Within the Commerce Center study area, the slender mariposa lily was found primarily on east and northeast-facing ridges and slopes in California sagebrush, California buckwheat and California grasslands (see *Figures 4* and *5*). The occurrences were generally mapped in areas of high vegetative cover and a variety of soil types (*e.g.*, gravelly loam, sandy loam, rocky clay). The elevation of occurrences ranges from 1,000 to 1,330 feet AMSL. This species is locally abundant at the Commerce Center study area: 39 polygon occurrences were mapped with a polygon size ranging from 177 to 34,041 square feet. The estimated number of individuals within each polygon ranges from 1 to 175, with approximately 1037 individuals within the project site (see *Table 4*). CNDDDB forms were completed for each occurrence and are included in *Appendix C*.

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TABLE 4
Slender Mariposa Lily Summary of Occurrence Data
for the Commerce Center Site

Polygon Name	Polygon Size (Square Feet)	Estimated Number of Flowering Individuals
513101	21,213	100
513102	1,478	3
513103	1,589	4
513104	6,248	35
513105	10,870	75
513106	559	1
513107	545	3
513108	994	3
513109	1,146	10
513110	12,055	30
513111	559	2
513112	3,572	20
513113	4,490	25
513114	886	6
513115	614	4
513116	886	3
513117	2,941	6
513118	4,043	15
513119	559	5
513120	559	3
513121	1,118	8
513122	1,298	10
513123	3,003	12
523171	9,533	50
523172	33,876	100
523173	559	3
523174	14,994	50
523175	34,041	175
523176	7,925	40
523177	558	3
523178	11,155	75
523179	8,023	50
523180	1,517	15
523181	2,333	15
523182	436	1
523183	3,685	12
523184	8,535	20
523185	460	4
523186	177	1
TOTAL	219,032	997

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4.2.3 Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)

Coulter's goldfields is a CNPS List 1B plant which has not been documented to occur in the vicinity of the project (Hickman 1993; CNPS 2001). This variety is documented as being restricted to alkali playas, vernal pools, and some freshwater habitats in Riverside and San Diego counties (CNPS 2001). During the 2005 season, the species was observed in other portions of Newhall Land & Farm Company landholdings on recently manufactured slopes; apparently applied as part of an erosion control hydroseed mix.

The plants are growing on a southeast-facing manufactured slope. The area does contain alkali habitat characteristics (silty clay, cracked soils with 10 percent vegetative cover), which are known to support this variety. These plants appear to be a non-native introduction; therefore CNDDDB data forms are not included.

4.2.4 Peirson's Morning Glory (*Calystegia peirsonii*)

Peirson's morning-glory has no state or federal status, but is found on List 4 of the *CNPS Inventory* (2001). This morning-glory is a rhizomatous perennial that typically is found in more desert-like areas (*e.g.*, creosote bush scrub, Joshua tree woodland) at elevations which exceed 3,000 feet AMSL, although there are records in the CNDDDB for lower elevations in the local area. While never abundant, Peirson's morning-glory is widespread onsite and was observed on virtually all ridges and slopes, weakly climbing over mixed chaparral, California sagebrush, California buckwheat, and in grasslands throughout the 532-acre study area. Due to the widespread nature of Peirson's morning-glory on the Commerce Center site and its relatively low sensitivity level, it was not mapped. No CNDDDB forms were completed for this species because of these same reasons.

4.2.5 Southern California black walnut (*Juglans californica*)

Southern California black walnut has no state or federal status, but is found on List 4 of the *CNPS Inventory*. Within its distributional range in southern California, this species is found as scattered occurrences throughout chaparral, cismontane woodlands, and coastal and alluvial scrub habitats (CNPS 2001).

In the VCC survey area, one southern California black walnut was found along the southern bank of Castaic Creek, west of the junction of Interstate 5 and State Highway 126. The tree occurred at the edge of willow-cottonwood forest on relatively flat terrain at an elevation of about 1,000 feet. CNDDDB forms were not completed for this species because of its relatively low sensitivity.

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4.2.6 *Gnaphalium sp. nova* (everlasting)

The undescribed species of *Gnaphalium* documented within the study area during the 2004 field season was observed again during the 2005 field season. Plants of this unnamed everlasting were previously ascribed to the species *Gnaphalium leucocephalum*, which is not thought to occur west of the Peninsular and Transverse Ranges in California. These specimens, rather, are thought by UC Riverside (UCR) and Rancho Santa Ana Botanic Garden (RSA) botanists to be an undescribed taxon (*Gnaphalium species nova*). The *Gnaphalium* plants on the Newhall Ranch SPA differ from *Gnaphalium leucocephalum* in stature, pubescence, and phyllary characters.

A search of three herbaria (UCR, RSA, and the San Diego Natural History Museum) by Dudek biologist Marc Doalson revealed that 14 collections of this plant have been made in Ventura, Orange, Riverside, Los Angeles, and San Diego Counties. Eight collections date from 1901 to 1987 (1901, 1918, 1922, 1928, 1931, 1959, 1985 and 1987). There are six more recent collections dating from 1994 to 2003 (1994, two from 1995, 1997 and two from 2003). Many are from somewhat vague localities, such as "San Fernando Valley" and "Pasadena." Modern collections have come mostly from the Santa Ana Mountains region and especially Temescal Wash in western Riverside County, with several collections from adjacent San Diego County. In addition to the herbaria specimens, the *G. sp. nova* has been observed in 2003 and 2004 along Castaic Creek and the Santa Clara River in Los Angeles County (Dudek 2004). Plants are almost always associated with alluvial soils, often being found on the benches along major washes. The one occurrence on VCC (*Figure 5*) consists of approximately 65 individuals growing on a secondary alluvial bench. The vegetation around these plants consists of open alluvial sage scrub habitats that are sparsely vegetated. A CNDDDB form was completed for this occurrence and are included in *Appendix C*.

4.2.7 Bryophytes (Non-vascular Plants) and Lichens

Bryophytes (non-vascular plants including mosses, liverworts, and hornworts) include plants which lack specialized water- or nutrient-conducting tissue. Lacking water-transporting tissue, bryophytes must live in proximity to a moisture source and are commonly found in damp or shady microhabitats. Overall, the Valencia Commerce Center Site is very arid and supports little of this type of habitat; however, limited quantities of mosses were found on north-facing slopes and along shady banks and cut faces of ephemeral stream channels.

Lichens, in contrast, are not classified as plants but are instead unique mutualistic associations of fungi with green algae and/or cyanobacteria. Lichens are extremely widespread in nature; they

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are found at nearly every latitude and altitude on earth. Lichens often grow on exposed rocks but are also found on bare soil, tree trunks, or in one instance, completely submerged in water (Raven et al. 1992). Generally, the Valencia Commerce Center Site contains little habitat appropriate for the growth of lichens as rocky substrates are limited.

No sensitive non-vascular plants or lichens were observed onsite or are known to occur in the proximity of the Valencia Commerce Center Site.

5.0 ACKNOWLEDGMENTS

Patricia Schuyler and Michelle Balk prepared this report, with review by Sherri Miller. Mark McGinnis provided graphics and GIS mapping analyses. Tonette Foster provided word processing.

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APPENDIX A

Resumes of Survey Personnel

Nathan Gale
Principal Scientist, FLx

EDUCATION AND CERTIFICATIONS

Ph.D., Geography, University of California, Santa Barbara, 1985.

M.A., Geography, University of California, Santa Barbara, 1980.

PWS, Certified Professional Wetland Scientist #1216, Society of Wetland Scientists, 1999.

SUMMARY OF QUALIFICATIONS

Dr. Gale has 24 years of experience managing and conducting multidisciplinary projects ranging from methodology development to applied environmental impact assessments, planning studies, and restoration programs. His management experience includes proposal preparation; contract negotiation and client relations; cost control and schedule monitoring; document production supervision; and quality assurance review. His specific technical work has involved experimental and sampling design; photographic documentation; and mapping of natural vegetation, environmental constraints, and land use. He also has field experience in quantitative vegetation sampling, environmental data collection, and wetland delineation. Dr. Gale is skilled in qualitative and quantitative data analysis for numerous applications including ecological and environmental impact assessment as well as mitigation and monitoring planning. He has been responsible for the preparation of NEPA/CEQA environmental documents, planning studies, and technical reports for the Department of Defense (DOD), the Department of Energy (DOE), the Department of Interior (DOI), and for state and local agencies. In addition, he has published extensively in the fields of geography, ecology, planning, and environmental studies.

EXPERIENCE

Vegetation and Rare Plant Surveys and Wetlands Delineations, Ventura and Los Angeles Counties, CA. Impact Sciences, Inc. Vegetation surveys and mapping of plant communities, rare plant surveys, field wetland surveys, delineation of jurisdictional wetlands, and report preparation for more than 30 sites in various locations in Ventura and Los Angeles counties.

Ventura River Estuary Enhancement Project. California Department of Parks and Recreation. Design and implementation of a five-year vegetation monitoring program for restoration efforts at Emma Wood State Beach, Ventura County, CA. The project involves monitoring four vegetation types: willow-cottonwood forest, saltbush scrub, dune scrub, and foredune vegetation. Activities include botanical surveys, survival and growth surveys, photodocumentation, data collection and comparative analysis of natural and revegetated areas, evaluation of exotics eradication, and recommendations for ongoing restoration.

Peacekeeper Rail Garrison Mitigation Program, San Antonio Terrace, Vandenberg AFB. U.S. Air Force and The Earth Technology Corporation. Technical advisor and senior data analyst for wetland creation, upland dune scrub habitat restoration, coast live oak revegetation, and vegetation monitoring for a five-year biological mitigation and monitoring program. Activities included initial planning, budgeting, methodology development, sampling design, vegetation sampling, data analysis, preparation and review of annual monitoring reports.

UCSB Campus Lagoon Wetland Restoration. The Herbarium, Museum of Systematics and Ecology, University of California, Santa Barbara. Design and implementation of a five-year vegetation monitoring program for wetland plant communities restored at the UCSB Campus Lagoon, Santa Barbara County, CA, as required by the Streambed Alteration Agreement of the California Department of Fish and Game. The project included plant species identification, vegetation sampling, data analysis, photo documentation, and report preparation.

Guadalupe Oil Field Restoration. California Department of Fish and Game and Hagler Bailly Consulting, Inc. Initial restoration planning, including background research, historical air photo assessment, and analysis of restoration alternatives at the Guadalupe Oil Field. Results from these tasks were used in the evaluation of potential restoration options, and to anticipate biological, hydrological, ecological, logistical, economic, and other issues associated with each restoration option.

Restoration of Coastal Dunes and Associated Wetlands in California. California Department of Fish and Game and Hagler Bailly Consulting, Inc. Principal scientist responsible for compiling and annotating a comprehensive bibliography of restoration and revegetation projects in coastal California, with an emphasis on coastal dune habitats and coastal wetlands.

Restoration Planning and Implementation, Former Guadalupe Oil Field, San Luis Obispo County, CA. Unocal Corporation. Preparation and implementation of site-specific restoration plans, including the development of revegetation specifications, monitoring methods, performance criteria, and performance evaluation.

Controlled Burn Monitoring, Vandenberg AFB. U.S. Air Force and Museum of Systematics and Ecology, University of California, Santa Barbara. Pre-burn monitoring of vegetation and plant species in coastal sage scrub and chaparral at two prescribed burn sites, South Vandenberg AFB.

Natural Resources Surveys and Environmental Assessments, Vandenberg AFB. U.S. Air Force and Tetra Tech, Inc. Principal environmental scientist responsible for conducting field surveys and preparing report sections for vegetation, wildlife, and wetland resources for 17

environmental assessments of facility and infrastructure development projects, and for an EIS on San Antonio Creek.

Integrated Natural Resources Management Plan, Vandenberg AFB. U.S. Air Force and Tetra Tech, Inc. Principal scientist responsible for preparing sections on existing conditions, issues of concern, and management objectives for vegetation, wildlife, and wetland resources for a basewide five-year plan.

