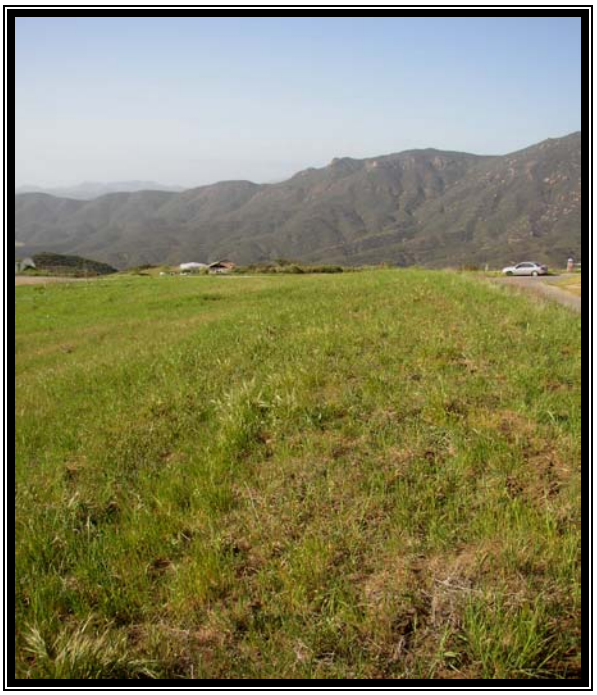
David Magney Environmental Consulting

BIOLOGICAL RESOURCES AND IMPACT ASSESSMENT OF THE KILLEN PROPERTY, PACIFIC VIEW DRIVE, DEALS FLAT, VENTURA COUNTY, CALIFORNIA

(VENTURA COUNTY PLANNING NO: LU06-0158)



Prepared for:
VENTURA COUNTY PLANNING DIVISION

On Behalf of:
PATRICK KILLEN

DMEC Mission Statement:
To provide quality environmental consulting services, with integrity, that protect and enhance the human and natural environment.

July 2007

DMEC

Biological Resources and Impact Assessment of the Killen Property, Pacific View Drive, Deals Flat, Ventura County, California

(Ventura County Planning No: LU06-0158)

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SECTION 1. PROJECT DESCRIPTION

LOCATION

The Killen property is a 1.08-acre parcel located at an unassigned address on Pacific View Drive (Deals Flat) in the Santa Monica Mountains region of the unincorporated area of Ventura County, California (APN 700-0-010-275). The project site is located at NE¼ NW¼ NE¼ S16 T1S R20W, Triunfo Pass, California Quadrangle (USGS 7.5-minute Series Topographic Map), and at the approximate coordinates of 34.08821ºN latitude and 118.97675ºW longitude. In the region, Serrano Canyon (a tributary to Sycamore Canyon) is to the northwest, Little Sycamore Canyon is to the east, Boney Mountain is to the north, and the Pacific Ocean is to the south. Deals Flat is immediately east of the project site.

Note: The southeastern most corner of the Killen property is kiddy-corner to the northwestern- most corner of the Beltrami property, for which DMEC conducted the CEQA Initial Study and prepared the *Biological Resources Assessment for Deals Flat Property on Pacific View Drive* report (DMEC 2005).

BACKGROUND AND PURPOSE

The applicant (Mr. Killen) is proposing to construct a new, single-story, 2,212-square-foot single family dwelling, with a detached, 410-square-foot garage with a 1,281-square-foot horse stable (with four stalls), and a swimming pool. The subject parcel is 1.08 acres. Water will be provided through a private well, and sewage disposal will be provided through a private septic system. No trees are proposed for removal. Approximately 150 cubic yards (4,000 square feet) of grading is proposed for the project, and excavated material is proposed for relocation onsite. Access would be provided via a new driveway from Pacific View Drive.

David Magney Environmental Consulting (DMEC) was contracted by the County of Ventura to conduct seasonal biological field surveys, vegetation mapping, and impact assessment for this proposed development project.

DMEC conducted the winter and spring surveys in order to detect, observe, and map existing conditions and any special-status resources existing and potentially occurring onsite. The entire property was surveyed for sensitive biological resources to meet Ventura County Planning Division (VCPD) requirements. The purpose of this report is to present the results of both the winter and spring 2007 surveys, and to provide the impact assessment for the Killen project.

Figure 1. Location of the Killen Property

Figure 2. Aerial Photograph of the Killen Property (2006)

SECTION 2. METHODS

FIELD SURVEYS

Two seasonal field surveys were conducted of the project site, one on 3 January 2007 by Cher Batchelor, and the second survey on 31 May 2007 by biologists Ms. Batchelor and William Abbott. These surveys covered the winter and spring seasons.

The seasonal surveys were conducted onsite to identify the native and naturalized flora and fauna onsite, including special-status plant and wildlife species and sensitive habitats. The parcel was walked over to account for as many observable plant and wildlife species as feasible onsite, without conducting intensive sampling, such as trapping or other observation techniques. Global Positioning System (GPS) units were carried to track footpaths and to mark waypoints of findings of interest. DMEC concentrated survey efforts in and around the areas that have the potential be directly affected by any proposed development activities. Figure 3, Survey Paths on the Killen Property, illustrates areas walked and surveyed by DMEC biologists, which included a portion of the parcel to the west.

MAPPING HABITATS

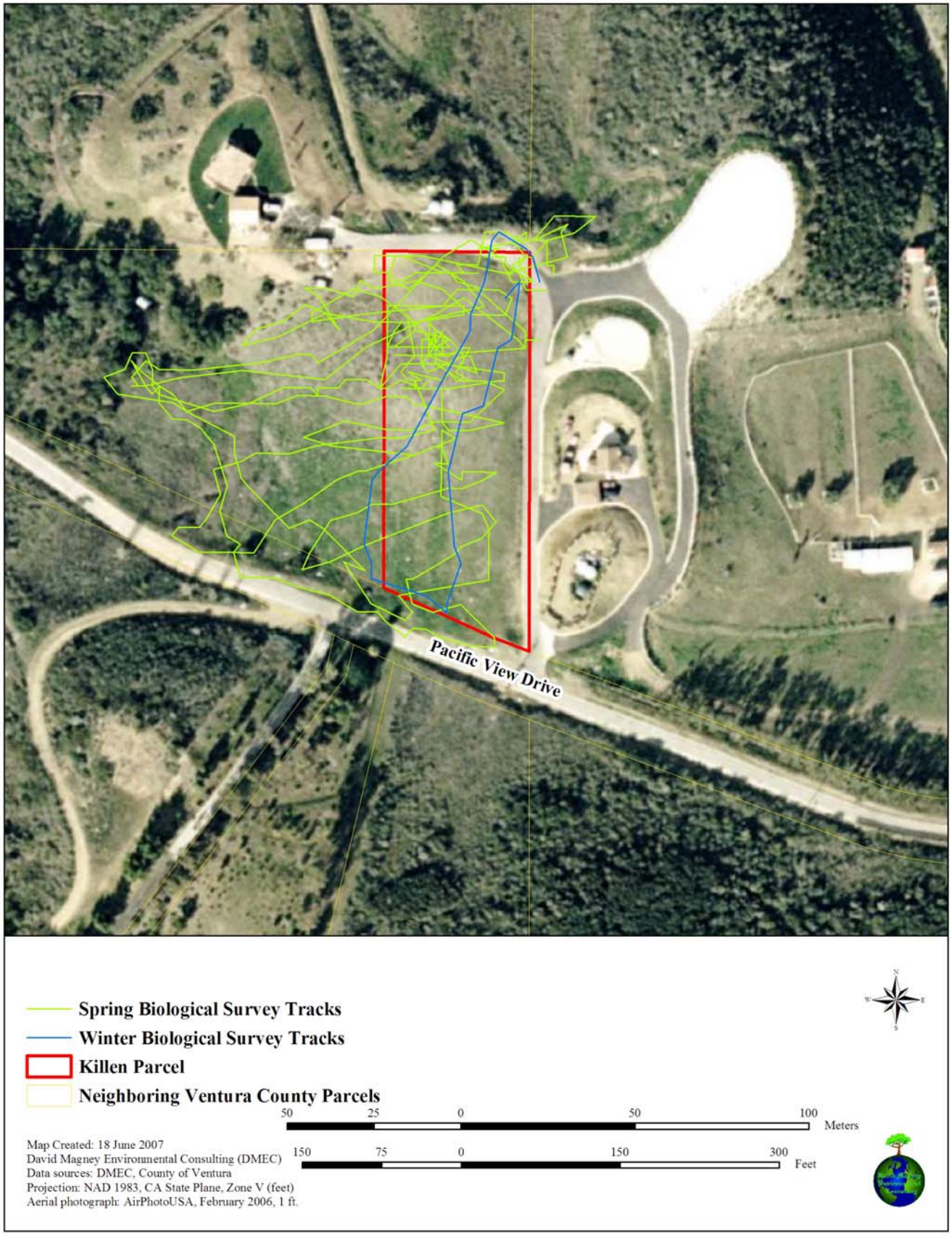
Mapping of vegetation alliances was performed with the aid of ArcGIS programs (ArcView 3.3, ArcMap 8.2 and 9.1, and related programs). The vegetation map was drawn onscreen at a scale of 1:2,000 to 1:5,000 using color aerial photographs (AirPhotoUSA), also used as a base layer. The polygons of this map differentiate the distinct land cover signatures related to patterns observed on the aerial photograph. These polygons were classified and attributed with different vegetation alliances after checking all available vegetation data gathered onsite by DMEC. DMEC's field data were also consulted as ground-truthing points in order to discern the boundaries of vegetation alliances that were not easily detected with the color aerial photograph.

