



2002 Sensitive Plant Survey Results

Valencia Commerce Center



J A N U A R Y 2 0 0 3

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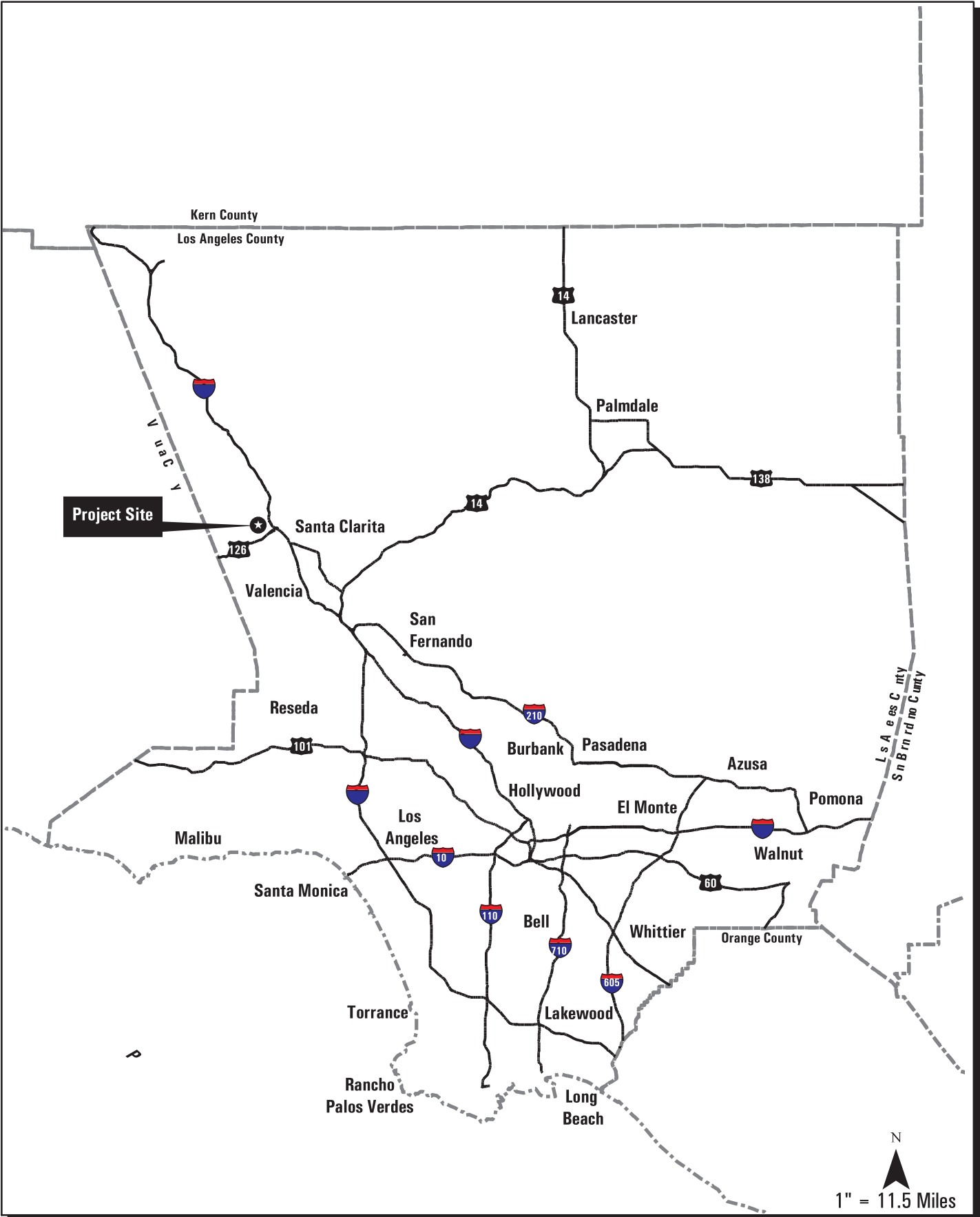
1.0 INTRODUCTION

The purpose of this report is to document the results of surveys for sensitive plant species within a 104-acre study area on the 150-acre Valencia Commerce Center Site (Commerce Center) for the 2002 field season, with an emphasis on the identification of populations of the state-listed as endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; SFVS). DUDEK was directed to conduct sensitive plant surveys in the study area (which included all upland areas/habitats and excluded the wash/riparian areas of Castaic Creek and Hasley Canyon). We conducted two levels of survey effort in the study area: one effort focused on the location of all federally- and state-listed, proposed for listing, and candidate species and California Native Plant Society (CNPS) List 1A, 1B, and 2 species; and another effort focused on the identification and location of populations of SFVS.

2.0 SITE DESCRIPTION

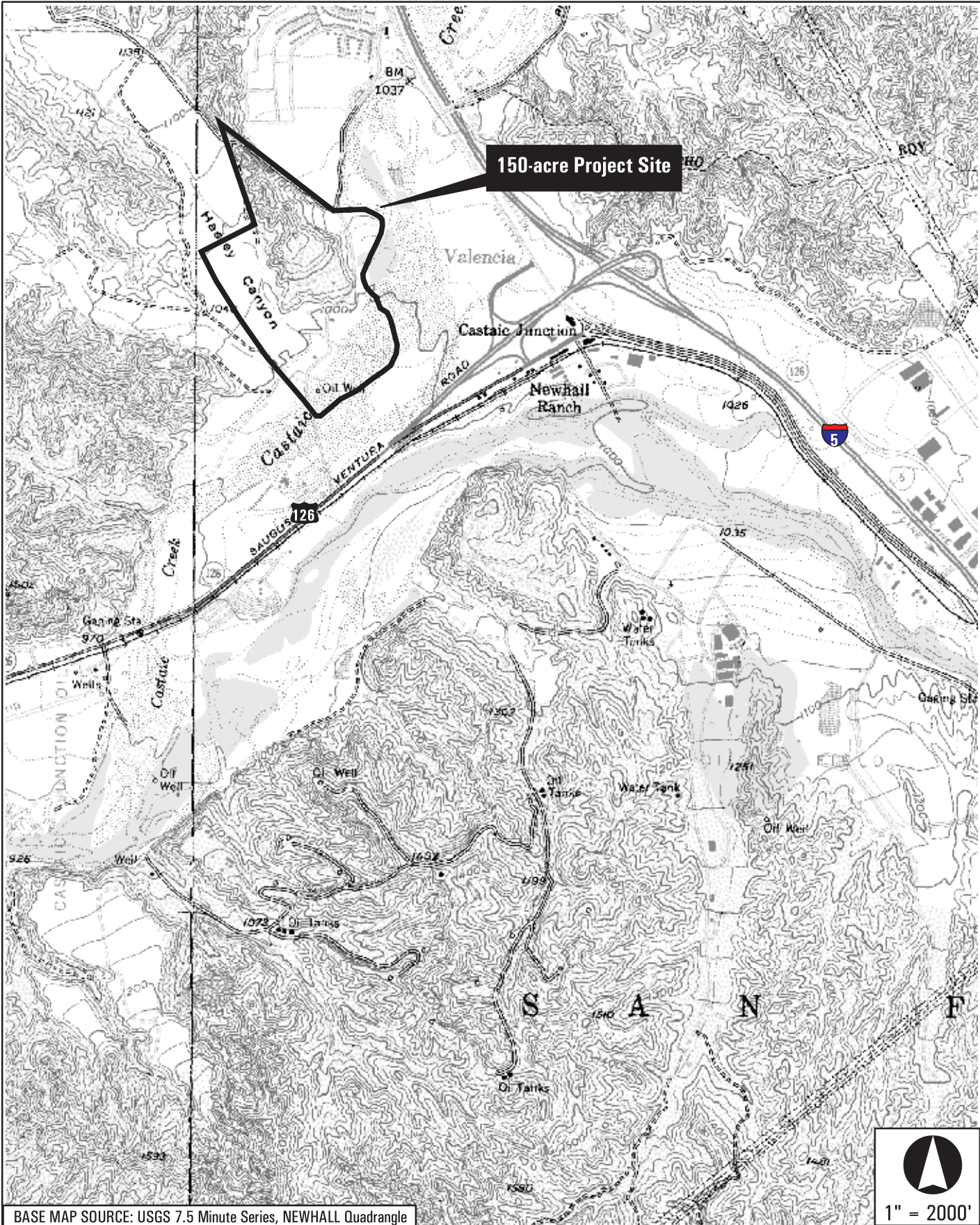
The study area on the 150-acre Valencia Commerce Center Site (Commerce Center) is located in an unincorporated portion of the Santa Clara River Valley in northwestern Los Angeles County (*Figure 1*). The Commerce Center site lies roughly in the northwest corner of the junction of Interstate 5 (I-5) and 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 a north/south trending ridge that lies between and north of the confluence of Hasley Canyon and Castaic Creek. Site elevations range from just under 1,000 feet above mean sea level (AMSL) in the Castaic Creek bottom to just over 1,200 feet AMSL at the top of the ridge (*Figure 3*). This 200-foot high ridge encompasses all of the north and eastern portions of the site and is bordered on the south and west by the wash areas of Castaic Creek and Hasley Canyon. The wash areas contain numerous benches and braided channels with associated riparian/wash scrub habitats. The ridge is rounded at the top with slopes that vary from steep to gentle. The western portion drops sharply down to the wash from Hasley Canyon, whereas, the other portions of the hill tend to be steep at the top, gently rounding out to Castaic Creek on the south and east and to hills on the north. Distinctive geographic features onsite include the previously mentioned ridge, Castaic Creek, and Hasley Canyon.