EIS and Environmental Assessments. U.S. Air Force. Program manager and contract administrator, under a contract with the Strategic Air Command (SAC), for eight environmental assessments and one EIS for proposed USAF real estate, facility construction, and training actions. Impact analyses were conducted for the full range of environmental and socioeconomic issues; major areas of focus involved endangered species' habitats, cultural and historical resources, and hazardous waste sites.

Rare Plant Census. All American Pipeline, L.P. Rare plant monitoring census for Gaviota tarplant (*Hemizonia increscens* ssp. *villosa*) in permanent plots established at Gaviota, CA.

Vernal Pool Restoration Monitoring, Isla Vista, CA. Isla Vista Recreation and Park District. Vegetation monitoring, data analysis, and publication preparation for a 10-year assessment of restored and created vernal pools at the Del Sol Open Space and Vernal Pool Reserve.

Plant Surveys and Wetland Delineations for Five Land Parcels, Isla Vista, CA. County of Santa Barbara Planning and Development. Field surveys and report preparation for botanical and wetland resources, including jurisdictional wetland delineations and mapping, in coastal mesa vernal pool habitat along Del Playa Drive, Isla Vista.

Santa Barbara County Oak Restoration Program. University of California, Santa Barbara. Vegetation monitoring in savanna and woodland habitats of blue oak, valley oak, and coast live oak, for the long-term assessment of cattle grazing impacts on oak seedling recruitment at Sedgwick Ranch, Santa Barbara County, CA.

Goleta Revitalization EIR/EIS. County of Santa Barbara Planning and Development. Wetland delineations at sixteen creek crossings and plant surveys for street extensions, bike paths and a multipurpose trail.

Oil and Gas Exploration and Facilities Development EIRs/EISs. Santa Barbara County and California State Lands Commission. Environmental analyst for EIRs/EISs of oil and gas development projects located offshore California.

Supplemental Environmental Impact Report for the 1990 Long Range Development Plan. University of California, Santa Barbara. Program manager for a supplemental EIR focused on growth-related impacts to local school districts, and potential secondary environmental impacts to sensitive wetland habitats that could be caused by needed school facility expansion.

Recovery Plan for Two Federally Endangered Plant Species. U.S. Fish and Wildlife Service. Technical advisor responsible for developing strategy and task recommendations for the recovery plan for marsh sandwort (*Arenaria paludicola*) and Gambel's watercress (*Rorippa gambelii*). Key aspects of the plan included an outline of steps for habitat protection, species and habitat monitoring, biological and ecological research, and the establishment of new populations.

Implementation of Recovery Activities for Two Federally Endangered Plant Species. California Department of Fish and Game and University of California. Research on species biology and ecology, plant propagation, experimental establishment of new populations, and monitoring of existing and new populations of marsh sandwort (*Arenaria paludicola*) and Gambel's watercress (*Rorippa gambelii*). Reporting of species and habitat status and progress of recovery activities.

Restoration Plans for Installation of VTS Fiber-Optic Cable System, Honda Ridge Road Repair, and El Rancho Road Bridge Project, Vandenberg AFB. U.S. Air Force and Tetra Tech, Inc. Preparation of restoration plans including sections on ecological background, revegetation measures, monitoring and maintenance methods, performance criteria for assessing success, and restoration schedule for sites at North and South Vandenberg AFB.

Implementation of Restoration Plans, South Base and VTS Fiber-Optic Cable Systems, Vandenberg AFB. U.S. Air Force and Foster Wheeler Environmental Corp. Native plant species restoration, long-term monitoring, and restoration evaluation at four sites at Vandenberg AFB, CA.

Biological Monitoring for Installation of CITS, VTS, South Base, and Tranquillon Mountain Fiber-Optic Cable Systems, Vandenberg AFB. U.S. Air Force, Tetra Tech, Inc., and Foster Wheeler Environmental Corporation. Onsite biological monitoring for cable installation activities to ensure avoidance of adverse impacts to sensitive biological and wetland resources.

Biological Surveys and Monitoring for Installation of Building 3000 Fiber-Optic Cable System, Vandenberg AFB. U.S. Air Force and System Technology Associates. Field surveys and onsite biological monitoring for cable installation activities to ensure avoidance of adverse impacts to sensitive biological and wetland resources.

Biological Monitoring for Honda Ridge Road Repair and Point Sal Road Repair, Vandenberg AFB. U.S. Air Force, Tetra Tech, Inc., and Ace Engineering, Inc. Onsite biological monitoring for road repair activities to ensure avoidance of adverse impacts to sensitive biological and wetland resources.

MEMBERSHIPS

California Botanical Society; California Exotic Pest Plant Council; Society of Wetland Scientists; Society of Ecological Restoration; The International Mountain Society.

SELECTED PUBLICATIONS

Dr. Gale has been an author and collaborator on numerous academic publications, government research grant reports, and presentations at national and international professional conferences. In addition, he has contributed to environmental and planning documents. A summarized count of his work includes: Refereed Journal Articles - 28; Book Chapters - 5; Papers in Conference Proceedings - 3; Government Research Reports - 13; Contributions to Planning Studies - 44; Contributions to Environmental Documents - 55.

Journal Articles

"Coast Live Oak Revegetation on the Central Coast of California," (with A. Parikh), *Madroño*, 45(4), 1998, 301-309.

"Vegetation Monitoring of Created Dune Swale Wetlands, Vandenberg Air Force Base, California," (with A. Parikh), *Restoration Ecology*, 6(1), 1998, 83-93.

"The Analysis of Class Dispersion Patterns Using Matrix Comparisons," (with L.E. Harvey and F.W. Davis), *Ecology*, 69(2), 1988, 537-542.

"Tests of Randomness: Unidimensional and Multidimensional," (with L.J. Hubert, R.G. Golledge, and C.M. Costanzo), *Environment and Planning A*, 17, 1985, 373-385.

"Measuring Association Between Spatially Defined Variables: An Alternative Procedure," (with L.J. Hubert, R.G. Golledge, and C.M. Costanzo), *Geographical Analysis*, 17, 1985, 36-46.

"Unclassed Matrix Shading and Optimal Ordering in Hierarchical Cluster Analysis," (with W.C. Halperin and C.M. Costanzo), *Journal of Classification*, 1, 1984, 775-92.

Conference Proceedings

- "Review of Ten Years of Vernal Pool Restoration and Creation in Santa Barbara, California," (with W.R. Ferren Jr., D.M. Hubbard, S. Wiseman, and A. Parikh), in C.W. Witham, E.T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff (Eds.) Ecology, Conservation, and Management of Vernal Pool Ecosystems, Proceedings from a 1996 Conference, California Native Plant Society, Sacramento, CA, 1998, 206-216.
- "Vegetation Monitoring of Created Wetland Sites on the San Antonio Terrace, Vandenberg Air Force Base, California," (with A. Parikh), in M.C. Landin (Ed.) Proceedings of the National Interagency Workshop on Wetlands: Technology Advances for Wetlands Science, Technical Report, Wetlands Research and Technology Center, U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS, 1995, 153-55.
- "Wetland Creation and Vegetation Monitoring in a Stabilized Sand Dune Ecosystem, San Antonio Terrace, Vandenberg Air Force Base, California," (with A. Parikh and T. Waddell), in M.C. Landin (Ed.) Proceedings of the 13th Annual Meeting of the Society of Wetland Scientists (SWS), New Orleans, LA, 1993, 368-76.
- "First-Year Vegetation Monitoring of Created Wetlands on the San Antonio Terrace, Vandenberg Air Force Base, California," (with A. Parikh and T. Waddell), in A.E. Leviton and M.L. Aldrich (Eds.) Proceedings of the Pacific Division, American Association for the Advancement of Science, University of California, Santa Barbara, June 1992, p. 46.

ANUJA K. PARIKH
Principal Ecologist, FLx

EDUCATION AND CERTIFICATIONS

Ph.D., Plant Geography, University of California, Santa Barbara, 1989

M.S., Geography, University of Bombay, India, 1981

B.S., Zoology and Geology, University of Bombay, India, 1979

PWS, Certified Professional Wetland Scientist #841, Society of Wetland Scientists, 1995

SUMMARY OF QUALIFICATIONS

Dr. Parikh has years of field and research experience in the areas of botany, plant ecology, wetlands, biogeography, and earth resources. Her work has included environmental baseline inventories and impact assessments, rare and endangered plant species surveys, revegetation and mitigation plans, restoration and monitoring of native upland and wetland habitats, and coast live oak revegetation studies. She has expertise in field vegetation sampling, plant species identification, wetland delineation, and the collection of physical environmental data. Using aerial photography and field surveys, she has prepared vegetation maps based on classification and quantification of plant communities in a variety of habitats; she also has mapped environmental constraints, incorporating data on sensitive species, natural habitats, and physiographic and man-made features. Dr. Parikh is experienced with experimental design as well as processing and analyzing ecological data using statistical and graphics software.

EXPERIENCE

Vegetation and Rare Plant Surveys and Wetlands Delineations, Impact Sciences, Inc., Ventura and Los Angeles Counties, California. Vegetation surveys and mapping of plant communities, rare plant surveys, field wetland surveys, delineation of jurisdictional wetlands, and report preparation for more than 30 sites in various locations in Ventura and Los Angeles counties.

Peacekeeper Rail Garrison Mitigation Program, U.S. Air Force and The Earth Technology Corporation, San Antonio Terrace, Vandenberg AFB, California. Project biologist responsible for directing, planning, and implementing biological field activities related to wetlands creation, upland habitat restoration, coast live oak revegetation, and vegetation monitoring for all mitigation and restoration sites.

Vegetation Mapping and Plant Species Surveys, Santa Barbara County, California. Vegetation mapping using aerial photographs of riparian communities along the Santa Ynez River, Santa Barbara County; field vegetation and topographical data collection from transects, species identification, rare and endangered plant species surveys, and report preparation for the County Flood Control District.

Rare and Endangered Plant Species Surveys, California Department of Water Resources, California. Rare and endangered plant species identification and mapping along a proposed aqueduct route in the Lompoc and Lake Cachuma areas in Santa Barbara County, and near Santa Margarita, San Luis Obispo County; field verification, ground truthing and mapping of vegetation communities along the Santa Ynez River, CA.

Rare and Endangered Plant Species Surveys, Metropolitan Water District and ERC Environmental and Energy Services Co, Riverside County, California. Plant species identification and sensitive plant species surveys at proposed reservoir and mitigation sites (Potrero Creek, Harford Springs, Crown/Rawson Valleys, Motte Rimrock Reserve, Domenigoni Valley, Santa Rosa Plateau Preserve, Lake Skinner, and Vail Lake) for the Metropolitan Water District's Eastside Reservoir Project, Riverside County, CA.

Floristic and Vegetation Surveys, U.S. Department of Agriculture, Forest Service, California. Preparation of floras and vegetation surveys in the Los Padres National Forest at Mt. Pinos, a lower subalpine community in Ventura and Kern counties, and at Alder Creek Botanical Area, Monterey County, CA. Identification of plant species and collection of vegetation and site data in permanent plots established in blue oak woodland in San Luis Obispo County, CA, as part of a Forest Service project on vegetation and habitat inventory and classification.

Wetland Vegetation Surveys, Mapping, and Monitoring, Dames & Moore, California. Vegetation mapping using aerial photographs, calculations of riparian habitat acreages, and field botanical surveys for a land development project along the Santa Clara River, Los Angeles County, CA. Biological construction monitoring for an archaeological site investigation in the Los Carneros wetlands, Goleta, CA. Field surveys and mapping of wetlands and vernal pools at Beale AFB, CA.

Rare and Endangered Plant Species Surveys and Vegetation Mapping, Jones and Stokes Associates, Inc., California. Field surveys for rare and endangered plant species at the proposed Los Vaqueros Reservoir site near Livermore, Contra Costa and Alameda counties, CA, and along ephemeral drainages near Taft in the Central Valley, Kern County, CA, for a project involving clean-up of oil and brea deposits. Habitat mapping and field surveys of riparian vegetation and plant species on transects along the Lower Ventura River, for an aquatic biology survey.