LITERATURE REVIEW

DMEC conducted a search of the California Department of Fish and Game's (CDFG's) California Natural Diversity Database (CNDDB) RareFind3 (CDFG 2007) for the Triunfo Pass, California Quadrangle (USGS 7.5-minute Series Topographic Map) (in which the Killen property exists), and all surrounding quads (Point Mugu, Camarillo, Newbury Park, Thousand Oaks, and Point Dume). DMEC conducted this database search to account for special-status species tracked by CDFG in the area and with potential to occur at the project site.

DMEC also conducted a literature search of California Native Plant Society's *Inventory of Rare and Endangered Plants of California* (CNPS 2001, 2006) and the *Checklist of Ventura County Rare Plants* (Magney 2007) to account for other special-status plant species not tracked by CNDDB with potential to occur in the vicinity of the proposed project site. Projects reviewed under California Environmental Quality Act (CEQA) should consider impacts to Locally Important Species as significant. Generally, impacts to an entire population of one or more of the species listed herein would be considered significant. The CNDDB Special Animals List (CDFG 2006) was also referenced to determine if any wildlife species observed onsite are considered special-status. DMEC also searched in-house files on occurrences of plants and wildlife.

Figure 3. Survey Paths on the Killen Property



DEFINITIONS OF SPECIAL-STATUS RESOURCES

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife.

Special-status species are plants and animals that are at least one of the following:

- *Listed as endangered or threatened* under Federal or California Endangered Species Acts,
- *Listed as rare* under the California Native Plant Protection Act, or
- *Considered rare* (but not formally listed) by resource agencies, professional organizations (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service), pursuant to the Federal Endangered Species Act or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Special-status species are defined in Table 1 below.

Table 1. Definitions of Special-Status Species

o Plants and animals legally protected under the California and Federal Endangered Species Acts or under other regulations. o Plants and animals considered sufficiently rare by the scientific community to qualify for such listing; or o Plants and animals considered to be sensitive because they are unique, declining regionally or locally, or are at the extent of their natural range.	
Special-Status Plant Species	**Special-Status Animal Species**
o Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.12 for listed plants and various notices in *Federal Register* for proposed species). o Plants that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (55 CFR 6184, February 21, 1990). o Plants that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines*, Section 15380). o Plants considered by CNPS to be "rare, threatened, or endangered" in California (Lists 1B and 2 in CNPS 2001). o Plants listed by CNPS as plants needing more information and plants of limited distribution (Lists 3 & 4 in CNPS 2001). o Plants listed by CNPS as locally rare (Magney 2007). o Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CCR 670.5). o Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.). o Plants considered sensitive by other federal agencies (i.e. U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions. o Plants considered sensitive or unique by the scientific community; occurs at natural range limits (*State CEQA Guidelines*, Appendix G).	o Animals listed/proposed for listing as threatened/endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in *Federal Register* for proposed species). o Animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under Federal Endangered Species Act (54 CFR 554). o Animals that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines*, Section 15380). o Animals listed or proposed for listing by the State of California as threatened and endangered under the California Endangered Species Act (14 CCR 670.5). o Animal species of special concern to the CDFG. o Animal species that are fully protected in California (California Fish & Game Code, Sections 3511 [birds], 4700 [mammals], 5050 [reptiles, amphibians]).

The CNPS' *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001, 2006[1]) categorizes rare California plants into one of five lists (1A, 1B, 2, 3, and 4) representing five levels of species status, one of which is assigned to a sensitive species to indicate its status of rarity or endangerment and distribution. Most taxa also receive a threat code extension following the List (e.g. 1B.1, 2.3), which replaces the old R-E-D Code previously used by CNPS. Table 2, California Native Plant Society List, provides a definition for each List code number, and Table 3, California Native Plant Society List Threat Code Extensions defines the CNPS List Threat Code Extensions that indicates the level of endangerment within the state.

Table 2. California Native Plant Society List (CNPS List)

CNPS List	Definition
1A	Presumed Extinct in California
1B	Rare, Threatened, or Endangered in California and elsewhere
2	Rare, Threatened, or Endangered in California, but more common elsewhere
3	Need more information (a Review List)
4	Plants of Limited Distribution (a Watch List)

Table 3. California Native Plant Society List Threat Code Extensions

CNPS Threat Code Extension	Definition
.1	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Fairly endangered in California (20-80% occurrences threatened)
.3	Not very endangered in California (<20% of occurrences threatened)

The CNDDB Element Ranking system provides a numeric global and state-ranking system for all special-status species tracked by the CNDDB. The global rank (G-rank) is a reflection of the overall condition of an element (species or natural community) throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank. This Element Ranking system is defined below in Table 4, California Natural Diversity Database Element Ranking System.

As described for the CNDDB ranking, not all special-status species considered in this report are tracked by CNPS at a statewide level; however, CNPS, primarily through local chapters, has developed regional/county lists of **Species of Local Concern** or **Locally Rare Species**. The Channel Islands Chapter of CNPS has developed a list of locally rare plants of Ventura County (Magney 2007), which is regularly updated. According to Magney (2007), Ventura County Locally Rare plant species are defined as plants with only 5 or fewer occurrences in Ventura County, and Ventura County Locally Uncommon species are defined as plants with only 6 to 10 occurrences in the County, regardless of their rarity status outside Ventura County.

The Ventura County Planning Division (VCPD) has preliminarily adopted a list of locally rare species of plants and wildlife, referred to as **Ventura County Locally Important Species**, which are taxa that are declining throughout the extent of their range and have a maximum of five (5) element occurrences (VCPD 2005).

[1] Changes to the *Inventory* as published on the CNPS website: http://www.cnps.org/programs/Rare_Plant/inventory/changes/changes_accepted.htm.

Table 4. California Natural Diversity Database Element Ranking System

Global Ranking (G)	
G1	Less than 6 viable element occurrences (pops for species), OR less than 1,000 individuals, OR <809.4 hectares (ha) (2,000 acres [ac]).
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac).
G3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac).
G4	Apparently secure; rank lower than G3, factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat).
G5	Population, or stand, demonstrably secure to ineradicable due to being commonly found in the world.
GH	All sites are **historic**; the element has not been seen for at least 20 years, but suitable habitat still exists.
GX	All sites are **extirpated;** this element is extinct in the wild.
GXC	Extinct in the wild; exists in cultivation.
G1Q	The element is very rare, but there is a taxonomic question associated with it.
Subspecies Level: Subspecies receive a **T-rank** attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. **For example:** *Chorizanthe robusta* var. *hartwegii* is ranked G2T1. The G-rank refers to the whole species range (*Chorizanthe robusta*), whereas the T-rank refers only to the global condition of the variety (var. *hartwegii*).	
State Ranking (S)	
S1	Less than 6 element occurrences OR less than 1,000 individuals OR less than 809.4 ha (2,000 ac). S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known
S2	6 to 20 element occurrences OR 3,000 individuals OR 809.4 to 4,047 ha (2,000 to 10,000 ac). S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known..
S3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac). S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known
S4	Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). NO THREAT RANK.
S5	Demonstrably secure to ineradicable in California. NO THREAT RANK.
SH	All California sites are **historic**; the element has not been seen for at least 20 years, but suitable habitat still exists.
SX	All California sites are **extirpated;** this element is extinct in the wild.
Notes	
1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take an aerial view when ranking sensitive elements rather than simply counting element occurrences.	
2. Uncertainty about the rank of an element is expressed in two major ways: by expressing the rank as a range of values (e.g. S2S3 means the rank is somewhere between S2 and S3), and by adding a ? to the rank (e.g. S2?). This represents more certainty than S2S3, but less than S2.	

SECTION 3. BIOLOGICAL RESOURCES SURVEY RESULTS

The project site flora, fauna, and habitats, including special-status biological resources, are discussed in detail in the following subsections.