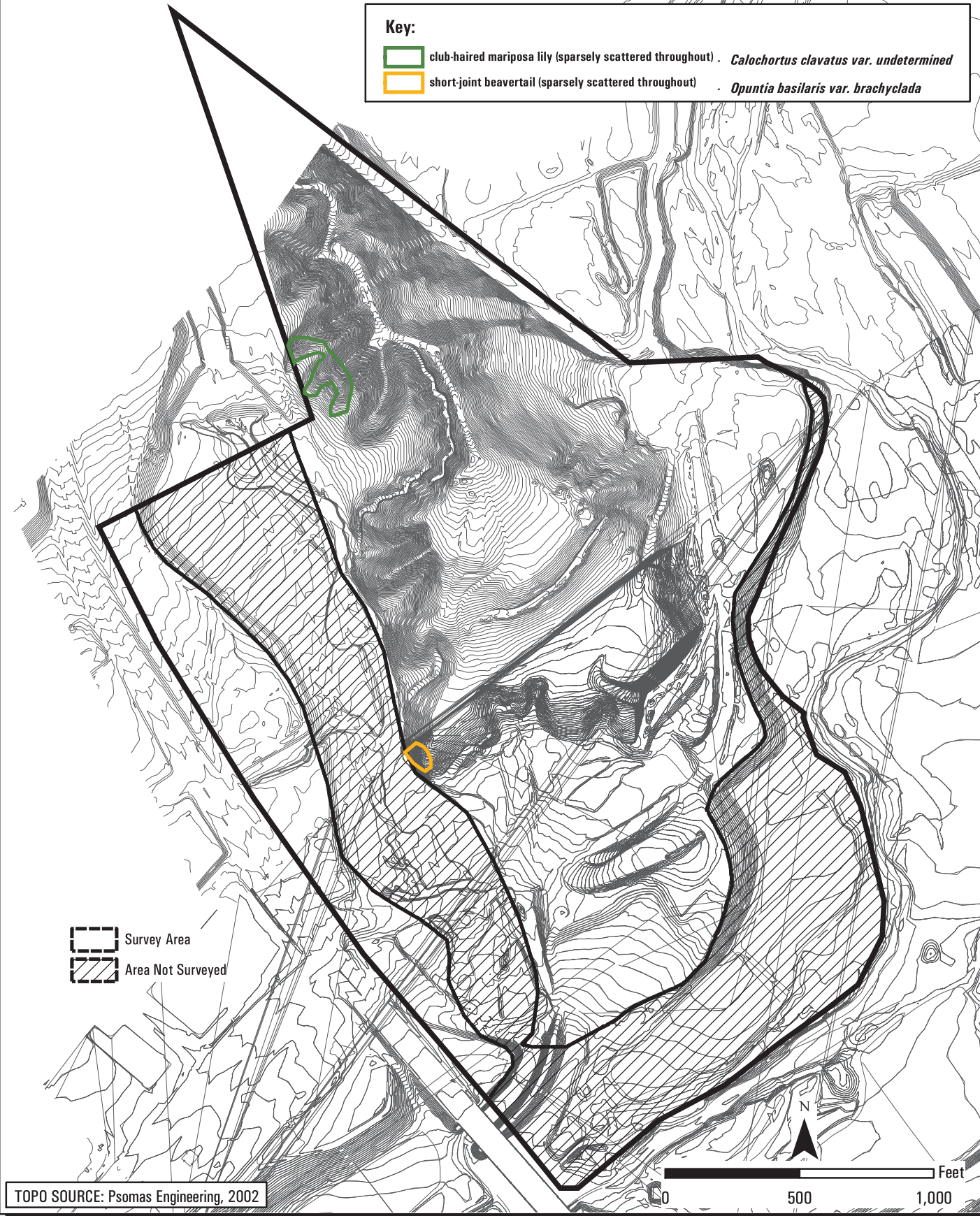
Valencia Commerce Center
Regional Map

FIGURE
1



Valencia Commerce Center
Vicinity Map

FIGURE
2



Valencia Commerce Center

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FIGURE 3

2002 Sensitive Plant Survey Results

Valencia Commerce Center

2.1 Plant Communities and Land Covers

DUDEK conducted a sensitive plant survey in the study area, but we did not map vegetation on the Commerce Center site. Vegetation communities, when noted, were incidental. 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.*, Venturan coastal sage scrub, valley oak woodlands, and native and non-native grasslands); however, Castaic Creek and Hasley Canyon do support a variety of riparian plant communities that were not specifically surveyed (*e.g.*, southern willow scrub, southern cottonwood-willow mulefat scrub). We did not observe any freshwater marsh or seep areas in the study area.

Historically, The Newhall Land and Farming Company leased out portions of the study area for sand and gravel production, cattle grazing, and agricultural operations; but 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, as well.

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. The Holser fault lies immediately to the northwest of the site (Allan E. Seward 2002).

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.