Ecological Survey Reports for Candidate Research Natural Areas, U.S. Department of Agriculture, Forest Service, Ventura County, California. Field work, literature reviews, and document preparation for the San Emigdio Mesa and Sawmill Mountain Candidate Research Natural Areas, Los Padres National Forest, Ventura County, CA.

Santa Barbara County Oak Restoration Program, University of California, Santa Barbara, Santa Barbara County, California. Plant identification and vegetation monitoring in savanna and woodland habitats of blue oak, valley oak, and coast live oak, for the long-term assessment of cattle grazing impacts on oak seedling recruitment at Sedgwick Ranch, Santa Barbara County, CA.

Controlled Burn Monitoring, Vandenberg AFB, U.S. Air Force and Museum of Systematics and Ecology, University of California, Santa Barbara, California. Pre-burn monitoring of vegetation and plant species in coastal sage scrub and chaparral at two prescribed burn sites, South Vandenberg AFB.

Rare Plant Census, All American Pipeline, L.P., Gaviota, California. Rare plant monitoring census for Gaviota tarplant (*Hemizonia increscens* ssp. *villosa*) in permanent plots established at Gaviota, CA.

Ventura River Estuary Enhancement Project, California Department of Parks and Recreation, Ventura County, California. Design and implementation of a five-year vegetation monitoring program for restoration efforts at Emma Wood State Beach, Ventura County, CA. The project involves monitoring four vegetation types: willow-cottonwood forest, saltbush scrub, dune scrub, and foredune vegetation. Activities include botanical surveys, survival and growth surveys, photo documentation, data collection and comparative analysis of natural and revegetated areas, evaluation of exotics eradication, and recommendations for ongoing restoration.

Restoration Planning and Implementation, Former Guadalupe Oil Field, Unocal Corporation, San Luis Obispo County, California. Preparation and implementation of site-specific restoration plans, including the development of revegetation specifications, monitoring methods, performance criteria, and performance evaluation.

Restoration Plans for Installation of VTS Fiber-Optic Cable System, Honda Ridge Road Repair, and El Rancho Road Bridge Project, U.S. Air Force and Tetra Tech, Inc., Vandenberg AFB, California. Preparation of restoration plans including sections on ecological background, revegetation measures, monitoring and maintenance methods, performance criteria for assessing success, and restoration schedule for sites at North and South Vandenberg AFB.

Implementation of Restoration Plans, South Base and VTS Fiber-Optic Cable Systems, U.S. Air Force and Foster Wheeler Environmental Corp, Vandenberg AFB, California. Native plant species restoration, long-term monitoring, and restoration evaluation at four sites at Vandenberg AFB, CA.

Vernal Pool Restoration Monitoring, Isla Vista Recreation and Park District, Isla Vista, California. Vegetation monitoring, data analysis, and publication preparation for a 10-year assessment of restored and created vernal pools at the Del Sol Open Space and Vernal Pool Reserve.

UCSB Campus Lagoon Wetland Restoration, The Herbarium, Museum of Systematics and Ecology, University of California, Santa Barbara, California. Design of a five-year vegetation monitoring program for wetland plant communities restored at the UCSB Campus Lagoon, Santa Barbara County, CA, as required by the Streambed Alteration Agreement of the California Department of Fish and Game. The monitoring project included plant species identification, vegetation sampling, data analysis, photo documentation, and report preparation.

Integrated Natural Resources Management Plan, U.S. Air Force and Tetra Tech, Inc., Vandenberg AFB, California. Principal ecologist responsible for preparing sections on existing conditions, issues of concern, and management objectives for vegetation, wildlife, and wetland resources for a basewide five-year plan.

Natural Resources Surveys and Environmental Assessments, U.S. Air Force and Tetra Tech, Inc., Vandenberg AFB, California. Principal environmental scientist responsible for conducting field surveys and preparing report sections for vegetation, wildlife, and wetland resources for 17 environmental assessments of facility and infrastructure development projects, and for an EIS on San Antonio Creek.

Natural Resources Management Plans, U.S. Air Force and Higginbotham/Briggs & Associates. Participation in data collection, field visits, agency coordination, document preparation and review for Natural Resources Management Plans prepared for Kaena Point Satellite Tracking Station, HI, and Onizuka AFB, CA.

Recovery Plan for Two Federally Endangered Plant Species, U.S. Fish and Wildlife Service. Ecologist and principal author responsible for background research and all botanical elements of the recovery plan for marsh sandwort (*Arenaria paludicola*) and Gambel's watercress (*Rorippa gambelii*).

Implementation of Recovery Activities for Two Federally Endangered Plant Species, California Department of Fish and Game and University of California. Research on species biology and ecology, plant propagation, experimental establishment of new populations, and monitoring of existing and new populations of marsh sandwort (*Arenaria paludicola*) and Gambel's watercress (*Rorippa gambelii*). Reporting of species and habitat status and progress of recovery activities.

Wetlands Management Plan, Department of Geography and Campus Wetlands Committee, University of California, Santa Barbara, California. Field and literature surveys of hydrology and sedimentation of the campus-owned wetland resources in Devereux Slough and the Storke Campus wetlands.

Goleta Revitalization EIR/EIS, County of Santa Barbara Planning and Development, Santa Barbara County, California. Wetland delineations at sixteen creek crossings and plant surveys for street extensions, bike paths and a multipurpose trail.

Plant Surveys and Wetland Delineations for Five Land Parcels, County of Santa Barbara Planning and Development, Isla Vista, California. Field surveys and report preparation for botanical and wetland resources, including jurisdictional wetland delineations and mapping, in coastal mesa vernal pool habitat along Del Playa Drive, Isla Vista.

Biological Monitoring, Environmental Quality Assurance Program (EQAP), Storrer Environmental Services, Santa Barbara County, California. . Biological monitoring for the Level (3) fiber-optic cable installation project, and for the All-American Pipeline relocation at Gaviota Creek.

Watershed Surveys, U.S. Department of Agriculture, Forest Service, Counties of Santa Barbara and Ventura, California. Geomorphological, botanical, and hydrological field work in preliminary watershed surveys in Santa Barbara and Ventura counties, CA.

Vegetation Surveys and Analysis, The Herbarium, Department of Biological Sciences, University of California, Santa Barbara, Santa Barbara County, California. Plant species identification and vegetation sampling in upland and wetland areas for baseline data inventory of botanical resources and rare plants at Fish Slough, Inyo and Mono counties, CA. Project design and field surveys of topography, riparian vegetation, and plant species in the Ventura River estuary, Ventura County, CA; computer graphics, analysis, and document preparation of environmental relationships and distribution of species and vegetation communities. Computer analysis for a project on the botanical wetland resources of the Carpinteria salt marsh, Santa Barbara County, CA.

Research Activities, Department of Geography, University of California, Santa Barbara, California. Sampling and monitoring regeneration of tree and herbaceous species in the riparian zone of a chaparral watershed recovering from wildfire (N. Fork Matilija Creek, Ventura County); topographic channel surveys, computer plotting, ecological and botanical field, laboratory and greenhouse experiments, literature review, and data analysis. Vegetation sampling, inventory and analysis, and topographical surveys in chaparral ecosystems and oak

woodlands in Burton Mesa chaparral, Santa Barbara County. Field sampling in coniferous forests of the Mendocino National Forest Reserve, CA.

MEMBERSHIPS

California Native Plant Society; Society of Wetland Scientists; Society of Ecological Restoration; California Botanical Society.

SELECTED PUBLICATIONS AND REPORTS

"Coast Live Oak Revegetation on the Central Coast of California," (with N. Gale), *Madroño*, 45(4), 1998, 301-309.

"Vegetation Monitoring of Created Dune Swale Wetlands, Vandenberg Air Force Base, California," (with N. Gale), *Restoration Ecology*, 6(1), 1998, 83-93.

"Review of Ten Years of Vernal Pool Restoration and Creation in Santa Barbara, California," (with W.R. Ferren Jr., D.M. Hubbard, S. Wiseman, and N. Gale), in C.W. Witham, E.T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff (Eds.) *Ecology, Conservation, and Management of Vernal Pool Ecosystems*, Proceedings from a 1996 Conference, California Native Plant Society, Sacramento, CA, 1998, 206-216.

"Peacekeeper Rail Garrison and Small ICBM Mitigation Program, San Antonio Terrace, Vandenberg AFB, California Annual Wetlands Monitoring Report, Annual Upland Monitoring Report, Year 5," Prepared for the U.S. Department of the Air Force, Detachment 10, Space and Missile Systems Center, San Bernardino, CA, February 1996.

"Vegetation Monitoring of Created Wetland Sites on the San Antonio Terrace, Vandenberg Air Force Base, California," (with N. Gale), in M.C. Landin (Ed.) *Proceedings of the National Interagency Workshop on Wetlands: Technology Advances for Wetlands Science*, Technical Report, Wetlands Research and Technology Center, U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS, 1995, 153-55.

"Recovery Plan for Marsh Sandwort (*Arenaria paludicola*) and Gambel's Watercress (*Rorippa gambelii*)," (with N. Gale), U.S. Fish and Wildlife Service, Ventura, CA, August 1994.

"Wetland Creation and Vegetation Monitoring in a Stabilized Sand Dune Ecosystem, San Antonio Terrace, Vandenberg Air Force Base, California," (with N. Gale and T. Waddell), in M.C. Landin (Ed.) *Proceedings of the 13th Annual Meeting of the Society of Wetland Scientists (SWS)*, New Orleans, LA, 1993, 368-76.

- "First-Year Vegetation Monitoring of Created Wetlands on the San Antonio Terrace, Vandenberg Air Force Base, California," (with N. Gale and T. Waddell), in A.E. Leviton and M.L. Aldrich (Eds.) *Proceedings of the Pacific Division, American Association for the Advancement of Science*, University of California, Santa Barbara, June 1992, p. 46.
- "Biotic Inventory and Ecosystem Characterization for Fish Slough, Inyo and Mono Counties, California," (with the Fish Slough Research Team), Report to State of California, The Resources Agency, Department of Fish and Game, by the Departments of Biological Sciences, Geography, and Geological Sciences, University of California, Santa Barbara, June 1991.
- "Ecology of a Mediterranean-Climate Estuarine Wetland at Carpinteria, California: Plant Distributions and Soil Salinity in the Upper Marsh," (with R. Callaway, S. Jones, W. Ferren), *Canadian Journal of Botany*, 68, 1990, 1139-1146.
- "Botanical Resources at Emma Wood State Beach and the Ventura River Estuary, California: Inventory and Management," (with W. Ferren, M. Capelli, D. Magney, K. Clark, and J. Haller), Report to the State of California Department of Parks and Recreation, Environmental Report No. 15, The Herbarium, Department of Biological Sciences, University of California, Santa Barbara, August 1990.
- "UCSB Campus Wetlands Management Plan, Part II Technical Report Hydrology, Water Quality, and Sedimentation of West and Storke Campus Wetlands," (with F. Davis, D. Theobald, and R. Harrington), Report to the California Coastal Conservancy and Campus Wetlands Committee, University of California, Santa Barbara, CA, 1990.
- "Recovery of the Chaparral Riparian Zone After Wildfire," (with F. Davis, E. Keller, and J. Florsheim), *Proceedings of the California Riparian Systems Conference*, September 22-24, 1988, Davis, CA, Protection, Management, and Restoration for the 1990s, Gen. Tech. Rep. PSW-110, U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station, 1989, 194-203.
- "Plant Communities and Flora of the Proposed Botanical Reserve on Mt. Pinos, Ventura and Kern counties, CA," (with D. Capralis), Survey Report, U.S. Department of Agriculture, Forest Service, Los Padres National Forest Headquarters, Goleta, CA, August 1988.
- "Terrestrial Vegetation of Rattlesnake Canyon," (with F. Davis), *Proceedings of the Chaparral Ecosystems Research Conference*, Santa Barbara, CA, Report No. 62, California Water Resources Center, University of California, Davis, CA, 1986, 13-17.