SETTING

Currently, the property is undeveloped; however, the entire property has been disced. Evaluation of aerial photographs show the property was inhabited by Coastal Sage Scrub prior to discing activities. Very little native vegetation was observed during the winter survey, in part due to the extreme drought of 2006-2007. Only Ruderal Grassland Alliance established onsite as of the spring survey. Coastal Sage Scrub exists to the north, *Quercus agrifolia* Alliance exists in the adjacent property to the west, a residence exists to the east, and a drainage swale exists immediately to the north, off the property. The elevation onsite is approximately 1,410 feet above mean sea level.

FLORA

The flora of the Killen property project site includes the vascular plants (flowering) existing onsite. No nonvascular plants (lichens or bryophytes) were observed onsite. Only fourteen (14) plant species were directly observed onsite by DMEC during the winter field survey conducted on 3 January 2006, as significant bare ground existed as result of discing activities. As of the spring survey, a total of 70 plant species were observed onsite. Of the 70 vascular plant taxa, 42 (60%) are native species and 28 (40%) are introduced naturalized species. The current species richness is significantly low due to recent and likely recurring vegetation discing onsite, and the severe drought. What was once sensitive Coastal Sage Scrub habitat has been reduced to a disturbed ruderal field. The property currently consists primarily of introduced annual grasses and ruderal forbs. Table 5, Plants Observed at the Killen Property, lists all plant species observed on the Killen property and nearby during the winter and spring biological surveys.

The severe drought of 2006-2007 almost certainly limited the number of annual and perennial plant species that germinated this year, leaving high potential for one or more special-status species that may occur onsite to go undetected. Ideally, field surveys should be conducted during seasons and years when climatic conditions have not limited detection.

Table 5. Plants Observed at the Killen Property

Scientific Name[2]	Common Name	Habit[3]	WIS[4]	Family
Amsinckia menziesii var. *intermedia*	Rancher's Fire	AH	.	Boraginaceae
Anagallis arvensis *	Scarlet Pimpernel	AH	FAC	Primulaceae
Artemisia californica	California Sagebrush	S	.	Asteraceae
Asclepias fascicularis	Narrowleaf Milkweed	PH	FAC	Apocynaceae
Avena barbata *	Slender Wild Oat	AG	.	Poaceae
Avena fatua *	Wild Oat	AG	.	Poaceae
Baccharis pilularis	Coyote Brush	S	(FAC-)	Asteraceae
Brassica nigra *	Black Mustard	AH	.	Brassicaceae
Bromus catharticus *	Rescue Grass	AG	.	Poaceae
Bromus diandrus *	Ripgut Grass	AG	(FACU)	Poaceae
Bromus hordeaceus *	Soft Chess	AG	FACU-	Poaceae
Bromus madritensis ssp. *rubens* *	Red Brome	AG	NI	Poaceae
Carduus pycnocephalus *	Italian Thistle	AH	.	Asteraceae
Ceanothus megacarpus var. *megacarpus*	Bigpod Ceanothus	S	.	Rhamnaceae
Centaurea melitensis *	Tocalote	AH	.	Asteraceae
Cercocarpus betuloides var. *betuloides*	Birchleaf Mountain Mahogany	S	.	Rosaceae
Corethrogyne filaginifolia var. *filaginifolia*	California Cudweed-aster	PH	.	Asteraceae
Deinandra fasciculata	Fasciculed Tarplant	AH	.	Asteraceae
Dichelostemma capitatum ssp. *capitatum*	Blue Dicks	PG	.	Themidaceae
Epilobium canum ssp. *canum*	California Fuchsia	PH	.	Onagraceae
Eriogonum cinereum	Ash Coast Buckwheat	S	.	Polygonaceae
Erodium cicutarium *	Redstem Filaree	AH	.	Geraniaceae
Erodium moschatum var. *moschatum**	Whitestem Filaree	AH	.	Geraniaceae
Foeniculum vulgare *	Sweet Fennel	PH	FACU	Apiaceae
Fritillaria biflora* var. *biflora	**Chocolate Lily**	PH	.	Liliaceae
Galium angustifolium ssp. *angustifolium*	Chaparral Bedstraw	S	.	Rubiaceae
Galium porrigens var. *porrigens*	Climbing Bedstraw	PV	.	Rubiaceae
Grindelia camporum* var. *bracteosum	**Bracted Gumplant**	S	FACU	Asteraceae
Hazardia squarrosa var. *grindelioides*	Sawtooth Goldenbush	S	.	Asteraceae

[2] * = Introduced/naturalized plant species. **Bold** = Special-status species. Scientific and common names follow Hickman (1993) and Flora of North America (Flora of North America Editorial Committee 1993-2007).

[3] Habit definitions: AG = annual grass or graminoid; PG = perennial grass or graminoid; AH = annual herb; PH = perennial herb; PV = perennial vine; S= shrub; and T = tree.

[4] WIS = Wetland Indicator Status. The following code definitions are according to Reed (1988):
OBL = obligate wetland species, occurs almost always in wetlands (>99% probability).
FACW = facultative wetland species, usually found in wetlands (67-99% probability).
FAC = facultative species, equally likely to occur in wetlands or nonwetlands (34-66% probability).
FACU = facultative upland species, usually found in nonwetlands (67-99% probability).
+ or - symbols are modifiers that indicate greater or lesser affinity for wetland habitats.
NI = no indicator has been assigned due to a lack of information to determine indicator status.
* = a tentative assignment to that indicator status by Reed (1988).
Parentheses indicate a wetland status as suggested by David L. Magney based on extensive field observations.

Scientific Name[2]	Common Name	Habit[3]	WIS[4]	Family
Hesperoyucca [*Yucca*] *whipplei* ssp. *whipplei*	Our Lord's Candle	S	.	Agavaceae
Heteromeles salicifolia	Toyon	S	.	Rosaceae
Hirschfeldia incana *	Summer Mustard	PH	.	Brassicaceae
Hordeum murinum ssp. *glaucum* *	Summer Barley	AG	.	Poaceae
Hypochaeris glabra *	Smooth Cat's-ear	AH	.	Asteraceae
Lactuca serriola *	Prickly Wild Lettuce	AH	FAC	Asteraceae
Leymus condensatus	Giant Wildrye	PG	FACU	Poaceae
Leymus triticoides	Creeping Wildrye	PG	FAC+	Poaceae
Lotus scoparius var. *scoparius*	Deerweed	PH	.	Fabaceae
Lupinus succulentus	Fleshy Lupine	AH	.	Fabaceae
Malacothamnus fasciculatus var. *fasciculatus*	Chaparral Bushmallow	S	.	Malvaceae
Malacothrix saxatilis var. *tenuifolia*	Tenuated Cliff-aster	PH	.	Asteraceae
Malosma laurina	Laurelleaf Sumac	S	.	Anacardiaceae
Malva parviflora *	Cheeseweed	AH	.	Malvaceae
Marrubium vulgare *	White Horehound	S	FAC	Lamiaceae
Medicago polymorpha *	Common Burclover	AH	.	Fabaceae
Melilotus indica *	Sourclover	AH	FAC	Fabaceae
Mimulus longiflorus var. *longiflorus*	Sticky Bush Monkeyflower	S	.	Phrymaceae
Nassella lepida	Foothill Needlegrass	PG	.	Poaceae
Opuntia littoralis	Coastal Prickly Pear	S	.	Cactaceae
Plantago erecta	California Plantain	AH	.	Plantaginaceae
Poa secunda ssp. *secunda*	One-sided Bluegrass	PG	.	Poaceae
Pseudognaphalium californicum	Green Everlasting	A/BH	.	Asteraceae
Quercus agrifolia var. *agrifolia*	Coast Live Oak	T	.	Fagaceae
Rhamnus ilicifolia	Hollyleaf Redberry	S	.	Rhamnaceae
Rhus ovata	Sugar Bush	S	.	Anacardiaceae
Rumex crispus *	Curly Dock	PH	FACW-	Polygonaceae
Salvia leucophylla	Purple Sage	S	.	Lamiaceae
Sambucus mexicana	Blue Elderberry	S	FAC	Caprifoliaceae
Sanicula arguta	Southern California Sanicle	PH	.	Apiaceae
Schinus molle *	Peruvian Pepper Tree	T	.	Anacardiaceae
Silybum marianum *	Milk Thistle	AH	.	Asteraceae
Sisyrinchium bellum	Blue-eyed Grass	PH	FAC	Iridaceae
Solanum xantii var. *xantii*	Chaparral Nightshade	S	.	Solanaceae
Sonchus asper ssp. *asper**	Prickly Sow-thistle	AH	FAC	Asteraceae
Sonchus oleraceus *	Common Sow-thistle	AH	NI*	Asteraceae
Toxicodendron diversilobum	Western Poison Oak	S/V	(FACU)	Anacardiaceae
Vicia sativa ssp. *nigra* *	Narrow-leaved Vetch	AH	FACU	Fabaceae
Vulpia microstachys var. *pauciflora*	Few-flowered Side-oats	AG	.	Poaceae
Vulpia myuros var. *hirsuta* *	Foxtail Fescue	AG	FACU*	Poaceae

HABITAT DESCRIPTIONS

The predominant habitat inhabiting the Killen property prior to discing/disturbance was Coastal Sage Scrub (*Salvia leucophylla-Artemisia californica* Alliance). Currently under post-disturbance conditions, the Killen property is inhabited by Ruderal Grassland Alliance. These habitats observed within the Killen property are discussed in detail below. Additional habitats observed in adjacent parcels include *Quercus agrifolia* Alliance (to the west) and Perennial Grassland Alliance (to the south). All habitats and plant alliances are mapped below in Figure 4, Killen Property Pre-Disturbance Habitats.