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3.1 Literature Review

General floristic and sensitive botanical resources present or potentially present at Newhall Ranch 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 (CNDDDB, September 2002); *Biological Resource Assessment of the Proposed Santa Susana Mountains/Simi Hills Significant Ecological Area* (PCR, November 2000); CalFlora (University of California, Berkeley, May 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 Herbarium (UCR). 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 Dudek & Associates, Inc. (DUDEK) staff biologists. All surveys were conducted on-foot. Surveys were conducted by Julie Vanderwier, Mark A. Elvin, and assistance was provided by DUDEK biologist Cathleen Wiegand. Resumes for survey personnel are provided in *Appendix A*.

DUDEK biologists Julie Vanderwier, Mark A. Elvin, and Cathleen Wiegand surveyed the study area on the Commerce Center location (which only consisted of the upland areas onsite) for sensitive plant species. DUDEK surveyed for sensitive plant species within the study area with varying levels of specificity. As mentioned previously, the study area only consisted of the upland areas; therefore, we did not survey the riparian or wash areas.

Botanical surveys of the site were conducted in May, June and September of 2002 in accordance with the schedule provided in *Table 1*. A minimum of thirty-two person-hours (four person-days) was spent conducting botanical surveys within the study area. These surveys were conducted with two separate goals and levels of specificity: **(1)** On May 10

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and 11, 2002, surveys were focused on the location of all federally- and state-listed, proposed for listing, and candidate species and California Native Plant Society (CNPS) List 1A, 1B, and 2 species (see the list of target species in *Table 2*); and **(2)** On June 6, and September 17, 2002, surveys were focused on the identification and location of populations of SFVS after a better search image had been developed during surveys on the Newhall Ranch project site (DUDEK 2002).

TABLE 1
SURVEY SCHEDULE & PERSONNEL
VALENCIA COMMERCE CENTER PLAN AREA

Date	Biologists	Purpose
May 10, 2002	Julie Vanderwier	Focused surveys for sensitive plant species
May 11, 2002	Julie Vanderwier	Focused surveys for sensitive plant species
Jun 06, 2002	Julie Vanderwier	Focused surveys for SFVS
September 17, 2002	Mark Elvin and Cathleen Wiegand	Focused surveys for SFVS

TABLE 2
SENSITIVE PLANT SPECIES SUBJECT OF FIELD SURVEYS
VALENCIA COMMERCE CENTER PLAN AREA

Scientific Name	Common Name
<i>Arenaria paludicola</i>	marsh sandwort
<i>Astragalus brauntonii</i>	Braunton's milk-vetch
<i>Atriplex coulteri</i>	Coulter's saltbush
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale
<i>Baccharis malibuensis</i>	Malibu baccharis
<i>Berberis nevinii</i>	Nevin's barberry
<i>Brodiaea filifolia</i>	thread-leaved brodiaea
<i>Calochortus clavatus</i> var. <i>clavatus</i>	club-haired mariposa lily
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily
<i>Calochortus plummerae</i>	Plummer's mariposa lily
<i>Calochortus weedii</i> var. <i>vestus</i>	late-flowered mariposa lily
<i>Calystegia peirsonii</i>	Pierson's morning-glory
<i>Calystegia sepium</i> ssp. <i>binghamiae</i>	Santa Barbara morning-glory
<i>Centromadia</i> [= <i>Hemizonia</i>] <i>parryi</i> ssp. <i>australis</i>	southern tarplant
<i>Cercocarpus betuloides</i> var. <i>blancheae</i>	island mountain-mahogany
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower

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TABLE 2
SENSITIVE PLANT SPECIES SUBJECT OF FIELD SURVEYS
VALENCIA COMMERCE CENTER PLAN AREA

Scientific Name	Common Name
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>minthornii</i>	Santa Susana tarplant
<i>Dodecahema leptoceras</i>	slender-horned spineflower
<i>Dudleya blochmaniae</i> var. <i>blochmaniae</i>	Blochman's dudleya
<i>Dudleya cymosa</i> ssp. <i>marcescens</i>	marcescent dudleya
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	Santa Monica Mountains dudleya
<i>Dudleya multicaulis</i>	many-stemmed dudleya
<i>Dudleya parva</i>	Conejo Dudleya
<i>Erodium macrophyllum</i>	round-leaved filaree
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia
<i>Juglans californica</i>	southern California black walnut
<i>Malacothamnus davidsonii</i>	Davidson's bush mallow
<i>Nama stenocarpum</i>	mud nama
<i>Nolina cismontana</i>	chaparral nolina
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail
<i>Oxytheca parishii</i> var. <i>abramsii</i>	Abram's oxytheca
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta
<i>Rorippa gambellii</i>	Gambel's water cress
<i>Senecio aphanactis</i>	rayless ragwort
<i>Sidalcea neomexicana</i>	salt spring checkerbloom
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern

All plant species encountered during the field surveys were identified and recorded for inclusion in *Appendix B*. 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 the sensitive plant species listed in *Table 2* were conducted based upon: **(1)** the habitat preference, habit, and phenology for each species; **(2)** professional experience; and **(3)** any other additional information gathered (*i.e.*, local floras). Surveys for SFVS were focused in open areas of Venturan coastal sage scrub (purple sage series [Sawyer and Keeler-Wolf 1995]) and non-native grassland (California annual grassland series [Sawyer

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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 project site; information contained in the report prepared by Glenn Lukos Associates, Inc. (2002); 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. The riparian communities, including the Castaic Creek and Halsey Canyon floodplains, were not surveyed.

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 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 California Native Plant Society's *Inventory of Rare and Endangered Plants of California* (CNPS 2001; *Inventory*), 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 species, which have a lower level of sensitivity, were included in discussions only when encountered during the field surveys.

3.2.2 Survey Limitations

Surveys were conducted in late spring and summer of 2002. This was the driest year in recorded history for Los Angeles County, which began keeping records in 1877. Less than 4.5 inches of rain fell on the County, which is less than a third of the "normal" amount (Los Angeles Times, June 30, 2002; Western Regional Climate Center 2002; www.wrcc.edu). Also, some surveys were conducted late in the growing season (e.g., focused surveys for SFVS in June and September 2002). These factors affected the detection of annual plants and geophytic perennials more than most plants because few annuals or geophytes were observed growing this year (compared to the many stalks and/or dried remains of plants from the previous year). A number of the sensitive plants on our focused survey list were either annuals or geophytes and they either had a poor rate of detection or were not observed. The few annual and geophyte species that were observed during the field work on the Commerce Center site represent a fraction of the density and/or diversity of the species which are likely to occur onsite based on other surveys in the area (DUDEK 2002). This may also be true of other perennial plants (e.g., drought deciduous plants). Spring surveys during a year with a "normal" amount of rainfall will provide better conditions to determine the diversity of species (including

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sensitive plants) onsite and to map their presence, abundance, and distributions more accurately (when necessary).

Focused surveys were directed towards the detection of all of the sensitive species identified in *Table 2* for the study area, but the entire Commerce Center site was not surveyed (the wash areas and riparian habitats were not surveyed, see *Figure 3*). Focused surveys for SFVS were concentrated on south-facing slopes and for current-year plants. No surveys were conducted in the riparian or wash areas. The focused surveys for SFVS concentrated on locating additional populations within the study area in order to determine the taxon's gross distribution within the Commerce Center boundaries. The search parameters for SFVS used in this survey (*i.e.*, slope, aspect, soils, indicator species) may be an artifact of the predominant observations of SFVS on south-facing slopes on the Newhall Ranch Specific Plan Area (DUDEK 2002). We concentrated our efforts in similar areas that we felt had the highest likelihood for SFVS to occur.