APPENDIX B

*Vascular Plant Species Observed
Valencia Commerce Center Site
(2002, 2003, 2004 and 2005)*

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

LYCOPODIAE

SELAGINELLACEAE – SPIKE-MOSS FAMILY

Selaginella bigelovii – Bigelow's spike-moss

FILACEAE

PTERIDACEAE – BRAKE FAMILY

Pellaea andromedifolia var. *andromedifolia* – coffee fern

Pentagramma triangularis ssp. *viscosa* – goldenback fern

CONIFERAE

PINACEAE – PINE FAMILY

Pinus sp. – pine

ANGIOSPERMAE (DICOTYLEDONES)

AIZOACEAE – CARPET-WEED FAMILY

* *Mesembryanthemum crystallinum* – crystalline ice plant

* *Mesembryanthemum nodiflorum* – small-flowered ice plant

AMARANTHACEAE – AMARANTH FAMILY

Amaranthus albus – tumbleweed

Amaranthus blitoides – prostrate amaranth

* *Amaranthus retroflexus* – rough pigweed

ANACARDIACEAE – SUMAC FAMILY

Rhus ovata – sugar-bush

Rhus trilobata – squaw bush

APIACEAE – CARROT FAMILY

Apiastrum angustifolium – wild celery

Bowlesia incana – bowlesia

* *Conium maculatum* – poison-hemlock

Daucus pusillus – rattlesnake weed

* *Foeniculum vulgare* – sweet fennel

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Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

APOCYNACEAE – DOGBANE FAMILY

- * *Nerium oleander* – oleander

ASCLEPIADACEAE – MILKWEED FAMILY

- Asclepias eriocarpa* – Indian milkweed

ASTERACEAE – SUNFLOWER FAMILY

- Achillea millefolium* var. *californica* – yarrow
- Acourtia microcephala* – sacapellote
- Agoseris grandiflora* – mountain dandelion
- Ambrosia acanthicarpa* – annual burweed
- Ambrosia confertifolia* – weak-leaved burweed
- Ambrosia dumosa* – white bursage
- Ambrosia psilostachya* – western ragweed
- Artemisia californica* – coastal sagebrush
- Artemisia tridentata* ssp. *tridentata* – Great Basin sagebrush
- * *Arctotis hisuta* – African daisy
- Artemisia dracunculus* – tarragon
- Artemisia douglasiana* – California mugwort
- Baccharis pilularis* – coyote brush
- Baccharis salicifolia* – mule fat
- Baccharis sarothroides* – chaparral broom
- Brickellia californica* – California brickellbush
- Brickellia nevinii* – Nevin's brickellbush
- * *Carduus pycnocephalus* – Italian thistle
- * *Centaurea melitensis* – star thistle
- * *Centaurea solstitialis* – yellow star thistle
- Chaenactis glabriuscula* – yellow pincushion
- * *Chamomilla suaveolens* – pineapple weed
- Chrysothamnus nauseosus* – rubber rabbitbrush
- Cirsium occidentale* var. *californicum* – California thistle
- * *Cirsium vulgare* – Bull thistle
- * *Cnicus benedictus* – blessed thistle
- Conyza canadensis* – horseweed
- Coreopsis bigelovii* – tickseed
- * *Cotula australis* – brass buttons
- * *Dimorphotheca sinuata* – Cape-marigold
- Encelia californica* – California bush sunflower

Appendix B

Vascular Plant Species Observed

Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

- Encelia farinosa* – brittlebush, incensio
- Ericameria palmeri* var. *pachylepis* – Goldenbush
- Erigeron foliosus* var. *stenophyllus* – leafy daisy
- Eriophyllum confertiflorum* – long-stem golden yarrow
- Filago californica* – California fluffweed
- * *Filago gallica* – narrow-leaf filago
- * *Gazania linearis* – African daisy
- Gnaphalium* sp. (undescribed) – everlasting
- Gnaphalium californicum* – California everlasting
- Gnaphalium canescens* ssp. *Microcephalum* – white everlasting
- Gnaphalium luteo-album* – white cudweed
- Hazardia* sp. – goldenbush
- Helianthus annuus* – common sunflower
- Hemizonia fasciculata* – fascicled tarweed
- Heterotheca grandiflora* – telegraph weed
- Heterotheca psammophila* – camphor weed
- Heterotheca sessiliflora* – golden aster
- Heterotheca sessiliflora* ssp. *fastigiata* – telegraph weed
- * *Hypochaeris glabra* – smooth cat's-ear
- Isocoma menziesii* ssp. *veneta* – coastal Goldenbush
- * *Lactuca serriola* – prickly lettuce
- Lasthenia californica* – coast goldfields
- Lasthenia glabrata* ssp. *coulteri* – Coulter's goldfields
- Lepidospartum squamatum* – scale-broom
- Lessingia filaginifolia* – virgate cudweed aster
- Madia gracilis* – slender tarweed
- Malacothrix saxatilis* var. *commutate* – cliff desert dandelion
- Malacothrix saxatilis* - cliff *malacothrix* var. *tenuifolia* – cliff malacothrix
- * *Matricaria marticarioides* – pineapple weed
- Micropus californicus* – slender cottonweed
- Microseris douglasii* – Douglas' microseris
- Microseris lindleyi* – Lindley's microseris
- * *Picris echioides* – bristly ox-tongue
- Pluchea odorata* – marsh-fleabane
- Pluchea sericea* – arrow weed
- * *Pulicaria paludosa* – Spanish sunflower
- Rafinesquia californica* – California chicory
- Senecio californica* – California groundsel

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- Senecio californicus* – California butterweed
- Senecio flaccidus* var. *douglasii* – butterweed
- * *Senecio vulgaris* – common groundsel
- Silybum marianum* – milk thistle
- Solidago californica* – California goldenrod
- * *Sonchus asper* – prickly sow-thistle
- * *Sonchus oleraceus* – common sow-thistle
- Stephanomeria* sp. – wreathplant
- Stephanomeria virgata* – twiggy wreathplant
- Stylocline gnaphalioides* – everlasting nest-straw
- Tetradyma comosa* – hairy horsebrush
- Uropappus lindleyi* – silver puffs
- Xanthium strumarium* – cocklebur

BORAGINACEAE – BORAGE FAMILY

- Amsinckia menziesii* – yellow fiddleneck
- Amsinckia intermedia* – common fiddleneck
- Cryptantha intermedia* – common forget-me-not
- Cryptantha micrsthachys* – Tejon cryptantha
- Cryptantha muricata* – prickly cryptantha
- Cryptantha nevadensis* – Nevada cryptantha
- Cryptantha* spp. – forget-me-not
- Heliotropium curassavicum* – wild heliotrope
- Pectocarya linearis* – slender pectocarya
- Pectocarya recurvata* – pectocarya
- Plagiobothrys canescens* – rusty popcorn flower
- Plagiobothrys nothofulvus* – popcorn flower
- Plagiobothrys fulvus* – popcorn flower
- Plagiobothrys* sp. – popcorn flower

BRASSICACEAE – MUSTARD FAMILY

- * *Brassica nigra* – black mustard
- * *Brassica rapa* – turnip
- * *Brassica tournefortii* – mustard
- Erysimum capitatum* – western wallflower
- Capsella bursa pastoris* – shepherd's purse
- Erysimum capitatum* ssp. *capitatum* – western wallflower
- * *Hirschfeldia incana* – short-podded mustard

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

- * *Lobularia maritime* – sweet alyssum
- * *Sisymbrium altissimum* – tumble mustard
- * *Sisymbrium irio* – London rocket
- * *Sisymbrium orientale* – Oriental mustard
- Stanleya pinnata* var. *pinata* – prince's plume
- Thysanocarpus curvipes* – hairy fringedpod
- Thysanocarpus laciniatus* – narrow-leaved fringedpod

CACTACEAE – CACTUS FAMILY

- Opuntia basilaris* var. *ramosa* – beavertail cactus
- Opuntia littoralis* – coastal prickly-pear
- Opuntia parryi* – valley cholla

CAPPARACEAE – CAPER FAMILY

- Isomeris arborea* – bladderpod

CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

- Lonicera subspicata* – southern honeysuckle
- Sambucus mexicana* – Mexican elderberry

CARYOPHYLLACEAE – PINK FAMILY

- * *Silene gallica* – common catchfly
- * *Stellaria media* – common chickweed

CHENOPODIACEAE – GOOSEFOOT FAMILY

- Atriplex canescens* – four-winged saltbush
- Atriplex lentiformis* – big saltbush, quail brush
- Atriplex semibaccata* – Australian saltbush
- Atriplex suberecta* – Australian saltbush
- Chenopodium album* – lamb's quarters
- Chenopodium berlandieri* – pitseed goosefoot
- Chenopodium californicum* – California goosefoot
- Chenopodium murale* – nettle-leaved goosefoot
- * *Salsola tragus* – Russian-thistle

CRASSULACEAE – STONECROP FAMILY

- Crassula connata* – dwarf stonecrop
- Dudleya lanceolata* – lanceleaf dudleya

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

CONVOLVULACEAE – MORNING-GLORY FAMILY

Calystegia macrostegia – western bindweed
Calystegia peirsonii – Peirson's morning-glory
Convolvulus arvensis – bindweed

CRASSULACEAE – STONECROP FAMILY

Crassula connata – dwarf stonecrop
Dudleya lanceolata – lanceleaf dudleya

CUCURBITACEAE – GOURD FAMILY

Cucurbita foetidissima – coyote-melon, calabazilla
* *Marah fabaceus* – cucumber
Marah macrocarpus – wild cucumber

CUSCUTACEAE – DODDER FAMILY

Cuscuta californica – California dodder

EUPHORBIACEAE – SPURGE FAMILY

Chamaesyce albomarginata – rattlesnake spurge
Chamaesyce polycarpa – small-seed sand mat
Croton californicus – California croton
Eremocarpus setigerus – doveweed
Euphorbia spathulata – reticulate-seeded spurge
Stillingia linearifolia – linear-leaved stillingia

FABACEAE – PEA FAMILY

Astragalus trichopodus – Santa Barbara locoweed
Lotus hamatus – grab lotus
Lotus purshianus – Spanish-clover
Lotus salsuginosus – coastal lotus
Lotus scoparius – deerweed
Lotus strigosus – strigose deerweed
Lotus wrangelianus – California lotus
Lupinus bicolor – Lindley's annual lupine
Lupinus arizonicus – Arizona lupine
Lupinus hirsutissimus – stinging lupine
Lupinus excubitus var. *hallii* – grape soda lupine
Lupinus formosus var. *formosus* – no common name

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

- Lupinus microcarpus* var. *densiflorus* – chick lupine
Lupinus microcarpus var. *microcarpus* – chick lupine
Lupinus sparsiflorus – Coulter's lupine
Lupinus succulentis – arroyo lupine
Lupinus truncatus – collar lupine
* *Medicago sativa* – alfalfa
* *Medicago polymorpha* – California burclover
* *Melilotus alba* – white sweet-clover
* *Melilotus indica* – yellow sweet-clover
Trifolium albopurpureum – Indian clover
Trifolium ciliolatum – tree clover
Trifolium gracilentum – clover
Trifolium willdenovii – wildcat clover
* *Vicia benghalensis* – purple vetch
Vicia hassei – slender vetch
* *Vicia villosa* var. *varia* – hairy vetch

FAGACEAE – BEECH FAMILY

- Quercus* sp. – scrub oak
Quercus agrifolia – coast live oak
Quercus john-tuckerii – Tucker's oak
Quercus lobata – valley oak

GERANIACEAE – GERANIUM FAMILY

- * *Erodium cicutarium* – red-stemmed filaree
* *Erodium moschatum* – white-stemmed filaree