Pre-Disturbance Habitat - Coastal Sage Scrub

Coastal Sage Scrub is a shrubland dominated by facultative drought-deciduous, low-growing, soft-leaved, and grayish-green (malacophyllus) shrubs and subshrubs. Coastal Sage Scrub habitats typically exhibit a patchy distribution, often in close association with areas inhabited by grassland or chaparral habitats. Coastal Sage Scrub is a community at risk, with approximately 90 percent already lost to development (urban and agriculture); very little Coastal Sage Scrub has been protected by any legal mechanisms, such as enforceable conservation easements (Davis et al. 1985). (Boyd 1999.)

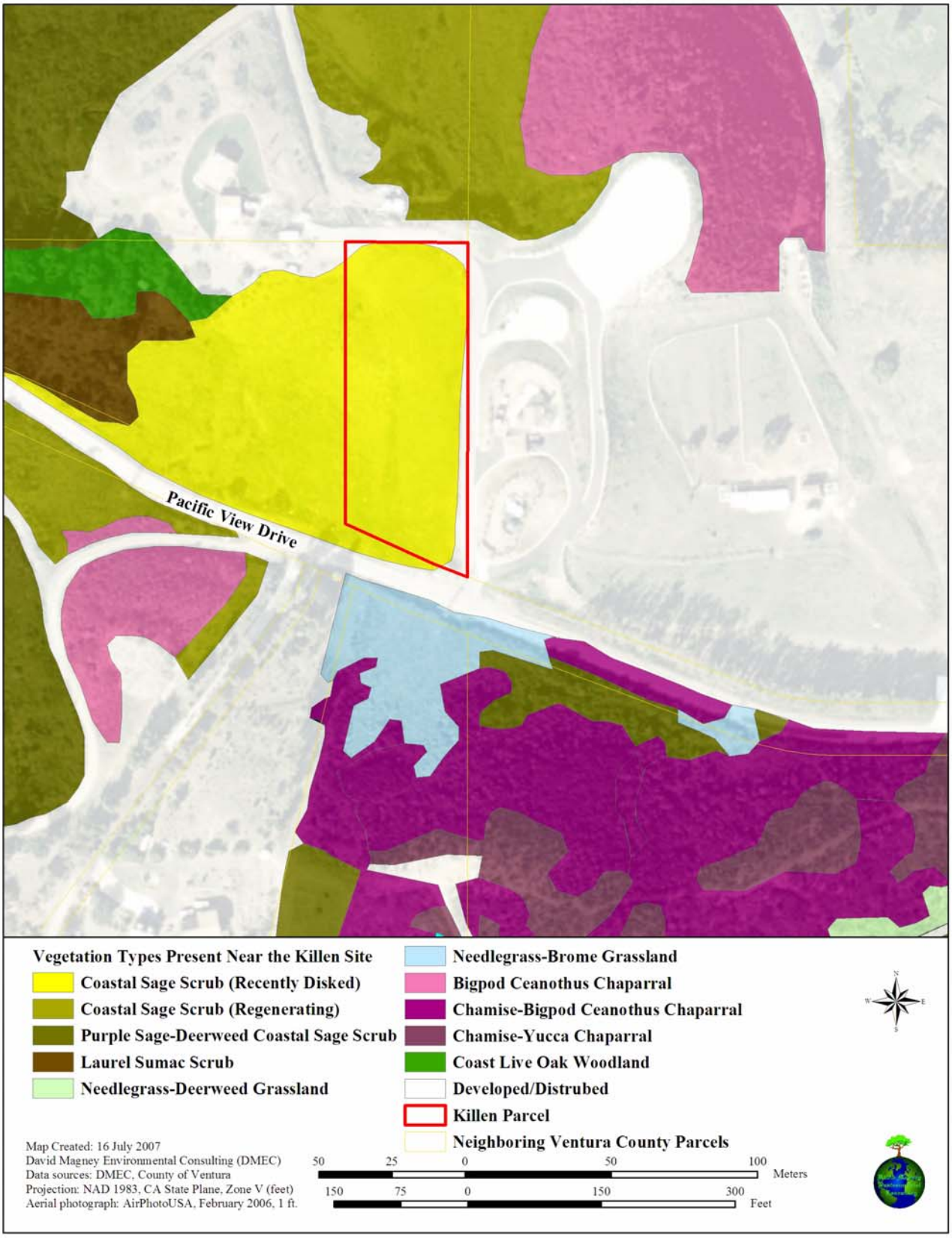
Due to stand variations, Coastal Sage Scrub is often considered part of a collection of species-specific plant alliances (Sawyer and Keeler-Wolf 1995). Coastal Sage Scrub covered most of the project site prior to disturbance. Specifically, the plant community likely making up the Coastal Sage Scrub habitat at the Killen property prior to discing activities is likely *Salvia leucophylla-Artemisia californica* Alliance. This plant community is described in the following paragraphs.

Salvia leucophylla-Artemisia californica **Alliance** is co-dominated by *Salvia leucophylla* (Purple Sage) and *Artemisia californica* (California Sagebrush). *Salvia leucophylla* and *Artemisia californica* typically form a continuous to intermittent canopy over a variable ground layer. This alliance grows on steeper north-facing slopes in colluvial-derived, rocky soils. It is considered part of the Coastal Sage Scrub alliance-collection. (Sawyer and Keeler-Wolf 1995.)

Salvia leucophylla-Artemisia californica Alliance was once an important component of Coastal Sage Scrub within the project site. The native associate shrub species likely contributing to the *Salvia leucophylla-Artemisia californica* Alliance onsite (based on species observed in surrounding habitats, resprouting individuals on the property, and aerial photograph interpretation) include: *Cercocarpus betuloides* var. *betuloides* (Birchleaf Mountain Mahogany), *Corethrogyne filaginifolia* var. *filaginifolia* (California Cudweed-aster), *Epilobium canum* ssp. *canum* (California Fuchsia), *Eriogonum cinereum* (Ash Coast Buckwheat), *Galium angustifolium* ssp. *angustifolium* (Chaparral Bedstraw), *Galium porrigens* var. *porrigens* (Climbing Bedstraw), *Hazardia squarrosa* var. *grindelioides* (Sawtooth Goldenbush), *Hesperoyucca whipplei* ssp. *whipplei* (Our Lord's Candle), *Heteromeles salicifolia* (Toyon), *Leymus condensatus* (Giant Wildrye), *Lotus scoparius* var. *scoparius* (Deerweed), *Malacothamnus fasciculatus* var. *fasciculatus* (Chaparral Bushmallow), *Malosma laurina* (Laurelleaf Sumac), *Mimulus longiflorus* var. *longiflorus* (Sticky Bush Monkeyflower), *Opuntia littoralis* (Coastal Prickly Pear), *Rhamnus ilicifolia* (Hollyleaf Redberry), *Rhus ovata* (Sugar Bush), *Sambucus mexicana* (Blue Elderberry), *Solanum xantii* var. *xantii* (Chaparral Nightshade), and *Toxicodendron diversilobum* (Western Poison Oak).

The native associate herb species likely contributing to the *Salvia leucophylla-Artemisia californica* Alliance onsite include: *Dichelostemma capitatum* ssp. *capitatum* (Blue Dicks), *Fritillaria biflora* var. *biflora* (Chocolate Lily), *Grindelia camporum* var. *bracteosum* (Bracted Gumplant), *Leymus triticoides* (Creeping Wildrye), *Nassella lepida* (Foothill Needlegrass), *Poa secunda* ssp. *secunda* (One-sided Bluegrass), *Pseudognaphalium californicum* (Green Everlasting), and *Vulpia microstachys* var. *pauciflora* (Few-flowered Side-oats).

Figure 4. Killen Property Pre-Disturbance Habitats*



*For the purpose of this report, only the habitat known onsite prior to disturbance (Coastal Sage Scrub) is described above in the Habitat Descriptions section. For habitat descriptions for the other habitat types mapped in Figure 4, refer to the *Biological Resources Assessment for Deals Flat Property on Pacific View Drive* report (DMEC 2005).