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.

At least 90 plant species were identified within the Valencia Commerce Center study area. Of these, 74 species (82%) are native to the region and 16 species (18%) are non-native. The list of plant species identified within the study area in 2002 is provided as *Appendix B*.

4.2 Sensitive Plant Species

Only two sensitive plant species were found within the study area during the course of our 2002 surveys: mariposa lily (*Calochortus clavatus*) and short-joint beavertail (*Opuntia basilaris*). 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 3*. This list is 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, those plant species found on Lists 1A, 1B, or 2 of the California Native Plant Society's *Inventory of Rare and Endangered Plants of California* (CNPS 2001).

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TABLE 3
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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrence is in the Santa Ana River. Limited suitable habitat onsite in wash/riparian areas that were not surveyed; 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 2002 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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite in wash/riparian areas that were not surveyed. likelihood of occurrence within study area. Moderate
<i>Atriplex serenana</i> var. <i>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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite in wash/riparian areas that were not surveyed. Low likelihood of occurrence within the study area.

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TABLE 3
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>Baccharis malibuensis</i>	Malibu baccharis	None/None	1B	chaparral, coastal sage scrub, cismontane woodland/deciduous shrub/August	Not observed during 2002 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 nevinii</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 2002 field season. CNDDDB records exist for San Francisquito Canyon at confluence with Santa Clara River; suitable habitat present onsite in wash/riparian areas that were not surveyed. 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 2002 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> var. <i>clavatus</i>	club-haired mariposa lily	None/None	4	chaparral and coastal sage scrub/perennial herb (geophyte)/March-May	Unidentified <i>Calochortus clavatus</i> subspecies observed in the study area. No CNDDDB records exist for Newhall and Val Verde quads. Need current year flowers to determine. Moderate to high likelihood of occurrence in study area.

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TABLE 3
SENSITIVE PLANT SPECIES OBSERVED OR POTENTIALLY OCCURRING AT
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Scientific Name	Common Name	Status Federal/State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Presence or Likelihood of Occurrence Onsite
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	None/None	1B	chaparral and coastal sage scrub/perennial herb (geophyte)/March-May	Unidentified <i>Calochortus clavatus</i> subspecies observed in the study area. CNDDDB records for mouth of Pico Canyon. Need current year flowers to determine. High likelihood of occurrence in study area.
<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 within study area during 2002 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> var. <i>vestus</i>	late-flowered mariposa lily	None/None	1B	chaparral, cismontane and riparian woodland/perennial herb (geophyte)/June-August	Not observed during 2002 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. likelihood of occurrence within study area. Moderate
<i>Calystegia peirsonii</i>	Peirson's morning-glory	None/None	4	chaparral, coastal sage scrub, cismontane woodland, grassland/perennial herb/May-June	Not observed within study area during 2002 field season. Occurrences documented from surrounding areas in chaparral and Venturan sage scrub. High likelihood of occurrence within study area.

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TABLE 3
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 sepium</i> <i>ssp. binghamiae</i>	Santa Barbara morning- glory	None/None	1A	marshes and swamps/perennial herb/ April-May	Not observed during 2002 field season. No CNDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite in wash/riparian areas that were not surveyed. Low likelihood of occurrence within study area.
<i>Centromadia</i> [= <i>Hemizonia</i>] <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 2002 field season. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite in wash/riparian areas that were not surveyed. 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 2002 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	Not observed within study area during 2002 field season. Occurrences documented from surrounding areas in chaparral and Venturan coastal sage scrub during 2002. An occurrence is known to exist onsite in study area.

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TABLE 3
SENSITIVE PLANT SPECIES OBSERVED OR POTENTIALLY OCCURRING AT
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Scientific Name	Common Name	Status Federal/State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Presence or Likelihood of Occurrence Onsite
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>minthornii</i>	Santa Susana tarplant	None/SR	1B	chaparral and coastal sage scrub on rocky substrate/deciduous shrub/July-November	Not observed during 2002 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>Dodecahema</i> <i>leptoceras</i>	slender-horned spineflower	FE/SE	1B	alluvial scrub on sandy substrate/annual herb/April-June	Not observed during 2002 field season. Historic CNDDDB records exist for the Newhall or Val Verde quads in alluvial habitat similar to those present onsite in wash/riparian areas that were not surveyed. Moderate likelihood of occurrence onsite.
<i>Dudleya 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 2002 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 2002 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 2002 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.

2002 Sensitive Plant Survey Results Valencia Commerce Center

TABLE 3
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>Dudleya multicaulis</i>	many-stemmed dudleya	None/None	1B	coastal bluff scrub, coastal sage scrub, valley and foothill grassland, rocky, often clay substrate/perennial herb/April-June	Not observed during 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads; closest known occurrences are in Calabasas 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 2002 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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads; however, records exist for Simi Valley. Suitable habitat present onsite; moderate likelihood of occurrence in study area.

2002 Sensitive Plant Survey Results Valencia Commerce Center

TABLE 3
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>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None/None	1A	marshes and swamps/perennial herb/ August-October	Not observed within study area during 2002 field season. A <i>Helianthus</i> population, discovered in 2002 by Elvin and Sanders 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. The final determination of the identity of this species is still being worked on. No suitable habitat observed in study area, however, wash/riparian areas were not surveyed.
<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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Suitable habitat present onsite in wash/riparian areas that were not surveyed. 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 2002 field season. Observed offsite in Venturan coastal sage scrub and chaparral onsite. Suitable habitat present onsite. Low likelihood of occurrence within study area.

2002 Sensitive Plant Survey Results Valencia Commerce Center

TABLE 3
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>Malacothamnus davidsonii</i>	Davidson's bush mallow	None/None	1B	chaparral, coastal sage scrub, riparian woodland/ deciduous scrub/June-January	Not observed during 2002 field season. Nearest occurrences are in San Fernando and Sunland. 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 2002 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 that were not surveyed. Low likelihood of occurrence within study area.
<i>Nolina cismontana</i>	chaparral nolina	None/None	1B	chaparral, coastal sage scrub on sandstone or gabbro substrate/perennial shrub/May-July	Not observed during 2002 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	Small groups observed in coastal sage scrub in study area at southwest portion of the ridge between Hasley Canyon and Castaic Creek.

2002 Sensitive Plant Survey Results Valencia Commerce Center

TABLE 3
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>Oxytheca parishii</i> var. <i>abramsii</i>	Abram's oxytheca	None/None	1B	chaparral (sandy or shale)/annual herb/June-August	Not observed during 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads; nearest occurrences are in the Topatopa Mountains. No suitable habitat present onsite. Very low likelihood of occurrence within study area.
<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 2002 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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite in wash/riparian areas that were not surveyed. 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 2002 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 2002 field season. No CNDDDB records exist for the Newhall or Val Verde quads; suitable habitat exists onsite. Moderate likelihood of occurrence within study area.