GROSSULARIACEAE – CURRANT FAMILY

- Ribes aureum* – golden currant

HYDROPHYLLACEAE – WATERLEAF FAMILY

- Emmenanthe penduliflora* – whispering bells
Eriodictyon crassifolium var. *nigrescens* – yerba santa
Eucrypta chrysanthemifolia – common eucrypta
Phacelia cicutaria var. *hispida* – caterpillar phacelia
Phacelia distans – wild heliotrope
Phacelia parryi – Parry's phacelia

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

Phacelia ramosissima – shrubby phacelia

Phacelia tanacetifolia – phacelia

JUGLANDACEA – WALNUT FAMILY

Juglans californica – Southern California black walnut

LAMIACEAE – MINT FAMILY

* *Lamium amplexicaule* – dead nettle

* *Marrubium vulgare* – horehound

Salvia apiana – white sage

Salvia columbariae – chia

Salvia leucophylla – purple sage

Salvia mellifera – black sage

Trichostema lanceolatum – vinegar weed

MALVACEAE – MALLOW FAMILY

Malacothamnus fasciculatus – mesa bushmallow

* *Malva parviflora* – cheeseweed

NYCTAGINACEAE – FOUR O'CLOCK FAMILY

Mirabilis californica – California wishbone-bush

ONAGRACEAE – EVENING-PRIMROSE FAMILY

Camissonia bistorta – California sun cup

Camissonia boothii – desert lantern

Camissonia californica – mustard primrose

Camissonia cheiranthifolia – beach evening primrose

Camissonia hirtella – field sun cup

Camissonia micrantha – miniature sun cup

Camissonia strigulosa – sandy soil sun cup

Clarkia purpurea – winecup clarkia

Clarkia unguiculata – elegant clarkia

Epilobium ciliatum – California cottonweed

Oenothera californica – California evening primrose

Oenothera elata – evening primrose

PAPAVERACEAE – POPPY FAMILY

Eschscholzia californica – California poppy

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

Platystemon californicus var. *crinitus* – cream cups

Stylomecon heterophylla – wind poppy

PLANTAGINACEAE – PLANTAIN FAMILY

Plantago erecta – dot-seed plantain

Plantago sp. – plantain

POLEMONIACEAE – PHLOX FAMILY

Eriastrum densifolium ssp. *densifolium* – woolly star

Eriastrum densifolium ssp. *elongatum* – chaparral woolly-star

Eriastrum sapphirinum – sapphire eriastrum

Gilia angelensis – angel gilia

Gilia capitata – ball gilia

Leptodactylon californicum – prickly phlox

Linanthus pygmaeus – linanthus

POLYGONACEAE – BUCKWHEAT FAMILY

Chorizanthe parryi var. *fernandina* – San Fernando Valley spineflower

Chorizanthe staticoides – turkish rugging

Eriogonum baileyi – Bailey's buckwheat

Eriogonum brachyanthum – short-flowered buckwheat

Eriogonum elongatum – long-stemmed buckwheat

Eriogonum fasciculatum ssp. *foliolosum* – California buckwheat

Eriogonum angulosum – wild buckwheat

Eriogonum gracile – slender woolly buckwheat

Lastarriaea coriacea – lastarriaea

Polygonum arenastrum – common knotweed

Pterostegia drymarioides – California threadstem

* *Rumex crispus* – curly dock

Rumex hymenosepalus – wild rhubarb

* *Rumex obtusifolius* – dock

PORTULACACEAE – PURSLANE FAMILY

Calandrinia ciliata var. *menziesii* – redmaids

Calyptridium monandrum – common calyptridium

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

- Claytonia perfoliata* var. *perfoliata* – miner's-lettuce
* *Portulaca oleracea* – common purslane

RANUNCULACEAE – CROWFOOT FAMILY

Delphinium parryi ssp. *parryi* – Parry's larkspur

RHAMNACEAE – BUCKTHORN FAMILY

Ceanothus megacarpus – big-podded Ceanothus
Rhamnus ilicifolia – holly-leaf redberry

ROSACEAE – ROSE FAMILY

Adenostoma fasciculatum – chamise
Heteromeles arbutifolia – toyon
Physanocarpus alteranus – ninebark
Prunus ilicifolia – holly-leaf cherry
Rubus ursinus – California blackberry

RUBIACEAE – MADDER FAMILY

- Galium angustifolium* – narrow-leaved bedstraw
* *Galium aparine* – goose grass
Galium nuttallii – Nuttall's bedstraw

SALICACEAE – WILLOW FAMILY

Populus fremontii – Fremont's cottonwood
Salix exigua – narrow-leaved willow
Salix laevigata – red willow
Salix lasiolepis – arroyo willow

SCROPHULARIACEAE – FIGWORT FAMILY

Antirrhinum coulterianum – white snapdragon
Antirrhinum kelloggii – climbing snapdragon
Castilleja affinis – coast paintbrush
Castilleja exserta – common owl's-clover
Castilleja foliolosa – wooly Indian paintbrush
Collinsia heterophylla – Chinese houses
Mimulus aurantiacus – bush monkeyflower
Mimulus brevipes – wide-throat monkeyflower
Penstemon centranthifolius – scarlet bugler

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

Scrophularia californica var. *floribunda* – coast figwort
Veronica anagallis-aquatica – water speedwell

SOLANACEAE – NIGHTSHADE FAMILY

- Datura wrightii* – western jimsonweed
- * *Nicotiana glauca* – tree tobacco
Nicotiana quadrivalvis – Wallace's tobacco
Solanum americanum – small-flowered nightshade
Solanum douglasii – white nightshade
Solanum umbelliferum – blue witch
Solanum xanti – chaparral nightshade

TAMARICACEAE – TAMARISK FAMILY

- * *Tamarix* sp. – tamarisk
- * *Tamarix gallica* – French tamarisk
- * *Tamarix ramosissima* – salt cedar

URTICACEAE – NETTLE FAMILY

- Urtica dioica* – giant creek nettle
- * *Urtica urens* – dwarf nettle

VISCACEAE – MISTLETOE FAMILY

Phoradendron macrophyllum – big leaf mistletoe

ZYGOPHYLLACEAE – CALTROP FAMILY

- * *Tribulus terrestris* – puncture vine

ANGIOSPERMAE (MONOCOTYLEDONES)

ARECACEAE – PALM FAMILY

- * *Washingtonia robusta* – Mexican fan palm

CYPERACEAE – SEDGE FAMILY

Cyperus esculentus – yellow nut-grass

LILIACEAE – LILY FAMILY

Calochortus clavatus var. *gracilis* – slender mariposa lily
Chlorogalum pomeridianum – soap plant

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

Dichelostemma capitatum – blue dicks

Yucca whipplei – Our Lord's candle

POACEAE – GRASS FAMILY

- Achnatherum coronatum* – giant needlegrass
- * *Arundo donax* – giant reed
- * *Avena barbata* – slender oat
- * *Avena fatua* – wild oat
- * *Avena sativa* – common oat
- Bromus carinatus* – California brome
- * *Bromus diandrus* – ripgut grass
- * *Bromus hordeaceus* – soft chess
- * *Bromus madritensis* ssp. *rubens* – foxtail chess
- * *Bromus tectorum* – cheat grass
- * *Cortaderia selloana* – pampas grass
- Cynodon dactylon* – Bermuda grass
- Distichlis spicata* – salt grass
- Elymus glaucus* – western wild rye
- * *Hordeum murinum* – glaucous foxtail barley
- * *Hordeum brachyantherum* ssp. *brachyantherum* – no common name
- Leymus condensatus* – giant ryegrass
- Leymus triticoides* – beardless wild rye
- Lolium multiflorum* – Italian ryegrass
- Lolium perenne* – perennial ryegrass
- Melica imperfecta* – California melic
- Melica subulata* – Alaska onion grass
- Muhlenbergia microsperma* – littleseed muhly
- Nassella cernua* – nodding needlegrass
- Nassella lepida* – foothill needlegrass
- Nassella pulchra* – purple needlegrass
- * *Parapholis incurva* – sickle grass
- * *Pennisetum clandestinum* – kikuyu grass
- * *Phalaris minor* – Mediterranean canary grass
- * *Piptatherum miliaceum* – smilo grass
- * *Poa annua* – annual bluegrass
- * *Polypogon monspeliensis* – rabbit's-foot grass
- * *Schismus arabicus* – Arabian schismus
- * *Schismus barbatus* – abumashi

Appendix B
Vascular Plant Species Observed
Valencia Commerce Center Site (2002, 2003, 2004 and 2005)

- * *Triticum aestivum* – common wheat
- * *Vulpia myuros* – rattail fescue

TYPHACEAE – CATTAIL FAMILY

Typha domingensis – slender cattail
Typha latifolia – broad-leaved cattail

- * signifies introduced (non-native) species

APPENDIX C

California Natural Diversity Database Form

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

OFFICE USE ONLY

PLEASE ENTER ALL INFORMATION AVAILABLE TO YOU.
USE THE BACK FOR COMMENTS IF NECESSARY. PLEASE
ATTACH OR DRAW A MAP ON BACK.

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes): *Calochortus clavatus* var. *gracilis*

Reporter: Anuja Parikh, Nathan Gale

Phone: (760) 942-5147

Address: Dudek & Associates, 605 Third Street, Encinitas, CA 92024

Date of Field Work: May 2, 2005

County: Los Angeles

Collection: If yes, #

Mus./Herb:

Location: Santa Clarita Valley, south-facing canyon north of the junction of Commerce Center Drive and SR 126.

Quad Name: Val Verde
Sec_

☒ 7½' 15' Elevation: 1000-1100' T 4N R 17W W ¼ of ¼

Landowner/Manager: Newhall Land, 23823 Valencia Boulevard, Valencia, CA 91355

Species Found? ☒ Yes ☐ No If not, reason:

Is this a new location record? ☐ Yes ☒ No ☐ Unknown

Total # of Individuals = 574 Is this a subsequent visit? ☒ Yes ☐ No Compared to your last visit: ☒ more ☐ same ☐ fewer

Phenology (plants): ☐ % vegetative ☐ % flowering ☐ % fruiting (not reported)

Population Age Structure (animals): ☐ # adults ☐ # juveniles ☐ # others

Site Function for Species (animals): ☐ breeding ☐ foraging ☐ wintering ☐ roosting ☐ denning ☐ other

Habitat Description (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope):

Annual (non-native) Grassland and California sagebrush - *Salvia leucophylla*, *Malacothamnus fasciculatus*, *Artemisia californica*, *Bromus* sp., *Cryptantha intermedia*, and *Eriogonum fasciculatum* dominant (average 54% native cover and 9% bare ground). Plants occurred on various aspects: east, west, southwest, southeast, northeast and northwest-facing slopes of up to 55% with rocky, sandy or clay loam soils. High number of observed plants may be the direct result of a heavy rain season.

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use: vacant; Visible Disturbances: detention basin at base of slope; Possible Threats: proposed residential/commercial development.