The Coastal Sage Scrub habitat observed onsite is within the Ventura County Coastal Zone as defined by the California Coastal Commission. Section 30107.5 of the Coastal Act defines an Environmentally Sensitive Habitat Area (ESHA) as, "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments". Regardless, Coastal Sage Scrub is a sensitive habitat considered by CNDDB (CDFG 2006) (classified as Coastal Sage Chaparral Scrub), which has a status of G3 S3.2. The sensitive Coastal Sage Scrub habitat onsite has been disced without a permit required by the County.

Figure 4, Killen Property Pre-Disturbance Habitats, illustrates the habitats observed onsite and the Coastal Sage Scrub habitat that was existing onsite prior to any discing activities.

Post-Disturbance Habitat - Ruderal Grassland

The project site **vegetation** is comprised of cleared Coastal Sage Scrub. The disturbed scrub habitat is in early succession (reverting back to pre-disturbance conditions) and is currently inhabited by Ruderal Grassland Alliance. If left undisturbed, the property would likely become reestablished with Coastal Sage Scrub.

Ruderal Grassland Alliance is typically in early successional stages resulting from severe disturbance by natural or human causes, and/or is due to recurrent disturbance. These areas are dominated by pioneering introduced herbaceous plants that readily colonize disturbed ground. The ability of exotic species to invade disturbed areas arises from their relationship to Old World ancestors that have co-existed with humans for millennia, and thus are more adapted to exploit disturbed land. Ruderal communities are typically a threat to regional biodiversity since they continually distribute nonnative propagules into native plant communities. These exotic species can colonize natural disturbances, such as burns, and typically can successfully compete with the more ecologically important and adapted natives. (Zedler et al. 1997.)

The predominant introduced grass species observed making the Ruderal Grassland onsite is *Avena barbata* (Slender Wild Oat), *Avena fatua* (Wild Oat), *Bromus diandrus* (Ripgut Grass), *Bromus hordeaceus* (Soft Chess), and *Bromus madritensis* ssp. *rubens* (Red Brome).

The predominant nonnative herbaceous species observed contributing to Ruderal Grassland Alliance onsite include: *Brassica nigra* (Black Mustard), *Carduus pycnocephalus* (Italian Thistle), *Erodium* spp. (filarees), *Foeniculum vulgare* (Sweet Fennel), *Hirschfeldia incana* (Summer Mustard), *Hordeum murinum* ssp. *glaucum* (Summer Barley), *Hypochaeris glabra* (Smooth Cat's-ear), *Lactuca serriola* (Prickly Wild Lettuce), *Malva parviflora* (Cheeseweed), *Marrubium vulgare* (White Horehound), *Medicago polymorpha* (Common Burclover), *Melilotus indica* (Sourclover), *Silybum marianum* (Milk Thistle), *Sisyrinchium bellum* (Blue-eyed Grass), *Sonchus oleraceus* (Common Sow-thistle), and *Vicia sativa* ssp. *nigra* (Narrow-leaved Vetch).

The native annual herb species found resprouting onsite include: *Amsinckia menziesii* var. *intermedia* (Rancher's Fire), *Asclepias fascicularis* (Narrowleaf Milkweed), *Baccharis pilularis* (Coyote Brush), *Deinandra fasciculata* (Fasciculed Tarplant), *Fritillaria biflora* var. *biflora* (Chocolate Lily), *Grindelia camporum* var. *bracteosum* (Bracted Gumplant), and *Lupinus succulentus* (Fleshy Lupine).

FAUNA

Numerous species of wildlife are known to occur within the Santa Monica Mountains vicinity, and DMEC expects that many wildlife species frequented the property on a regular basis prior to vegetation clearing. During the biological surveys, DMEC observed or detected 15 wildlife species onsite, including 1 reptile, 9 birds, and 5 mammals. Table 6, Killen Property Wildlife Species, contains a list of animal species that were directly observed or detected by sign in the vicinity of the Killen property. Scientific nomenclature follows Jennings (1983) and Stebbins (1985) for reptiles and amphibians, National Geographic Society (2002) for birds, and Burt and Grossenheider (1976) for mammals.

Table 6. Killen Property Wildlife Species

Scientific Name	Common Name	Observed or Detected?
Reptiles		
Sceloporous occidentalis	Western Fence Lizard	Observed
Birds		
Cathartes aura	Turkey Vulture	Observed
Buteo jamaicensis	Red-tailed Hawk	Observed
Callipepla californica	California Quail	Observed
Zenaida macroura	Mourning Dove	Observed
Geococcyx californicus	Greater Roadrunner	Observed
Sayornis nigricans	Black Phoebe	Observed
Aphelocoma californica	Western Scrub-jay	Observed
Corvus corax	Common Raven	Observed
Pipilo crissalis	California Towhee	Observed
Mammals		
Sylvilagus audubonii	Audubon Cottontail	Observed
Spermophilus beecheyi	California Ground Squirrel	Observed
Thomomys bottae	Botta's Pocket Gopher	Detected (borrows)
Canis latrans	Coyote	Detected (scat)
Odocoileus hemionus	Mule Deer	Detected (scat)

WILDLIFE HABITAT AND MOVEMENT

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Some wildlife species, especially the larger and more wide-ranging mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information. Corridors mitigate the effects of fragmentation by allowing animals to move between remaining habitats; providing escape routes from fire, predators, and human disturbances; and serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other resources.

Wildlife movement activities usually fall into one of three movement categories: dispersal (e.g. juvenile animals from natal areas or individuals extending range distributions); seasonal migration; and movements related to home range activities (e.g. foraging for food or water, defending territories, or searching for mates, breeding areas, or cover).

South Coast Wildlands (SCW) works to maintain and restore connections between isolated wildland areas in the South Coast through their program called the "Missing Linkages Project"[5]. One such isolated wildland area of concern is the Santa Monica Mountains. Although the Santa Monica Mountains are protected in part through state and federal ownership (Point Mugu State Park and the Santa Monica Mountains National Recreation Area [SMMNRA], respectively), this high-quality habitat area is severely isolated from other wildland areas in Southern California. Specifically, SCW has drafted a report that analyzes the potential linkage between the isolated Santa Monica Mountains and Simi Hills, and the much larger areas of contiguous habitat in the Sierra Madre to the north. (Penrod et al. 2006.)

SCW's report (Penrod et al. 2006) identifies multiple areas of existing and potential landscape linkage between the Santa Monica Mountains and the Sierra Madre. Using a "least cost union" methodology to determine which landscape linkages should be the focus of conservation efforts, they have identified one main corridor near the Ventura-Los Angeles County line, and one smaller "side branch" that connects the larger corridor with the western side of the Santa Monicas through the Tierra Rejada Valley/Simi Hills to the Santa Susana Mountains to the north.