2002 Sensitive Plant Survey Results Valencia Commerce Center

TABLE 3
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>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	None/None	2	meadows and seeps/perennial herb/ fertile January-September	Not observed during 2002 field season. No CNDDB 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	SE: State-listed as endangered
FT: Federally-listed as threatened	State-listed as threatened
FC: Federal candidate for listing	SR: State-listed as rare
SC: State candidate for listing	
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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Valencia Commerce Center

The species observed during the 2002 field surveys are discussed in greater detail below. A number of species found on CPNPS 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 both sensitive species found on the Commerce Center site during our surveys. These locations were mapped on a USGS 7.5 minute topographic map and digitized in the office. DUDEK used professional judgment to delineate polygons of the plants' occurrences based on the detectability of the species, topography, and vegetation. Information regarding the mapping of the sensitive species is included in the sections below (Sections 4.2.1 through 4.2.2).

4.2.1 *Calochortus clavatus* (mariposa lily)

This mariposa lily observed within the study area was identified to species level from parts still in evidence from a previous year (e.g., seed capsule, bulb coat). It is likely that it is one of the only two varieties of this species that occur in this area: *Calochortus clavatus* var. *clavatus* (club-haired mariposa lily) or *C. clavatus* var. *gracilis* (slender mariposa lily). *Calochortus clavatus* var. *gracilis* is a CNPS List 1B plant and *C. clavatus* var. *clavatus* is a CNPS List 4 plant. Slender mariposa lily has been documented to occur at the mouth of Pico Canyon and other canyons in the vicinity (Newhall Quad; CNDDDB 2002). Both varieties are typically found in chaparral, coastal sage scrub, and grasslands, often on clay, and/or rocky soils. The club-haired mariposa lily is usually found on serpentine soils.

Within the Commerce Center study area, the unidentifiable variety of *Calochortus clavatus* found by DUDEK occurs on southwest-facing ridges and slopes in Venturan coastal sage scrub and grasslands (see Figure 3). The likelihood is greater that it is the slender mariposa lily, because this taxon has been documented nearby and the plant stalks were generally smaller in habit than the larger club-haired mariposa lily. DUDEK mapped the *C. clavatus* occurrence in the study area by drawing a polygon on a USGS 7.5-minute quadrangle map around the area that contained plant material from the previous year. The *Calochortus* plants were randomly scattered within this polygon and no population estimate was made because of the deteriorated nature of the remaining stalks from the previous year. A CNDDDB form was not completed for this plant because we were not able to determine which taxon, *Calochortus clavatus* var. *clavatus* or *C. clavatus* var. *gracilis*, is present due to the lack of flowering material.

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4.2.2 *Opuntia basilaris* var. *brachyclada* (short-joint beavertail)

Short-joint beavertail has no state or federal status but is a CNPS List 1B plant. Throughout its range, it is found in a variety of scrub and woodland habitats on the north side of the Transverse Range along the edge of the Mojave Desert. The beavertail cactus identified within the study area keys to *Opuntia basilaris* var. *brachyclada* in *The Jepson Manual* (Hickman 1993), which identifies pad lengths as more than twice as long as their width. Pads on the observed beavertail cactus in the study area range in length from 315 inches, which was considerably longer than the pad width of 1-4 inches. It should be noted that in the past, beavertail cactus in the Newhall/Valencia area that were of this size were ascribed to *O. basilaris* var. *ramosa*; however, this variety was subsumed into variety *O. basilaris* var. *brachyclada* in *The Jepson Manual* (Hickman 1993).

Within the study area, short-joint beavertail was observed in sparsely scattered clumps/patches on ridges and slopes. DUDEK mapped these locations by drawing polygons on USGS 7.5-minute quadrangle maps. The one polygon depicts the distribution of short-joint beavertail (see *Figure 3*) and represents multiple individuals. A CNDDB form is included in *Appendix C*.

5.0 ACKNOWLEDGMENTS

Mark A. Elvin and Julie M. Vanderwier prepared this report, with review by Sherri L. Miller, Philip R. Behrends Ph.D., and staff at The Newhall Land and Farming Company. Mark McGinnis provided graphics and GIS mapping analyses. Tonette S. Foster provided word processing.

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APPENDIX A
RESUMES OF SURVEY PERSONNEL

MARK ELVIN
SENIOR BIOLOGIST/BOTANIST

EDUCATION

- University of California, Irvine
M.S. Ecology and Evolutionary Biology, 1992
- University of North Carolina, Chapel Hill
B.A. Biology and Philosophy, 1986

PROFESSIONAL CERTIFICATIONS

- California Department of Fish and Game State listed plants collecting permit

PROFESSIONAL AFFILIATIONS

- California Native Plant Society
- Southern California Botanists

EXPERIENCE SUMMARY

Mr. Elvin has 16 years experience as a biological resource specialist in southern California. As a Fish and Wildlife Biologist at the U.S. Fish and Wildlife Service (USFWS) he was responsible for conducting scientific reviews and analyses of species statuses for proposing and designating critical habitat within court ordered deadlines for listed fauna and flora; conducting scientific reviews and analyses of species statuses and developing recovery plans for listed species; and was the lead staff biologist for the USFWS for the implementation of the City of San Diego Multiple Species Conservation Plan (MSCP). In addition, he was the lead staff biologist at the USFWS for Quino checkerspot butterfly survey work conducted within San Diego County. Through his years of experience he has conducted sensitive species surveys in various habitat types throughout central and southern California including coastal strand, dune, coastal marsh, estuarine, coastal bluff scrub, coastal sage scrub, maritime succulent scrub, southern maritime chaparral, chaparral, valley grass lands, vernal pools, riparian scrub, riparian woodland, southern oak woodlands, alluvial fan sage scrub, montane coniferous forest, pebble plains, montane meadows, pinyon-juniper woodland, joshua tree woodland, sagebrush scrub, creosote bush scrub, alkali flats, desert mountains, creosote bush scrub, Mojavean desert scrub, and Sonoran desert scrub.

Mr. Elvin has also worked as a seed and conservation program coordinator, seed technologist, museum scientist, and conservation collection manager.

PROFESSIONAL ASSIGNMENTS

- Lead botanist responsible for the coordination and conducting of focused surveys for sensitive plant species on approximately 1,500 acres and focused surveys for the state-listed as endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) on approximately 6,000 acres at Newhall Ranch, Los Angeles County.
- Lead botanist responsible for the coordination and conducting of botanical surveys on approximately 2,400 acres at Laborde Canyon for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) in Riverside County, California.

- Served on the DUDEK project team preparing the MSHCP that covers approximately 1.2 million acres. Mr. Elvin provided input on the sensitive plants component of the plan that addresses 59 plants, including 13 that are state and/or federally listed, and species monitoring studies.
- Conducted onsite ecological and biological investigations and surveys of complex development proposals to determine their effects on flora and fauna throughout southern California.
- Conducted field surveys for state- and federally-listed and Multiple Species Conservation Program (MSCP)-covered plant species for the City of San Diego's MSCP.
- Conducted surveys for and collections of plants throughout Orange, San Diego, Riverside, San Bernardino, and Los Angeles counties and Baja California, Mexico.
- Conduct onsite ecological and biological investigations and surveys for threatened and endangered plant species throughout Los Angeles, Orange, San Diego, San Bernardino, Riverside, Imperial, Baja California (Mexico), Ventura, Monterey, San Benito, and San Luis Obispo counties.
- Participated in surveys for sensitive plants (including *Delphinium variegatum* ssp. *kinkiense* (San Clemente Island larkspur), *Lithophragma maximum* (San Clemente Island woodland star), *Lotus dendroideus* var. *traskiae* (San Clemente Island lotus), *Malacothamnus clementinus* (San Clemente Island bush mallow), *Sibara filifolia* (Santa Cruz Island rock cress)) on San Clemente and Santa Catalina Islands Los Angeles County.