Overall Site Quality: ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Comments: This report summarizes fifteen discrete locations with estimated populations containing 1 to 175 individuals observed.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

☐ Keyed in a site reference:

☐ Compared with specimen housed at:

☐ Compared with photo/drawing in:

☐ By another person (name):

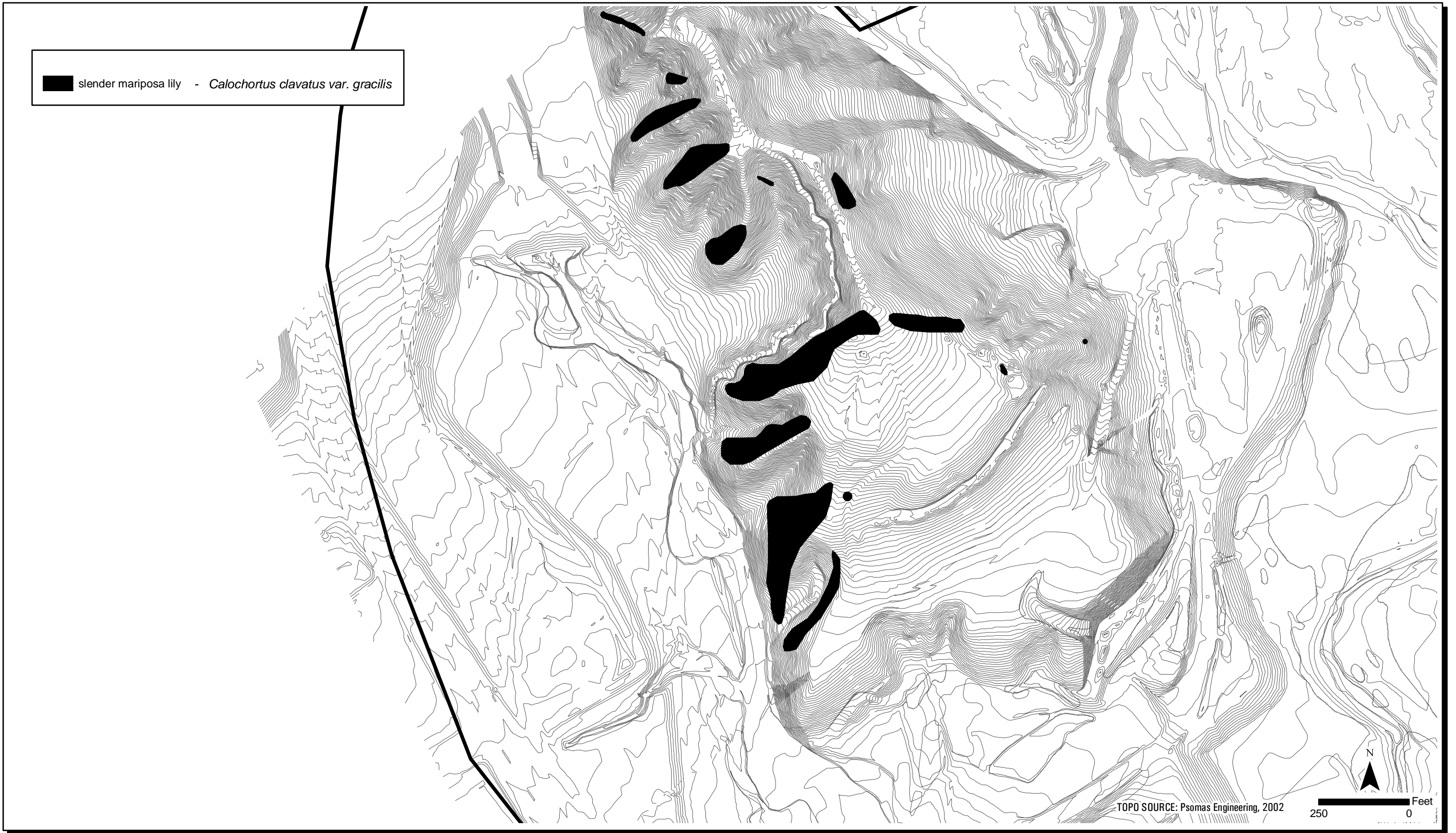
☒ Other: personal knowledge

OTHER KNOWLEDGEABLE INDIVIDUALS (Name/Address/Phone)

PHOTOGRAPHS (Check one or more)

Subject	Type
<input type="checkbox"/> Plant/Animal	<input type="checkbox"/> Slide
<input type="checkbox"/> Habitat	<input type="checkbox"/> Print
<input type="checkbox"/> Diagnostic Feature	
<input type="checkbox"/> Other	

May we obtain duplicates at our cost?
☐ Yes ☒ No



Valencia Commerce Center
2005 Sensitive Plant Survey Results

FIGURE
1

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

OFFICE USE ONLY

PLEASE ENTER ALL INFORMATION AVAILABLE TO YOU.
USE THE BACK FOR COMMENTS IF NECESSARY. PLEASE
ATTACH OR DRAW A MAP ON BACK.

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes): *Calochortus clavatus* var. *gracilis*

Reporter: Anuja Parikh, Nathan Gale

Phone: (760) 942-5147

Address: Dudek & Associates, 605 Third Street, Encinitas, CA 92024

Date of Field Work: April 21-22, 2005

County: Los Angeles

Collection: If yes, #

Mus./Herb:

Location: Santa Clarita Valley, east-facing canyon west of the Commerce Center Drive.

Quad Name: Val Verde
Sec_

X 7½' _ 15'

Elevation: 1,000-1,500'

T 4N

R 17W

W

¼ of ¼

Landowner/Manager: Newhall Land, 23823 Valencia Boulevard, Valencia, CA 91355

Species Found? X Yes ___ No ___ If not, reason:

Is this a new location record? ___ Yes X No ___ Unknown

Total # of Individuals = 281 Is this a subsequent visit? X Yes ___ No ___ Compared to your last visit: X more ___ same ___ fewer

Phenology (plants): ___ % vegetative ___ % flowering ___ % fruiting (not reported)

Population Age Structure (animals): ___ # adults ___ # juveniles ___ # others

Site Function for Species (animals): ___ breeding ___ foraging ___ wintering ___ roosting ___ denning ___ other

Habitat Description (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope):

Annual (non-native) Grassland and California sagebrush - purple sage series *Salvia leucophylla*, *Eriogonum fasciculatum*, *Artemisia californica*, and *Bromus* spp. (average 53% native cover and 11% bare ground). Plants occurred predominantly on northeast-facing slopes (up to 55%) with rocky sandy loam soils.

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use: vacant, water storage tank, detention basin; Visible Disturbances: access road to water tank, detention basin; Possible Threats: proposed residential/commercial development.

Overall Site Quality: ___ Excellent X Good ___ Fair ___ Poor

Comments: This report summarizes thirteen discrete locations, each estimated with 1 to approximately 100 plants observed. Greater abundance of individuals observed is likely due to heavy rainfall during winter months.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

___ Keyed in a site reference:

___ Compared with specimen housed at:

___ Compared with photo/drawing in:

___ By another person (name):

X Other: personal knowledge

OTHER KNOWLEDGEABLE INDIVIDUALS (Name/Address/Phone)

PHOTOGRAPHS (Check one or more)

Subject

Type

___ Plant/Animal

___ Slide

___ Habitat

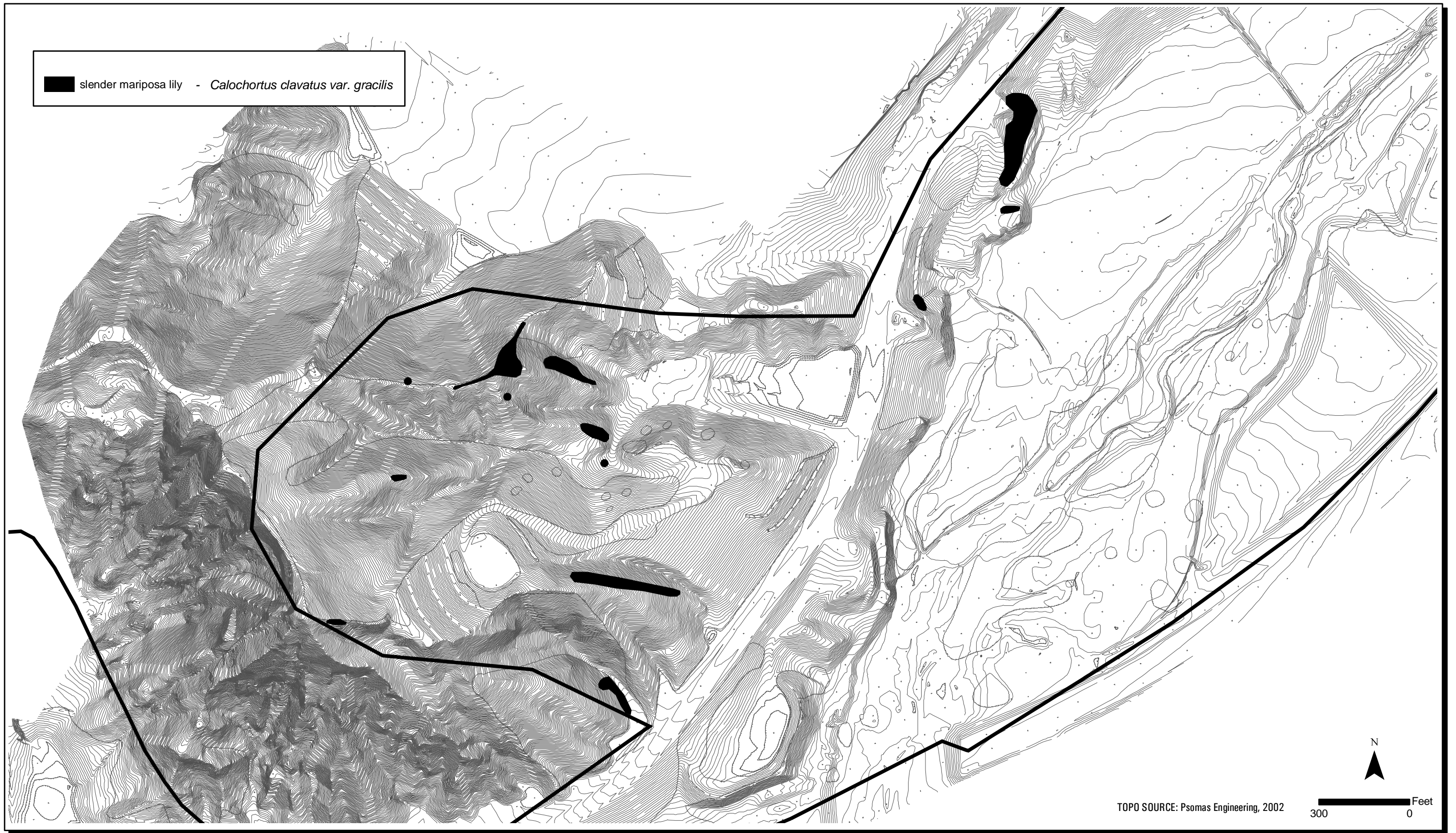
___ Print

___ Diagnostic Feature

___ Other

May we obtain duplicates **at our cost**?

___ Yes X No



Valencia Commerce Center
2005 Sensitive Plant Survey Results

FIGURE
1

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

OFFICE USE ONLY

PLEASE ENTER ALL INFORMATION AVAILABLE TO YOU.
USE THE BACK FOR COMMENTS IF NECESSARY. PLEASE
ATTACH OR DRAW A MAP ON BACK.

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes): *Calochortus clavatus* var. *gracilis*

Reporter: Anuja Parikh, Nathan Gale

Phone: (760) 942-5147

Address: Dudek & Associates, 605 Third Street, Encinitas, CA 92024

Date of Field Work: April 22, 2005

County: Los Angeles

Collection: If yes, #

Mus./Herb:

Location: Santa Clarita Valley, edge of the floodplain N of Castaic Creek and its junction with the Santa Clara River.

Quad Name: Val Verde

X 7½' 15' Elevation: ~1,000 T 4N R 17W W ¼ of ¼ Sec

Landowner/Manager: Newhall Land and Farming Company, 23823 Valencia Boulevard, Valencia, CA 91355

Species Found? X Yes No If not, reason:

Is this a new location record? Yes X No Unknown

Total # of Individuals = 72 Is this a subsequent visit? X Yes No Compared to your last visit: X more same fewer

Phenology (plants): % vegetative % flowering % fruiting (unreported)

Population Age Structure (animals): # adults # juveniles # others

Site Function for Species (animals): breeding foraging wintering roosting denning other

Habitat Description (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope):

Annual (non-native) grassland and California sagebrush - *Eriogonum fasciculatum*, *Salvia mellifera*, *Encelia californica*, *Lotus scoparius*, and *Bromus madritensis rubens* (average 50% native cover and <10% bare ground) . Observed plant populations occurred in rocky or sandy clay loam soils and were generally on steep east or northeast-facing slopes (up to 55%).

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use: vacant, flood management; Visible Disturbances: farming, grading/clearing for fire and flood control, utility poles; Possible Threats: proposed residential/commercial development, flood control activities, utility poles maintenance.