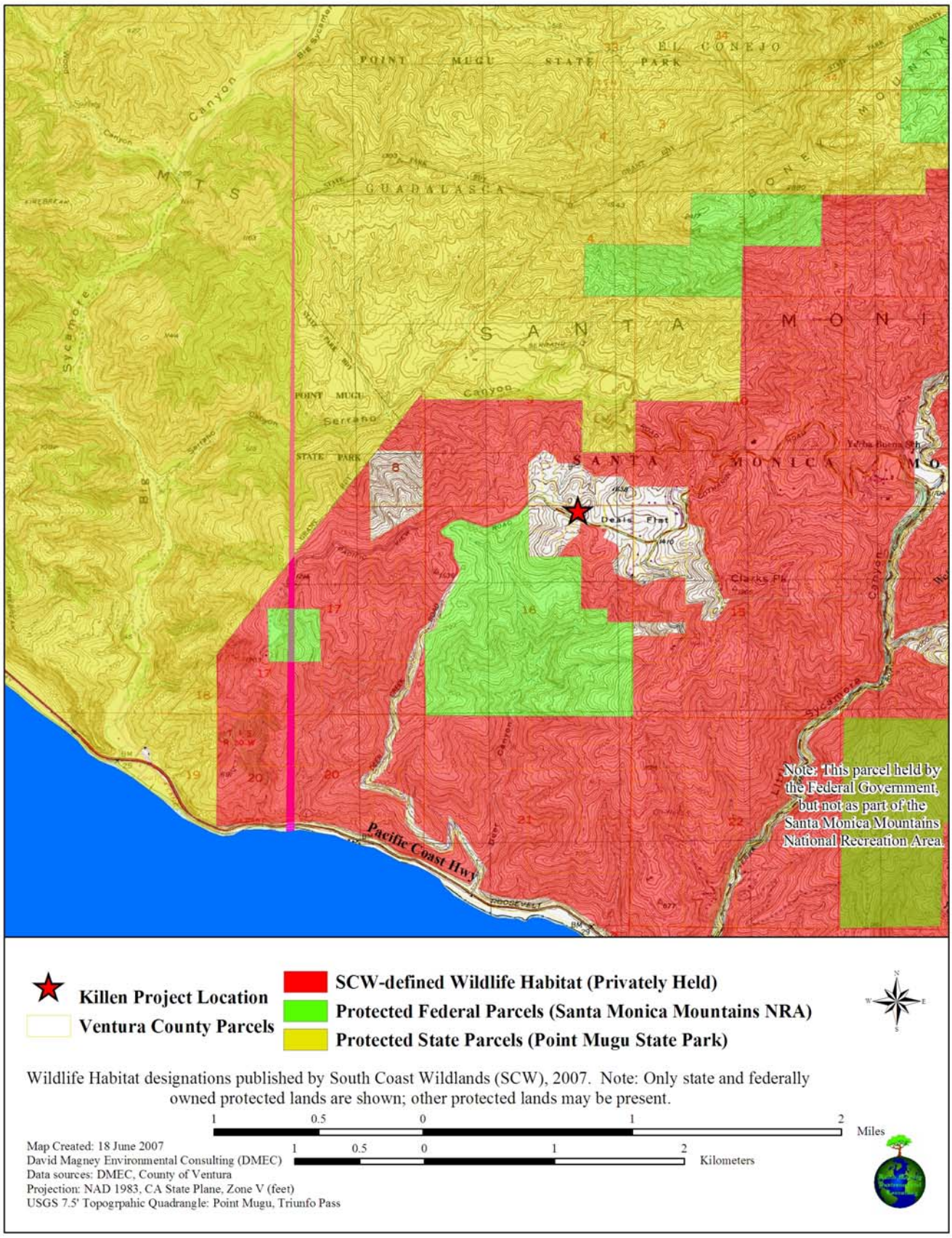
Figure 5, Regional Wildlife Habitat Near the Killen Property, illustrates the wildlife habitat (non-core), which is privately held, and protected Federal and State land in relation to the location of the project site. The wildlife habitats illustrated on Figure 5 are based primarily on research conducted by the South Coast Wildlands Project (Penrod et al. 2006).

Based on maps provided by CDFG's BIOS MAPS (available at: http://imaps.dfg.ca.gov) and Figure 5, the project site, as well as other adjacent residences and undeveloped parcels, are not mapped as any particular wildlife movement category. The Killen property exists within an "island" of non-wildlife habitat and unprotected land; however, the project site is surrounded by what is mapped as wildlife habitat (non-core and privately held). Protected land exists to the north and west (Point Mugu State Park) of the parcel.

No local wildlife travel routes were observed onsite during the timing of the survey; however, evidence of wildlife travel routes may have been lost due to recurring discing disturbances to the project site soil.

[5] Report is available at http://www.scwildlands.org/reports/SCML_SantaMonica_SierraMadre.pdf.

Figure 5. Regional Wildlife Habitat Near the Killen Property



SECTION 4. SPECIAL-STATUS BIOLOGICAL RESOURCES

One of the goals of the Ventura County General Plan is to "preserve and protect significant biological resources from incompatible land uses and development. Significant biological resources include endangered species and habitats, wetlands, wildlife migration corridors, and locally important species/communities (Policy 1.5.2). Discretionary development in these areas must be evaluated by a qualified biologist, and be sited and designed to mitigate impacts"[6].

Sixty-three (63) special-status elements are tracked within the CNDDB nine-quad search (CDFG 2007), including Triunfo Pass (in which the Killen property exists), Point Mugu, Camarillo, Newbury Park, Thousand Oaks, and Point Dume, California Quadrangles (USGS 7.5-minute Series Topographic Map). Of the 63 elements, 25 are special-status plant species, 32 are special-status wildlife species, and 8 are sensitive habitat types known to occur in the vicinity of the project site. Two (2) plant species of local concern were observed onsite, and another 12 species of local concern are expected onsite based on occurrences of these species across the street at the Beltrami property. The 25 CNDDB-tracked special-status plants species in addition to the 14 species of local concern makes a total of 39 special-status plant species known or with potential onsite. No special-status wildlife species were observed onsite. The special-status species and habitats, either observed onsite or expected onsite based on habitat requirements similar to those on the Killen property, are discussed in the following subsections.

SPECIAL-STATUS PLANT SPECIES

No Federally or State listed plant species were observed onsite during DMEC's seasonal surveys; however, a total of 39 special-status plant species are known or reported in the vicinity of the Killen property and have the potential to occur onsite (including 25 CNDDB-tracked species and 14 species of local concern).

One species of local concern, *Fritillaria biflora* var. *biflora* (Chocolate Lily), was observed onsite (a population of approximately 120 individuals). *Fritillaria biflora* var. *biflora* (approximately 5 individuals) and *Grindelia camporum* var. *bracteosum* (Bracted Gumplant [approximately 14 individuals]), another species of local concern, were also observed in the adjacent parcel to the west (not on the Killen property). Both of these observed species are considered Locally Uncommon with only 8 known extant populations in Ventura County, including the populations observed onsite (Magney manuscript). No lichens, special-status or otherwise, were observed onsite.

Figure 6, Special-Status Plant Species Observed on or near the Killen Property, indicates the locations of special-status plants observed onsite. Table 7, Special-Status Plant Species Observed and Potentially Present at the Killen Property, summarizes the 39 CNDDB-tracked and locally important special-status plant species expected and reported within the vicinity of the Killen property, and provides each species' scientific/common name, status, habitat requirements, and likelihood of occurrence. Fourteen (14) of the species listed in Table 7 are likely to occur onsite, especially since 12 of them were observed across the street from the Killen property at the Beltrami property (DMEC 2005). It is likely that the discing and vegetation clearing conducted onsite made one or more of these special-status species undetectable.

[6]Ventura County General Plan, available at: http://64.233.187.104/search?q=cache:4KXd1AOp5TgJ:danr.ucop.edu/ihrmp/county/VENTURA.pdf+Ventura+County+General+Plan+Policy&hl=en&gl=us&ct=clnk&cd=3.

Figure 6. Special-Status Plant Species Observed On or Near the Killen Property

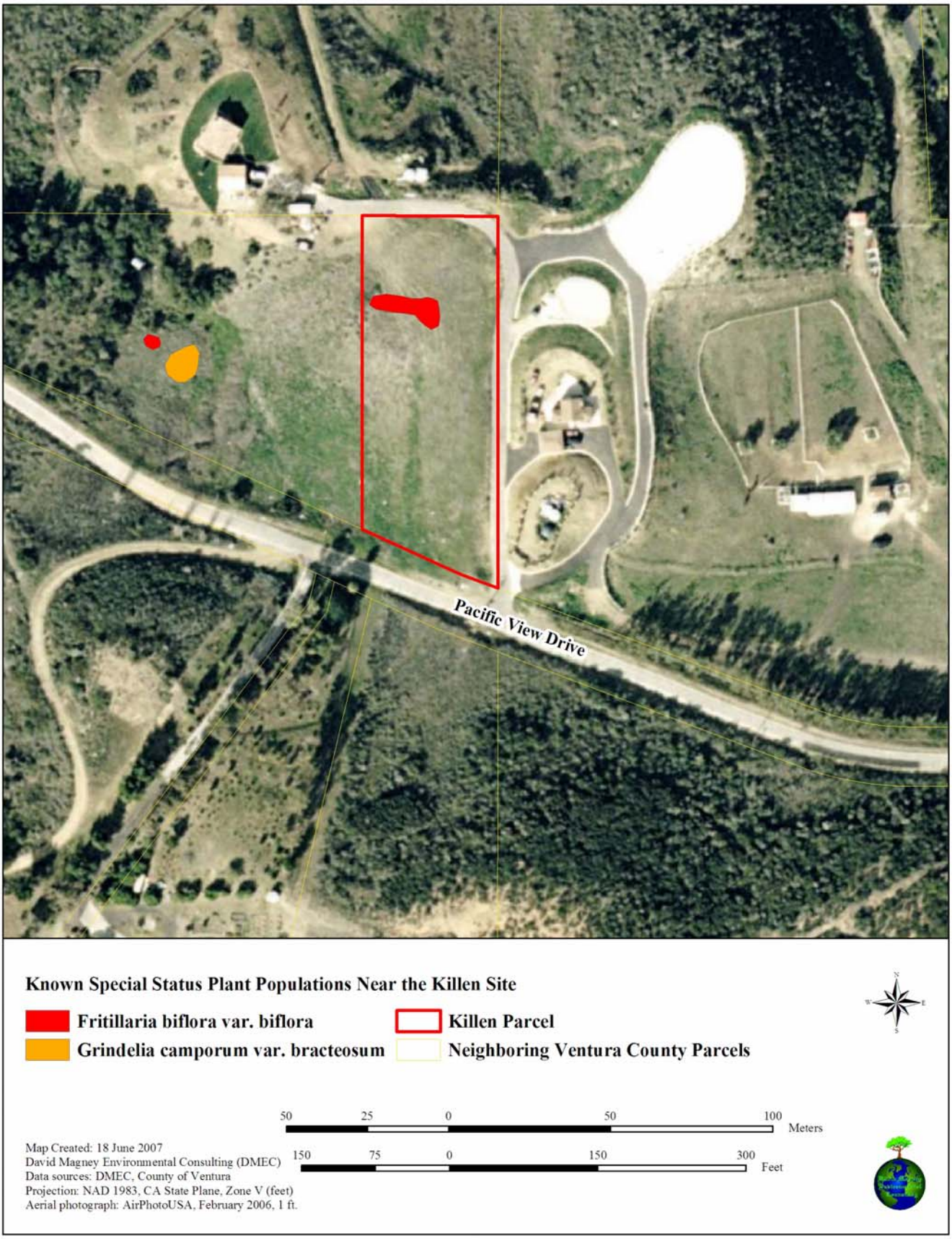


Table 7. Special-Status Plant Species Observed and Potentially Present at the Killen Property