Monitoring Programs

- Conducted demographic and ecological data collection surveys for the federally-listed as threatened *Deinandra conjugens* (Otay tarplant) and the federally-proposed as endangered *Ambrosia pumila* (San Diego ambrosia) and focused surveys for the federally-listed as endangered Quino checkerspot butterfly (*Euphydryas editha quino*) in San Diego County for the MSCP.

Threatened and Endangered Species

- Conducted many surveys for state- and/or federally-listed plants in San Diego, Orange, Los Angeles, Riverside, and San Bernardino counties.

SELECTED PUBLICATIONS

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JULIE M. VANDERWIER

Senior Biologist

EDUCATION

- California Polytechnic State University, San Luis Obispo
M.S. Biological Sciences (Plant Ecology and Taxonomy) 1987
- California Polytechnic State University, San Luis Obispo
B.S. Biological Sciences (Field Biology) 1977

EXPERIENCE SUMMARY

Ms. Vanderwier has 20 years of experience as a field ecologist and regulatory biologist in central and southern California. Although trained as a plant ecologist, she also has considerable field experience with a number of sensitive and listed animal species, particularly those which occur in vernal pools, coastal salt marsh, and sage scrub habitats. Plant communities with which she has specific expertise include coastal sage scrub, maritime chaparral, coastal salt marsh, and vernal pools, as well as the flora of the California Channel Islands and the Baja California peninsula. In 1991, she was the lead botanist on a five-week survey throughout Baja to determine the presence and distribution of the California gnatcatcher and its habitat. In concert with her field experience, Ms. Vanderwier has 16 years of regulatory experience, and has prepared numerous technical documents, including biological constraints reports, environmental and biological assessments, biological opinions, and habitat conservation plans. Work experience with the Department of Defense, California Department of Fish and Game, local jurisdictions, University of California Natural Reserve System, U.S. Fish and Wildlife Service, and the private sector has provided Ms. Vanderwier with an extremely diverse biological background.

At DUDEK, Ms. Vanderwier serves as a senior biologist in the Environmental Sciences Division. In that capacity, she is responsible for conducting sensitive plant surveys, plant community identification and mapping, preparation of biological constraints and technical reports, and conservation analyses for target species as part of the preparation of large-scale conservation plans. She is also responsible for quality assurance and review of work completed by other DUDEK biologists, and for technical training of staff.

Ms. Vanderwier is authorized by the California Department of Fish and Game (pursuant to Sections 1907a and 2081a of the Fish and Game Code) to collect state-designated endangered, threatened, and rare plants.

PROFESSIONAL ASSIGNMENTS

Focused Surveys and Plant Community Mapping

- Botanist, and one of two team leaders, responsible for the coordination and conducting of focused surveys for the state-listed endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) on approximately 6,000 acres at Newhall Ranch, Los Angeles County.
- Conducted field surveys and mapping of native grasslands on approximately 4,800 acres of Rancho Mission Viejo lands in Orange County. Surveys were concentrated in the areas of Chiquita, Cristianitos, and Upper and Lower Gabino Canyons.

- Conducted field surveys for state and federally listed, and MSCP-covered plant species, along with vegetation mapping, for over 1,000 acres of coastal sage and chaparral at Black Mountain City Park, Paraiso Cumbres, and Montaña Mirador, City of San Diego, Multiple Species Conservation Program (MSCP).
- Lead botanist responsible for conducting field surveys for sensitive, proposed, or listed plant species and the classification and mapping of vegetation for hundreds of projects throughout central and southern California (San Luis Obispo, Santa Barbara, Kern, Ventura, Orange, San Diego, Riverside, and Imperial counties).
- Conducted protocol surveys for listed plant and anostracan species as part of data collection for numerous vernal pool projects in San Diego and Riverside counties.
- Botanist, and one of two team leaders, providing botanical support during a five-week presence-absence survey for California gnatcatchers in Baja California, Mexico. Vegetation transect data were collected and analyzed for over 100 sites throughout the northern two-thirds of the peninsula.
- Conducted demographic studies and ecological data collection and analysis for the federally-listed endangered salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*) at Mugu Lagoon, Ventura County, pursuant to a section 7 consultation with the U.S. Fish & Wildlife Service. Additional data was collected at Newport Back Bay, Orange County; Ormond Beach, Ventura County; Carpinteria Marsh, Santa Barbara County; and Sweetwater Marsh, San Luis Obispo County.
- Conducted protocol-level presence-absence surveys for the federally threatened coastal California gnatcatcher (*Poliophtila californica californica*) and other sensitive coastal sage scrub species for numerous projects throughout Los Angeles, Orange, San Diego, San Bernardino, and Riverside Counties, and Baja California, Mexico.
- Conducted rare plant surveys, desert tortoise presence-absence surveys, and tortoise movement studies (radio-tracking) at Eagle Mountain and on Chuckawalla Bench (BLM lands), Riverside County.
- Participated in surveys for sensitive plants and wildlife (including island fox and island night lizard) on San Nicolas Island, and listed saltmarsh birds (including light-footed clapper, California least tern, and Belding's savannah sparrow) at Mugu Lagoon, Ventura County.
- Conducted field work and participated in the preparation of vegetation maps for the City of San Diego's pilot vegetation mapping for the Clean Water program.

Habitat Conservation Planning

- Lead staff biologist responsible for federal resource agency oversight in the preparation of the Multiple Habitats Conservation Plan (MHCP) and the City of Carlsbad's Habitat Management Plan (HMP).
- Assisted in the conservation analysis for 87 target species proposed for coverage in the MSCP (City and County of San Diego) pursuant to criteria necessary for the issuance of a section 10(a)(1)(B) permit pursuant to the federal Endangered Species Act (ESA).

- Participated in data collection and analysis in support of the identification of critical habitat for the coastal California gnatcatcher, San Diego fairy shrimp, Riverside fairy shrimp, and southern maritime chaparral plants. Provided input regarding existing conservation areas and strategies.
- Lead staff biologist responsible for resource agency oversight and permit processing for a single-species (California gnatcatcher) section 10(a)(1)(B) permit for a residential project in San Marcos, including preparation of all necessary NEPA documentation (*e.g.*, biological opinion, finding of no significant impact, statement of findings).

Habitat Restoration and Monitoring

- Assisted in the development of revegetation and monitoring programs for the First San Diego River Improvement Project (FSDRIP) as compensation for impacts to riparian and freshwater marsh habitats as a result of flood control measures along a one-mile reach of the San Diego River.
- Assisted in the collection and analysis of floral, faunal, and hydrological data for the Brown Parcel (Lopez Ridge) Vernal Pool Remediation Plan in Peñasquitos Canyon, Parcel C (Beazer) Vernal Pool Restoration Plan on Marine Corps Air Station (MCAS) Miramar, and vernal pools created by Caltrans along Highway 163 adjacent to MCAS Miramar.