Overall Site Quality: Excellent X Good Fair Poor

Comments: This report summarizes ten discrete locations, each with three to fifteen individuals observed. Greater abundance of individuals observed is likely due to heavy rainfall during winter months.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

 Keyed in a site reference:

 Compared with specimen housed at:

 Compared with photo/drawing in:

 By another person (name):

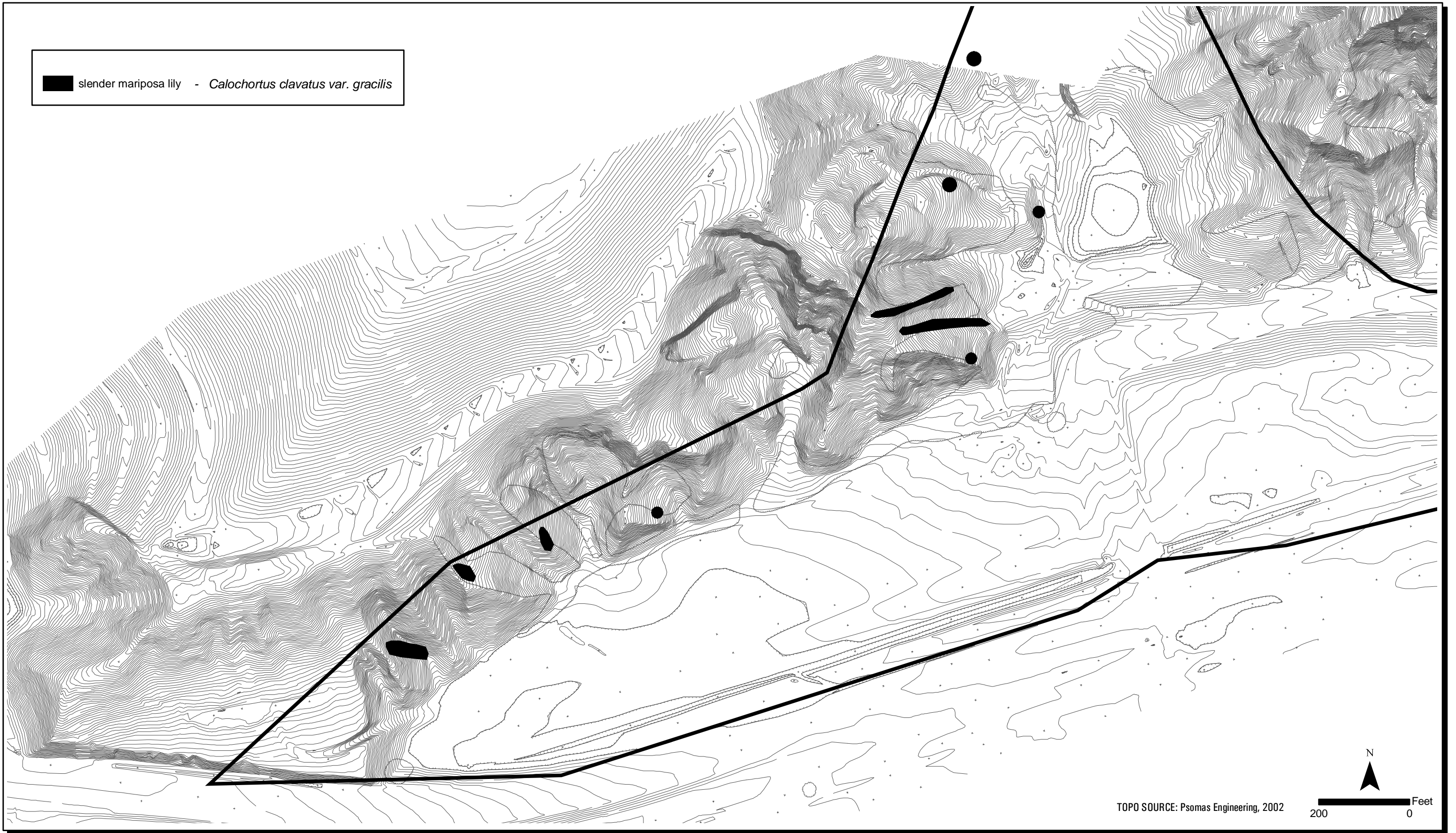
X Other: personal knowledge

OTHER KNOWLEDGEABLE INDIVIDUALS (Name/Address/Phone)

PHOTOGRAPHS (Check one or more)

Subject	Type
<u> </u> Plant/Animal	<u> </u> Slide
<u> </u> Habitat	<u> </u> Print
<u> </u> Diagnostic Feature	
<u> </u> Other	

May we obtain duplicates at our cost?
 Yes X No



Valencia Commerce Center
2004 Sensitive Plant Survey Results

FIGURE
1

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

OFFICE USE ONLY

PLEASE ENTER ALL INFORMATION AVAILABLE TO YOU.
USE THE BACK FOR COMMENTS IF NECESSARY. PLEASE
ATTACH OR DRAW A MAP ON BACK.

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes): *Chorizanthe parryi* var. *fernandina*

Reporter: Anuja Parikh, Nathan Gale

Phone: (760) 942-5147

Address: Dudek & Associates, 605 Third Street, Encinitas, CA 92024

Date of Field Work: April 25-27, 2005 County: Los Angeles Collection: If yes, # Mus./Herb:

Location: Santa Clarita Valley, north-facing canyon north of the junction of Commerce Center Drive and SR 126.

Quad Name: Val Verde X 7½' _ 15' Elevation: 1000-1100' T 4N R 17W W ¼ of ¼
Sec_

Landowner/Manager: Newhall Land, 23823 Valencia Boulevard, Valencia, CA 91355

Species Found? X Yes ___ No ___ If not, reason:

Is this a new location record? ___ Yes X No ___ Unknown

Total # of Individuals = 223,155 Is this a subsequent visit? X Yes ___ No Compared to your last visit: X more ___ same ___ fewer

Phenology (plants): ___ % vegetative ___ % flowering ___ % fruiting (not reported)

Population Age Structure (animals): ___ # adults ___ # juveniles ___ # others

Site Function for Species (animals): ___ breeding ___ foraging ___ wintering ___ roosting ___ denning ___ other

Habitat Description (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope):

Annual (non-native) grassland - *Avena barbata*, *Bromus* spp., *Eriogonum fasciculatum*, *Lupinus bicolor*, *Clarkia purpurea*, *Artemisia californica*, and *Vulpia myuros* (average 37% native cover and 22% bare ground). Observed individuals occurred on both northeast and northwest-facing slopes of up to 20% within clay loam soils.

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use: vacant; Visible Disturbances: detention basin at base of slope; Possible Threats: proposed residential/commercial development.

Overall Site Quality: ___ Excellent X Good ___ Fair ___ Poor

Comments: This report summarizes 45 discrete locations with estimated abundances of 1 to 10,000 individuals.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

___ Keyed in a site reference:

___ Compared with specimen housed at:

___ Compared with photo/drawing in:

___ By another person (name):

X Other: personal knowledge

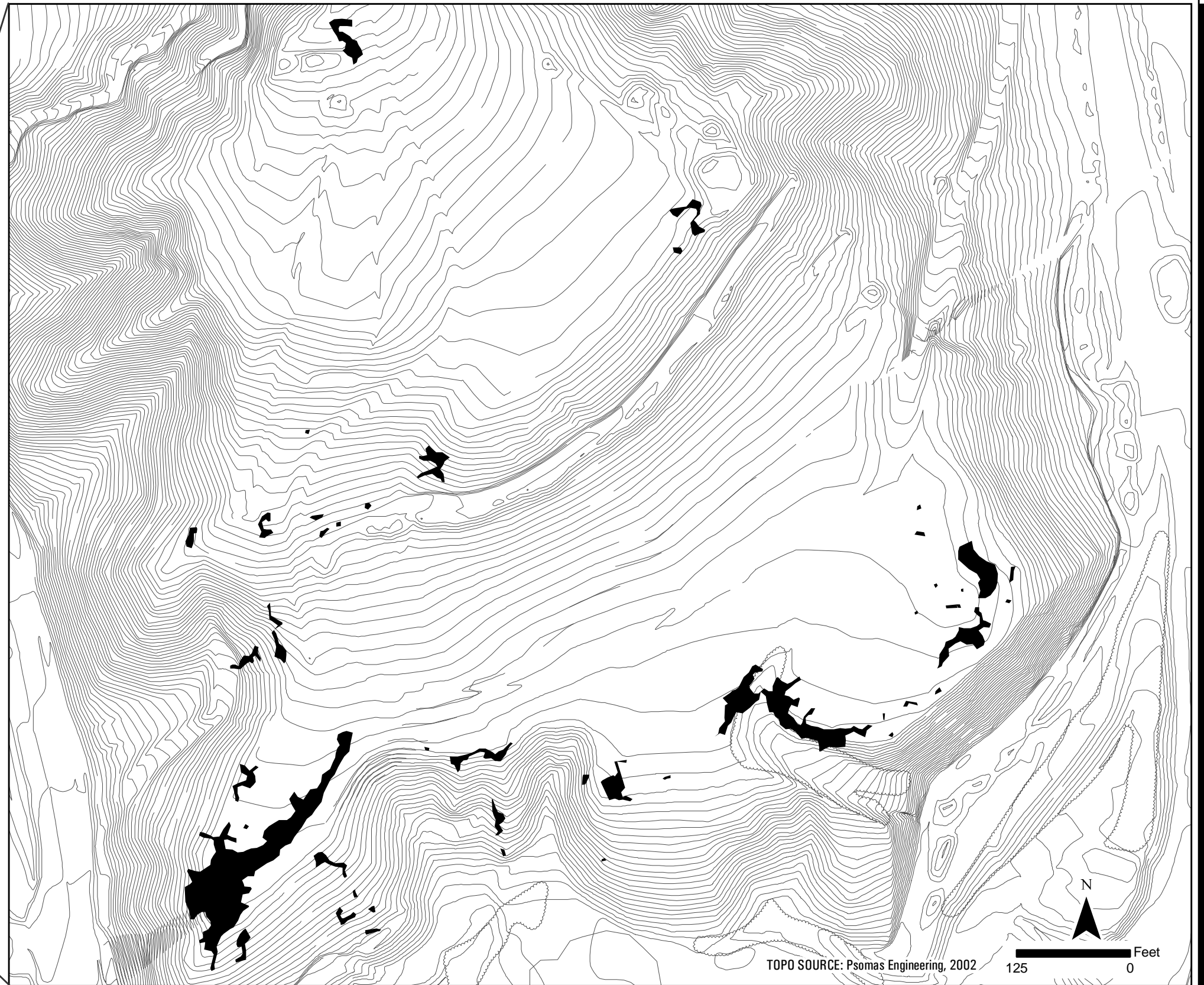
OTHER KNOWLEDGEABLE INDIVIDUALS (Name/Address/Phone)

PHOTOGRAPHS (Check one or more)

Subject	Type
___ Plant/Animal	___ Slide
___ Habitat	___ Print
___ Diagnostic Feature	
___ Other	

May we obtain duplicates **at our cost**?
___ Yes X No

San Fernando Valley spineflower -
Chorizanthe parryi var. *fernandina*



Valencia Commerce Center
2005 San Fernando Valley spineflower Results

FIGURE
1

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

OFFICE USE ONLY

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ATTACH OR DRAW A MAP ON BACK.

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes): *Gnaphalium sp. nova*

Reporter: Anuja Parikh, Nathan Gale

Phone: (760) 942-5147

Address: Dudek & Associates, 605 Third Street, Encinitas, CA 92024

Date of Field Work: April 23, 2005

County: Los Angeles

Collection: If yes, #

Mus./Herb:

Location: Santa Clarita Valley, south-facing canyon north of the junction of Commerce Center Drive and SR 126.