Scientific Name	Common Name	Species Status[7]					Habitat Requirements[8]	Likelihood of Occurrence[9]
		G-Rank	S-Rank	Federal Listing[10]	State Listing	CNPS List/ Local Status[11]		
Antirrhinum nuttallianum ssp. *subsessile*	Lesser Nuttall Snapdragon	-	-	-	-	LR	Rocky or disturbed places; Coastal Sage Scrub, Chamise Chaparral; <1,400 m.	Likely: observed by DMEC across the street at Beltrami property
Astragalus brauntonii	Braunton's Milk-vetch	G2	S2.1	E	-	1B.1	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland. Recent burns or disturbed areas; in stiff gravelly clay soils overlying granite or limestone. 4-640m.	Possible
Atriplex coulteri	Coulter's Saltbush	G2	S2.2	-	-	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. 10-440m.	Unlikely
Baccharis malibuensis	Malibu Baccharis	G1	S1.1	-	-	1B.1	Coastal scrub, chaparral, cismontane woodland. In Conejo volcanic substrates, often on exposed roadcuts. Sometimes occupies oak woodland habitat. 150-260m.	Possible
Californica macrophyllum	Round-leaved Filaree	G3	S3.1	-	-	1B.1	Cismontane woodland, valley and foothill grassland. Clay soils. 15-1200m.	Unlikely
Calochortus catalinae	Catalina Mariposa Lily	G3	S3.2	-	-	4.2	Valley and foothill grassland, chaparral, coastal scrub, cismontane woodland. In heavy soils, open slopes, openings in brush. 30-700m.	Likely: observed by DMEC across the street at Beltrami property
Calochortus plummerae	Plummer's Mariposa Lily	G3	S3.2	-	-	1B.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 90-1610m.	Likely
Centromadia parryi ssp. *australis*	Southern Tarplant	G4T2	S2.1	-	-	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast; also in alkaline soils sometimes with Saltgrass; also vernal pools. 0-425m.	Unlikely
Chaenactis artemisiifolia	White Pincushion	-	-	-	-	LU	Open slopes, disturbed areas; Chaparral; <1,600 m.	Likely: observed by DMEC across the street at Beltrami property
Chaenactis glabriuscula	Orcutt's Pincushion	G5T3	S2.1	-	-	1B.1	Coastal bluff scrub, coastal dunes. Sandy sites. 3-100m.	Unlikely

[7] For special-status species definitions, refer to Tables 1 through 4 in the Methods Section.

[8] Required habitat according to CDFG (2007) and Hickman (1993).

[9] Likelihood of occurrence based on species' habitat requirements and presence of required habitat in the project site.
Observed = Species was directly observed during DMEC's winter or spring 2007 surveys;
Likely = Required habitat exists at the project site and/or has been reported onsite or near by;
Possible = Marginal required habitat exists onsite, and/or required habitat exists in surrounding areas;
Unlikely = Required habitat does not exist at the project site nor does it exist nearby.

[10] E = Endangered; T = Threatened; R = Rare; C = Candidate.

[11] LR = a Locally Rare plant species with 5 or fewer occurrences in Ventura County, and LU = Locally Uncommon plant species with 6 to 10 occurrences in the County (Magney 2007).

Scientific Name	Common Name	Species Status[7]					Habitat Requirements[8]	Likelihood of Occurrence[9]
		G-Rank	S-Rank	Federal Listing[10]	State Listing	CNPS List/ Local Status[11]		
var. *orcuttiana*								
Chorizanthe parryi var. *parryi*	Parry's Spineflower	G2T2	S2.1	-	-	3.2	Coastal scrub, chaparral. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral & oak woodland; dry, sandy soils. 40-1705m.	Likely
Cordylanthus maritimus ssp. *maritimus*	Salt Marsh Bird's-beak	G4?T2	S2.1	E	E	1B.2	Coastal salt marsh, coastal dunes. Limited to the higher zones of the salt marsh habitat. 0-30m.	Unlikely
Cryptantha decipiens	Gravel Forget-me-not	-	-	-	-	LU	Open, sandy areas, grassland, shrubland; <1,500 m.	Likely: observed by DMEC across the street at Beltrami property
Deinandra minthornii	Santa Susana Tarplant	G2	S2.2	-	R	1B.2	Chaparral, coastal scrub. On sandstone outcrops and crevices, in shrubland. 280-760m.	Possible
Delphinium parryi ssp. *blochmaniae*	Dune Larkspur	G4T2	S2.2	-	-	1B.2	Chaparral, coastal dunes (maritime). On rocky areas and dunes. 30-375m.	Unlikely
Dodecatheon clevelandii ssp. *patulum*	Lowland Padre Shooting Star	-	-	-	-	LR	Grassy slopes, flats; Meadow, Wildflower Field, Coastal Sage Scrub; <600 m.	Likely: observed by DMEC across the street at Beltrami property
Dudleya abramsii ssp. *parva* [*D. parva*]	Conejo Dudleya	G2	S2.1	T	-	1B.2	Coastal scrub, valley and foothill grassland. In clayey or volcanic soils on rocky slopes and grassy hillsides. 60-450m.	Possible
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's Dudleya	G2T2	S2.1	-	-	1B.1	Coastal scrub, coastal bluff scrub, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas w/little soil. 5-450m.	Possible
Dudleya cymosa ssp. *marcescens*	Marcescent Dudleya	G5T2	S2.2	T	R	1B.2	Chaparral. On sheer rock surfaces and rocky volcanic cliffs. 180-520m.	Possible
Dudleya cymosa ssp. *ovatifolia* [*D. cymosa* ssp. *agourensis*]	Santa Monica Mountains Dudleya	G5T2	S2.2	T	-	1B.2	Chaparral, coastal scrub. In canyons on sedimentary conglomerates; primarily n-facing slopes. 210-500m.	Possible
Dudleya verityi	Verity's Dudleya	G1	S1.1	T	-	1B.2	Chaparral, cismontane woodland, coastal scrub. On volcanic rock outcrops in the Santa Monica Mountains. 60-120m.	Possible
Eriogonum crocatum	Conejo Buckwheat	G2	S2.1	-	R	1B.2	Chaparral, coastal scrub, valley and foothill grassland. Conejo volcanic outcrops; rocky sites. 50-580m.	Possible
Fritillaria biflora* var. *biflora	**Chocolate Lily**	-	-	-	-	LU	Heavy soils, serpentine barrens, slopes and mesas; grassland, Coastal Sage Scrub, Pinyon-Juniper Woodland; <1,200 m;	**Observed**
Galium nuttallii ssp. *nuttallii*	Climbing Bedstraw	-	-	-	-	LU	Shrubby hillsides; chaparral; 3-500 m.	Likely: observed by DMEC across the street at Beltrami property
Grindelia camporum* var. *bracteosum	**Bracted Gumplant**	-	-	-	-	LU	Clay or sandy roadsides, streambanks, dry washes; 150-1,400 m.	**Observed**