TRAINING

Vegetation Rapid Assessment Method

California Native Plant Society

Julie Evens, CNPS Vegetation Ecologist

Location: Volcan Mountain, San Diego County, CA

Date: June 29, 2001

Measuring and Monitoring Plant Populations

Bureau of Land Management Course 1730-05

Drs. Caryl Elzinga, Dan Salzer, and John Willoughby

Location: Lake Tahoe, CA

Date: July 2000

Habitat Conservation Planning for Endangered Species

U.S. Fish & Wildlife Service

Location: Carlsbad, CA

Date: February 2000

Interagency Consultation (Section 7) for Endangered Species

U.S. Fish & Wildlife Service

Location: Carlsbad, CA

Date: January 2000

Anostracan (Fairy Shrimp) Identification Course

Dr. Denton Belk

Location: Jones & Stokes, Sacramento, CA

Date: November, 1995

PUBLICATIONS

"Scrub Descriptions of the Baja California Peninsula, Mexico." Zippin, David B. and Vanderwier, Julie M. *Madroño* 41(2):85-119, 1994.

"Observations of Haustoria and Host Preference in *Cordylanthus maritimus* ssp. *maritimus* (Scrophulariaceae) at Mugu Lagoon, Ventura County, California." Newman, Judith C. and Vanderwier, Julie M. *Madroño* 31(1):185-186, 1984.

CATHLEEN M. WEIGAND
Botanist / Biologist

EDUCATION/REGISTRATION

- Humboldt State University
B.S., Botany and Biology, 2000
- New Dawn Center (Finca Alba Nueva), San Isidro, Costa Rica
Senior Thesis Study, 1997

PROFESSIONAL CERTIFICATIONS

- Certified Wetland Delineator (#2133) - Army Corps of Engineers Wetland Delineation & Management Training Program - 2002
- U.S.F.S. Wildland Firefighter Red Card Certified

EXPERIENCE SUMMARY

Ms. Weigand is a botanist/biologist with over three years experience in field studies, environmental document preparation, and habitat restoration and conservation. Project experience includes biological resource surveys, data collection and analysis, environmental assessments, wetland delineations, permitting, mitigation design, implementation and monitoring, and endangered and sensitive plant species surveys. Projects include issues relative to the California Coastal Act, the California Department of Fish and Game Code (Sections 1601 and 1603), and the federal Clean Water Act (Sections 401 and 404). Ms. Weigand has engaged in interagency coordination and public outreach efforts due to the complexities of each project. Her current role at Dudek & Associates includes biological resources assessment and impact analysis, wetland delineations and permitting, and habitat restoration and monitoring.

PROFESSIONAL ASSIGNMENTS

- Experience with seed and plant propagation.
- Greenhouse work (Humboldt State University- volunteer): watering, caring and maintenance of plants, re-potting/propagation, nomenclature of species housed in greenhouse, and preparation of species used for classroom and experimental purposes.
- Horticulture and nursery experience: watering, fertilizing, caring and maintenance of plants, propagation (plant cuttings, roots, and seeds), re-potting, installation and design of irrigation systems.
- Experience with growth chambers, preparation and implementation of fertilizers and composts, and the irrigation of greenhouses and farm properties.
- Riparian and wetland revegetation implementation.
- Seed and pollen collection.

- Supervising of farm and revegetation crews.
- Implementation of farm crops, community and personal gardens using sustainable agricultural practices.
- Revegetation and landscape design and implementation, monitoring, maintenance, and data collection.

APPENDIX B
VASCULAR PLANT SPECIES OBSERVED
VALENCIA COMMERCE CENTER SITE (2002)

2002 Sensitive Plant Survey Results Valencia Commerce Center

APPENDIX B VASCULAR PLANT SPECIES – VALENCIA COMMERCE CENTER

ANGIOSPERMAE (DICOTYLEDONES)

ANACARDIACEAE - SUMAC FAMILY

Rhus trilobata - squaw bush

ASTERACEAE - SUNFLOWER FAMILY

Ambrosia acanthicarpa - annual burweed

Artemisia californica - coastal sagebrush

Baccharis pilularis - coyote brush

Baccharis salicifolia - mule fat

Brickellia californica - California brickellbush

* *Centaurea melitensis* - star thistle

Chaenactis glabriuscula - yellow pincushion

Cirsium occidentale var. *californicum* - California thistle

Conyza canadensis - horseweed

Chrysothamnus nauseosus - rabbit brush

Encelia californica - California bush sunflower

Encelia farinosa - brittlebush, incensio

Ericameria palmeri var. *pachylepis* - goldenbush

Eriophyllum confertiflorum - long-stem golden yarrow

Filago californica - California fluffweed

Gnaphalium californicum - California everlasting

Helianthus annuus - common sunflower

Heterotheca grandiflora - telegraph weed

Lepidospartum squamatum - scale-broom

Lessingia filaginifolia - virgate cudweed aster

Malacothrix saxatilis - cliff malacothrix

Solidago californica - California goldenrod

* *Sonchus oleraceus* - common sow-thistle

Xanthium strumarium - cocklebur

BORAGINACEAE - BORAGE FAMILY

Amsinckia menziesii - yellow fiddleneck

Cryptantha sp. - forget-me-not

Heliotropium curassavicum - wild heliotrope

2002 Sensitive Plant Survey Results

Valencia Commerce Center

APPENDIX B (*Continued*)

BRASSICACEAE - MUSTARD FAMILY

- * *Hirschfeldia incana* - short-podded mustard

CACTACEAE - CACTUS FAMILY

- Opuntia basilaris* var. *brachyclada* - short-joint beavertail
- Opuntia littoralis* - coastal prickly-pear

CAPRIFOLIACEAE - HONEYSUCKLE FAMILY

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

CHENOPODIACEAE - GOOSEFOOT FAMILY

- Chenopodium californicum* - California goosefoot
- * *Salsola tragus* - Russian-thistle

CRASSULACEAE - STONECROP FAMILY

- Crassula connata* - dwarf stonecrop

CUCURBITACEAE - GOURD FAMILY

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

CUSCUTACEAE - DODDER FAMILY

- Cuscuta californica* - California dodder

EUPHORBIACEAE - SPURGE FAMILY

- Chamaesyce polycarpa* - small-seed sand mat
- Eremocarpus setigerus* - doveweed
- Stillingia linearifolia* - linear-leaved stillingia

FABACEAE - PEA FAMILY

- Astragalus trichopodus* - Santa Barbara locoweed
- Lotus purshianus* - Spanish-clover
- Lotus scoparius* - deerweed
- Lotus strigosus* - strigose deerweed
- Lupinus bicolor* - Lindley's annual lupine
- Lupinus hirsutissimus* - stinging lupine

2002 Sensitive Plant Survey Results

Valencia Commerce Center

APPENDIX B (*Continued*)

- Lupinus succulentis* - arroyo lupine
- * *Medicago polymorpha* - California burclover
- * *Melilotus alba* - white sweet-clover

FAGACEAE - BEECH FAMILY

- Quercus agrifolia* - coast live oak
- Quercus lobata* - valley oak

GERANIACEAE - GERANIUM FAMILY

- * *Erodium cicutarium* - red-stemmed filaree

HYDROPHYLLACEAE - WATERLEAF FAMILY

- Eriodictyon crassifolium* var. *nigrescens* - yerba santa
- Phacelia ramosissima* - shrubby phacelia

LAMIACEAE - MINT FAMILY

- * *Marrubium vulgare* - horehound
- Salvia apiana* - white sage
- 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 cheiranthifolia* - beach evening primrose
- Clarkia purpurea* - winecup clarkia
- Oenothera elata* - evening primrose

PAPAVERACEAE - POPPY FAMILY

- Eschscholzia californica* - California poppy

2002 Sensitive Plant Survey Results

Valencia Commerce Center

APPENDIX B (*Continued*)