Quad Name: Val Verde
Sec_

X 7½' 15' Elevation: 1000-1100' T 4N R 17W W ¼ of ¼

Landowner/Manager: Newhall Land, 23823 Valencia Boulevard, Valencia, CA 91355

Species Found? X Yes No If not, reason:

Is this a new location record? Yes X No Unknown

Total # of Individuals = 65 Is this a subsequent visit? X Yes No Compared to your last visit: X more same fewer

Phenology (plants): 100 % vegetative % flowering % fruiting (not reported)

Population Age Structure (animals): # adults # juveniles # others

Site Function for Species (animals): breeding foraging wintering roosting denning other

Habitat Description (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope):

Mule Fat Scrub - *Baccharis salicifolia*, *Lotus scoparius*, *Melilotus indica*, *Vulpia myuros*, *Lepidospartum squamatum*, and *Eriogonum fasciculatum* (approximately 10% native cover and 85% bare ground). Individuals occurred on southwest-facing slope of 30% with rocky alluvium soil.

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use: vacant; Visible Disturbances: detention basin at base of slope; Possible Threats: proposed residential/commercial development.

Overall Site Quality: Excellent X Good Fair Poor

Comments: This report summarizes a single occurrence.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

 Keyed in a site reference:

 Compared with specimen housed at:

 Compared with photo/drawing in:

 By another person (name):

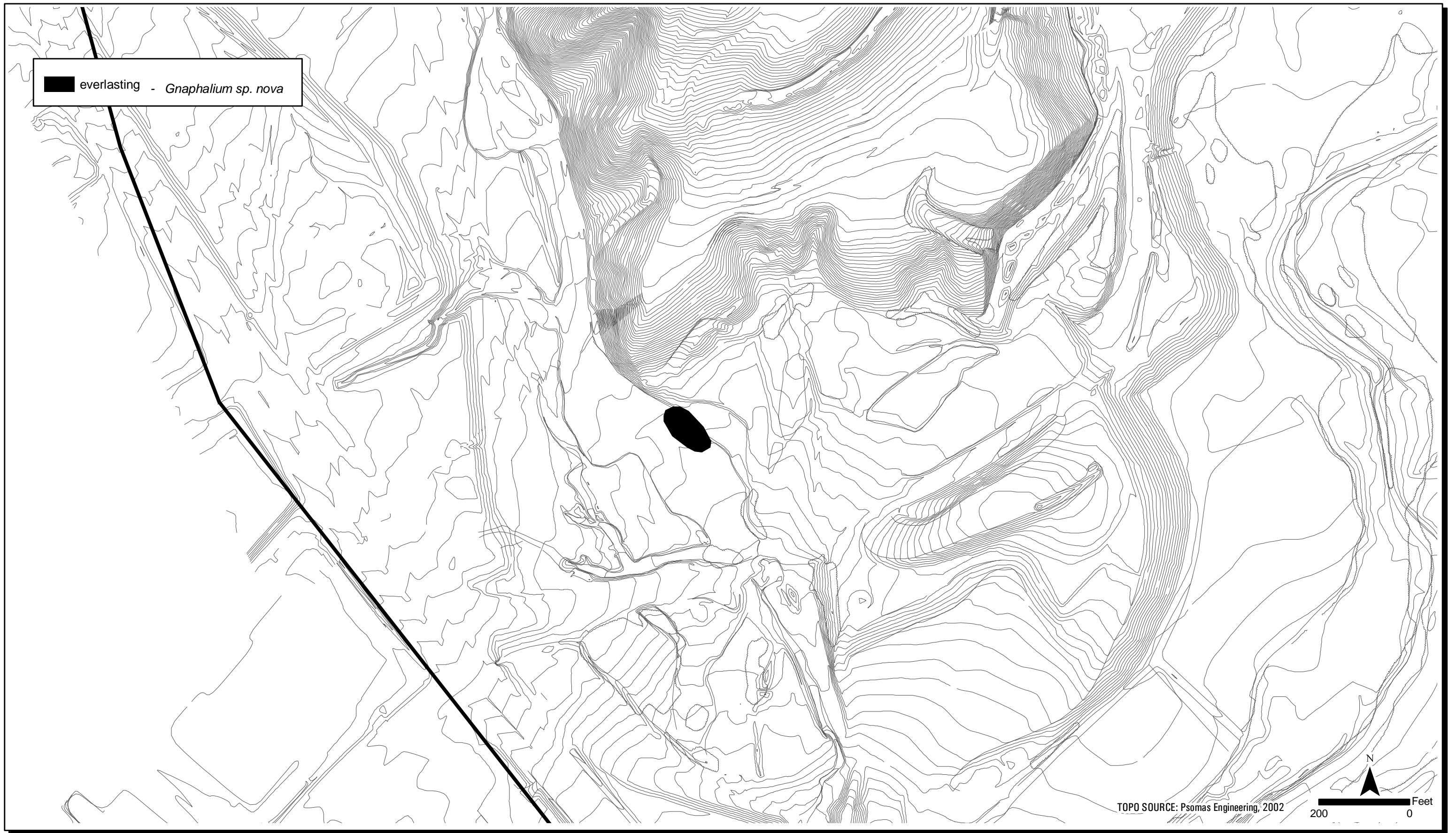
X Other: personal knowledge

OTHER KNOWLEDGEABLE INDIVIDUALS (Name/Address/Phone)

PHOTOGRAPHS (Check one or more)

Subject	Type
<u> </u> Plant/Animal	<u> </u> Slide
<u> </u> Habitat	<u> </u> Print
<u> </u> Diagnostic Feature	
<u> </u> Other	

May we obtain duplicates **at our cost**?
 Yes X No



Valencia Commerce Center
2005 Sensitive Plant Survey Results

FIGURE
1

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

OFFICE USE ONLY

PLEASE ENTER ALL INFORMATION AVAILABLE TO YOU.
USE THE BACK FOR COMMENTS IF NECESSARY. **PLEASE
ATTACH OR DRAW A MAP ON BACK.**

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes): *Lasthenia Glabrata* ssp. *coulteri*

Reporter: Anuja Parikh, Nathan Gale

Phone: (760) 942-5147

Address: Dudek & Associates, 605 Third Street, Encinitas, CA 92024

Date of Field Work: April 23, 2005 County: Los Angeles Collection: If yes, # Mus./Herb:

Location: Santa Clarita Valley, southwest-facing canyon north of the junction of Commerce Center Drive and SR 126.

Quad Name: Val Verde X 7 1/2' 15' Elevation: 1000-1100' T 4N R 17W W
1/4 of 1/4 Sec

Landowner/Manager: Newhall Land and Farming Company, 23823 Valencia Boulevard, Valencia, CA 91355

Species Found? X Yes ___ No ___ If not, reason:

Is this a new location record? ___ Yes X No ___ Unknown

Total # of Individuals = 75 Is this a subsequent visit? X Yes ___ No Compared to your last visit: X more ___ same ___ fewer

Phenology (plants): 100 % vegetative ___ % flowering ___ % fruiting (not reported)

Population Age Structure (animals): ___ # adults ___ # juveniles ___ # others

Site Function for Species (animals): ___ breeding ___ foraging ___ wintering ___ roosting ___ denning ___ other

Habitat Description (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope):

Disturbed habitat - *Melilotus indica*, *Bromus carinatus*, and *Hordeum brachyantherum* (15% native cover and 80% bare ground).
Observed individuals occurred on a southwest-facing slope (approximately 15% m) within a silty clay loam soil.

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use: vacant; Visible Disturbances: detention basin at base of slope; Possible Threats: proposed residential/commercial development.

Overall Site Quality: ___ Excellent ___ Good X Fair ___ Poor

Comments: This report summarizes a single population.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

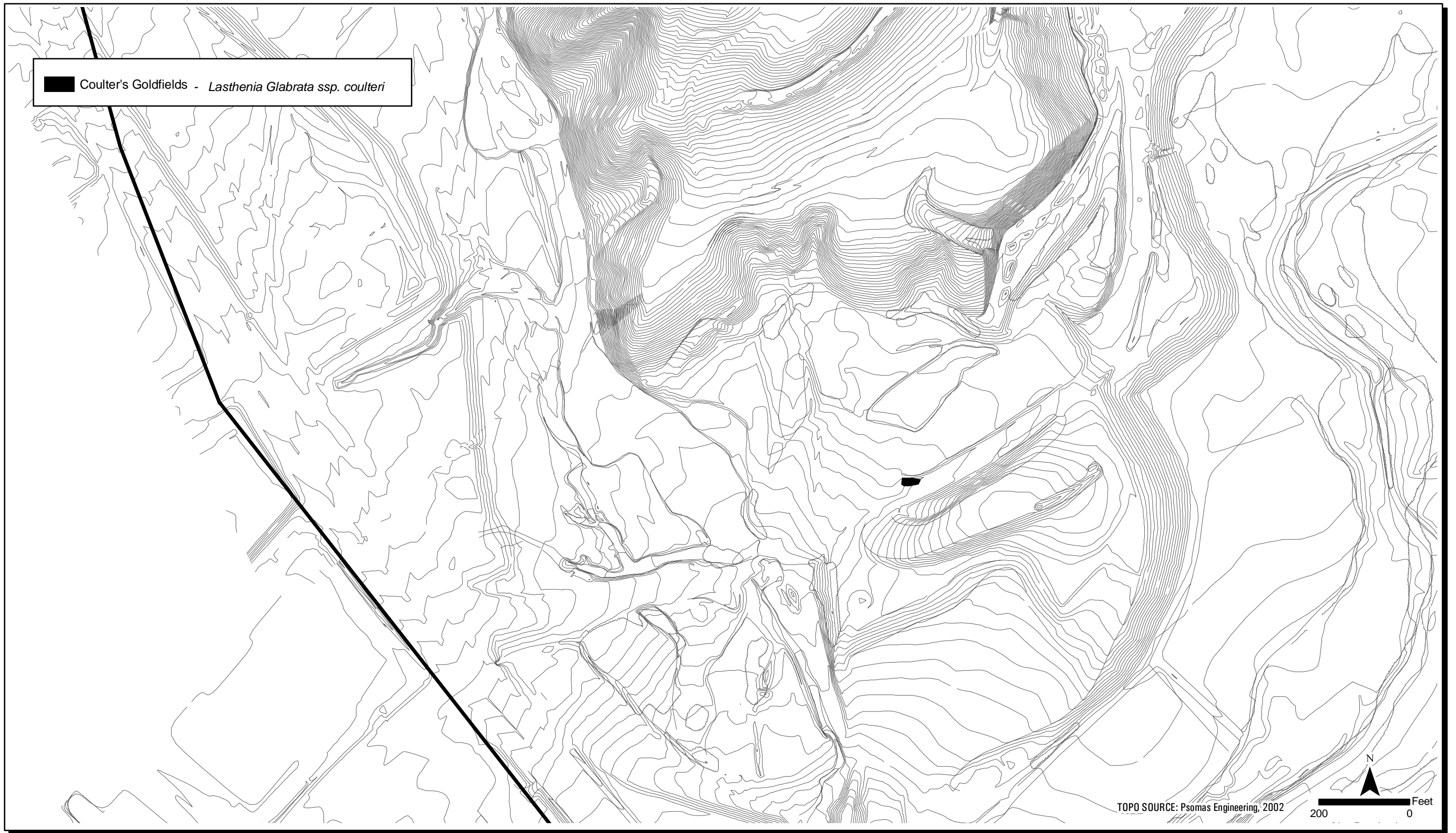
___ Keyed in a site reference:
___ Compared with specimen housed at:
___ Compared with photo/drawing in:
___ By another person (name):
X Other: personal knowledge

OTHER KNOWLEDGEABLE INDIVIDUALS (Name/Address/Phone)

PHOTOGRAPHS (Check one or more)

Subject	Type
___ Plant/Animal	___ Slide
___ Habitat	___ Print
___ Diagnostic Feature	
___ Other	

May we obtain duplicates at our cost?
___ Yes X No



Valencia Commerce Center
2005 Sensitive Plant Survey Results

FIGURE
1

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