POLEMONIACEAE - PHLOX FAMILY

Eriastrum sapphirinum - sapphire eriastrum
Linanthus pygmaeus - linanthus

POLYGONACEAE - BUCKWHEAT FAMILY

Eriogonum elongatum - long-stemmed buckwheat
Eriogonum fasciculatum ssp. *foliolosum* - California buckwheat
Eriogonum gracile - slender woolly buckwheat

SALICACEAE - WILLOW FAMILY

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

SCROPHULARIACEAE - FIGWORT FAMILY

Castilleja exserta - common owl's-clover

SOLANACEAE - NIGHTSHADE FAMILY

Datura wrightii - western jimsonweed
* *Nicotiana glauca* - tree tobacco

TAMARICACEAE - TAMARISK FAMILY

* *Tamarix* sp. - tamarisk

ANGIOSPERMAE (MONOCOTYLEDONES)

LILIACEAE - LILY FAMILY

Calochortus clavatus - mariposa lily
Dichelostemma capitatum - blue dicks
Yucca whipplei - Our Lord's candle

POACEAE - GRASS FAMILY

* *Arundo donax* - giant reed
* *Avena barbata* - slender oat
* *Bromus diandrus* - ripgut grass
* *Bromus madritensis* ssp. *rubens* - foxtail chess

2002 Sensitive Plant Survey Results Valencia Commerce Center

APPENDIX B (*Continued*)

Leymus condensatus - giant ryegrass

Nassella lepida - foothill needlegrass

* *Schismus barbatus* - abumashi

* signifies introduced (non-native) species

APPENDIX C
CALIFORNIA NATURAL DIVERSITY
DATA BASE 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 # _____

Scientific name (no codes): *Opuntia basilaris* var. *brachyclada*

Reporter: Julie Vanderwier Phone: (760) 942-5147

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

Date of Field Work: 11 May 2002 County: Los Angeles Collection: no If yes, # Mus./Herb:

Location: Southeastern edge of the Topatopa Mountains, Valencia Commerce Center, on southwestern portion of the ridge just north of the confluence of Castaic Creek and Hasley Canyon.

Quad Name: Newhall
X 7½' 15' Elevation: 1100' T 4N R 16W W ¼ of W ¼ Sec 3

Landowner/Manager: The 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? X Yes No Unknown

Total # of Individuals = did not count Is this a subsequent visit? Yes X No Compared to your last visit: more same fewer

Phenology (plants): 90 % vegetative ~5 % flowering* ~5 % fruiting

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):

Venturan coastal sage scrub with *Artemisia californica*, *Eriogonum fasciculatum*, *E. elongatum*, *E. gracile*, *Salvia leucophylla*, *Ericameria palmeri* var. *pachypus*, *Mirabilis californica*

Current Land Use/Visible Disturbances/Possible Threats: Current Land Use - Vacant. Visible Disturbances - Trash dumping, off road vehicle activity, cattle grazing, utility lines/easements. Possible Threats - Trash dumping, off road vehicle activity proposed commercial development, utility lines/easements.

Overall Site Quality: Excellent X Good Fair Poor

Comments: Surveys were conducted until September 2002.

Should/Could this site be protected? How?

Other comments:

DETERMINATION (Check one or more, fill in blanks)

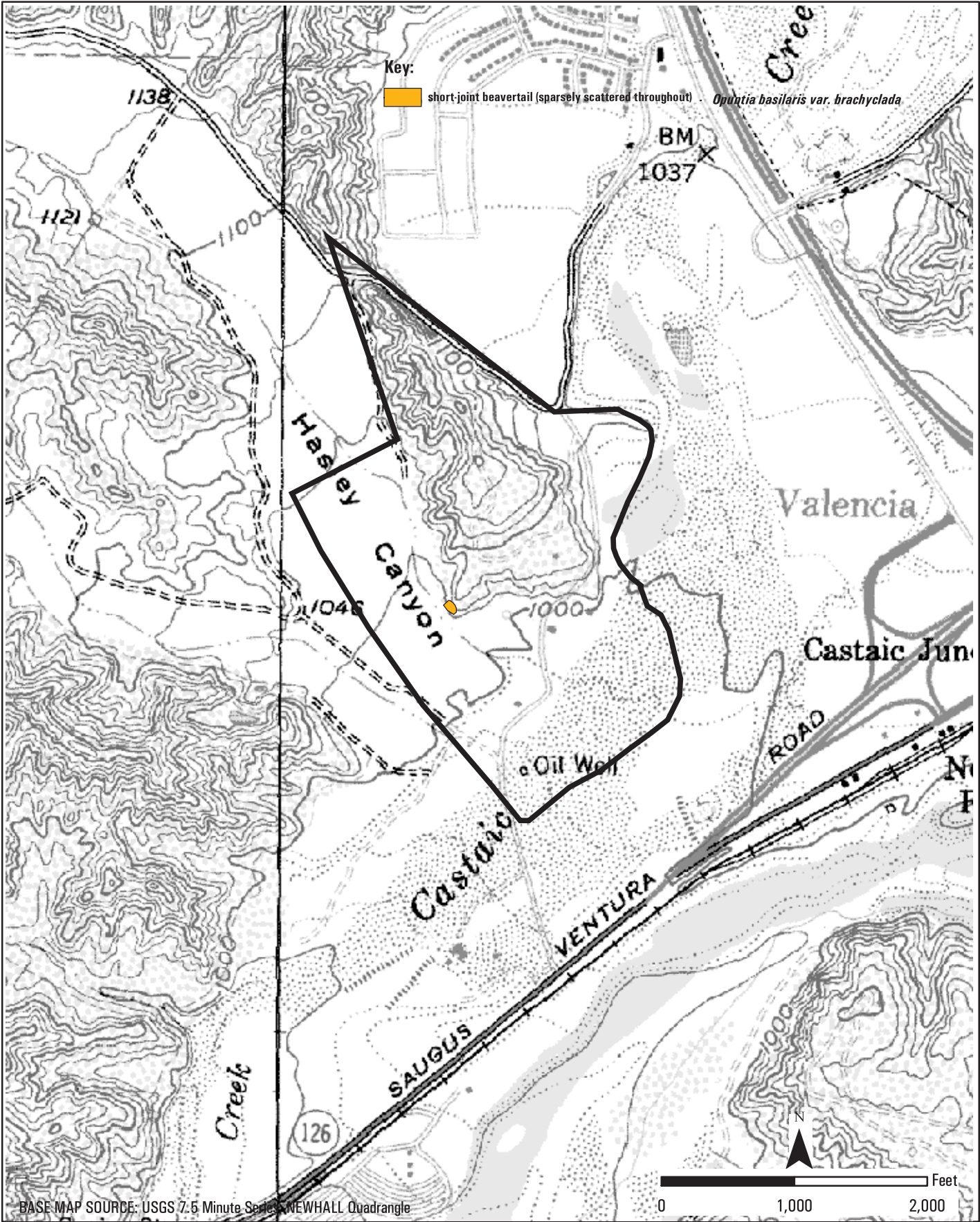
- X Keyed in a site reference: Jepson
- X Compared with specimen housed at: RSA
- Compared with photo/drawing in:
- By another person (name):
- X Other: compared with plants S of the Santa Clara River

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 No



Valencia Commerce Center