Scientific Name	Common Name	Species Status[7]					Habitat Requirements[8]	Likelihood of Occurrence[9]
		G-Rank	S-Rank	Federal Listing[10]	State Listing	CNPS List/ Local Status[11]		
Helianthemum scoparium	Peak Rushrose	-	-	-	-	LU	Dry sandy or rocky soil of hills, slopes, ridges; <1,500 m.	Likely: observed by DMEC across the street at Beltrami property
Lasthenia glabrata ssp. *coulteri*	Coulter's Goldfields	G4T3	S2.1	-	-	1B.1	Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1400m.	Unlikely
Lomatium lucidum	Shiny Lomatium	-	-	-	-	LR	Scrub, especially on burns, rocky loamy soil; Coastal Sage Scrub; 450-1,500 m.	Likely: observed by DMEC across the street at Beltrami property
Navarretia jaredii	Paso Robles Navarretia	G3	S3.3	-	-	4.3	Cismontane woodland, chaparral, valley and foothill grassland. Open, grassy areas on serpentine clay. 200-500m.	Likely: observed by DMEC across the street at Beltrami property
Nolina cismontana	Chaparral Nolina	G1	S1.1	-	-	1B.2	Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from gabbro. 140-1275m.	Possible
Orcuttia californica	California Orcutt Grass	G2	S2.1	E	E	1B.1	Vernal pools. 15-660m.	Unlikely
Pentachaeta lyonii	Lyon's Pentachaeta	G1	S1.1	E	E	1B.1	Chaparral, valley and foothill grassland. Edges of chaparral clearings, usually at ecotones between grassland and chaparral or edges of firebreaks. 30-630m.	Possible
Rhus ovata X R. integrifolia	Hybrid Sugar Bush	-	-	-	-	LR	Canyons, generally N-facing slopes, chaparral; <900 m.	Likely: observed by DMEC across the street at Beltrami property
Senecio aphanactis	Rayless Ragwort	G3?	S1.2	-	-	2.2	Cismontane woodland, coastal scrub. Drying alkaline flats. 20-575m.	Possible
Stylocline gnaphaloides	Everlasting Nest Straw	-	-	-	-	LU	Open, generally sandy soil of dry slopes, burns, etc.; Chaparral, Coastal Sage Scrub, Yellow Pine Forest; <1,200(1,700)m.	Likely: observed by DMEC across the street at Beltrami property
Suaeda esteroa	Estuary Seablite	G4	S3.2	-	-	1B.2	Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-5m.	Unlikely
Texosporium sancti-jacobi	Woven-spored Lichen	G2	S1.1	-	-	-	Chaparral. Open sites; in California w/*Adenostoma fasciculatum, Eriogonum, Selaginella*. At Pinnacles, on small mammal pellets. 290-660m.	Unlikely
Thelypteris puberula var. *sonorensis*	Sonoran Maiden Fern	G5T3	S2.2?	-	-	2.2	Meadows and seeps. Along streams, seepage areas. 50-550m.	Unlikely
Zigadenus brevibracteatus	Death Camas	-	-	-	-	LR	Sandy desert; Pinyon-Juniper Woodland; 600-1,800 m.	Likely: observed by DMEC across the street at Beltrami property

The winter survey of January 2007 and the spring survey of May 2007 generally captures the blooming period for most special-status plant species known or expected in the vicinity of the project site. These species of interest would generally have been detected if they were present onsite; however, discing and vegetation clearing may have prevented detected these species. Table 8, Blooming Periods of Special-Status Plant Species Known and Expected Onsite, provides the likelihood of occurrence and blooming period (Magney manuscript) for each species to help determine if DMEC would have been able to detect species onsite during the timing of the surveys.

Table 8. Blooming Periods of Special-Status Plant Species Known and Expected Onsite

Scientific Name	Common Name	Likelihood of Occurrence	Blooming Period	Comments
Antirrhinum nuttallianum ssp. *subsessile*	Lesser Nuttall Snapdragon	Likely	Unknown	Blooming period was likely captured during the winter and spring surveys.
Astragalus brauntonii	Braunton's Milk-vetch	Possible	MAR-JUN	Blooming period was captured during the spring survey.
Atriplex coulteri	Coulter's Saltbush	Unlikely	MAR-OCT	Blooming period was captured during the spring survey.
Baccharis malibuensis	Malibu Baccharis	Possible	AUG	Blooming period was not captured during the winter or spring surveys; however, this shrub species would likely be detectable if present onsite.
Californica macrophyllum	Round-leaved Filaree	Unlikely	MAR-MAY	Blooming period was captured during the spring survey.
Calochortus catalinae	Catalina Mariposa Lily	Likely	MAR-APR	Blooming period was likely captured during the winter and spring surveys.
Calochortus plummerae	Plummer's Mariposa Lily	Likely	MAY-JUL	Blooming period was captured during the spring survey.
Centromadia parryi ssp. *australis*	Southern Tarplant	Unlikely	JUN-SEP	Blooming period was not captured during the winter or spring surveys; however, this species is not likely onsite since it's required habitats (marshes, swamps, valley and foothill grassland, and vernal pools) were not observed onsite or nearby.
Chaenactis artemisiifolia	White Pincushion	Likely	APR-JUL	Blooming period was captured during the spring survey.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's Pincushion	Unlikely	APR-JUL	Blooming period was captured during the spring survey.
Chorizanthe parryi var. *parryi*	Parry's Spineflower	Likely	APR-JUN	Blooming period was captured during the spring survey.
Cordylanthus maritimus ssp. *maritimus*	Salt Marsh Bird's-beak	Unlikely	MAY-OCT	Blooming period was captured during the spring survey.
Cryptantha decipiens	Gravel Forget-me-not	Likely	MAR-MAY	Blooming period was captured during the spring survey.
Deinandra minthornii	Santa Susana Tarplant	Possible	JUL-OCT	Blooming period was not captured during the winter or spring surveys; however, this shrub species would likely be detectable if present onsite.
Delphinium parryi ssp. *blochmaniae*	Dune Larkspur	Unlikely	MAR-APR	Blooming period was likely captured during the winter and spring surveys.
Dodecatheon clevelandii ssp. *patulum*	Lowland Padre Shooting Star	Likely	JAN-APR	Blooming period was captured during the winter survey.

Scientific Name	Common Name	Likelihood of Occurrence	Blooming Period	Comments
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's Dudleya	Possible	MAY-JUN	Blooming period was captured during the spring survey.
Dudleya cymosa ssp. *ovatifolia* [*D. cymosa* ssp. *agourensis*]	Santa Monica Mountains Dudleya	Possible	MAY-JUN	Blooming period was captured during the spring survey.
Dudleya cymosa ssp. *marcescens*	Marcescent Dudleya	Possible	MAY-JUN	Blooming period was captured during the spring survey.
Dudleya abramsii ssp. *parva* [*D. parva*]	Conejo Dudleya	Possible	MAY-JUN	Blooming period was captured during the spring survey.
Dudleya verityi	Verity's Dudleya	Possible	MAY-JUN	Blooming period was captured during the spring survey.
Eriogonum crocatum	Conejo Buckwheat	Likely	APR-JUL	Blooming period was captured during the spring survey.
Fritillaria biflora var. *biflora*	Chocolate Lily	Observed	FEB-JUN	Blooming period was captured during the spring survey.
Galium nuttallii ssp. *nuttallii*	Climbing Bedstraw	Likely	MAR-JUN	Blooming period was captured during the spring survey.
Grindelia camporum var. *bracteosum*	Bracted Gumplant	Observed	MAR-JUL	Blooming period was captured during the spring survey.
Helianthemum scoparium	Peak Rushrose	Likely	MAR-JUN	Blooming period was captured during the spring survey.
Lasthenia glabrata ssp. *coulteri*	Coulter's Goldfields	Unlikely	MAR-MAY	Blooming period was captured during the spring survey.
Lomatium lucidum	Shiny Lomatium	Likely	JAN-APR	Blooming period was captured during the winter survey.
Navarretia jaredii	Paso Robles Navarretia	Likely	MAY-JUL.	Blooming period was captured during the spring survey.
Nolina cismontana	Chaparral Nolina	Possible	APR-JUN	Blooming period was captured during the spring survey.
Orcuttia californica	California Orcutt Grass	Unlikely	MAY-JUN	Blooming period was captured during the spring survey.
Pentachaeta lyonii	Lyon's Pentachaeta	Possible	MAR-APR	Blooming period was likely captured during the spring survey.
Rhus ovata X *R. integrifolia*	Hybrid Sugar Bush	Likely	FEB-MAY	Blooming period was captured during the spring survey.
Senecio aphanactis	Rayless Ragwort	Possible	FEB-APR	Blooming period was likely captured during the spring survey.
Stylocline gnaphaloides	Everlasting Nest Straw	Likely	MAR-MAY	Blooming period was captured during the spring survey.
Suaeda esteroa	Estuary Seablite	Unlikely	JUL-AUG	Blooming period was not captured during the winter or spring surveys; however, this species is not likely onsite since it's required habitats (coastal salt marshes and swamps) were not observed onsite or nearby.
Texosporium sancti-jacobi	Woven-spored Lichen	Unlikely	Unknown	Would have been detectable during either survey; however, no lichens observed onsite.
Thelypteris puberula var. *sonorensis*	Sonoran Maiden Fern	Unlikely	JAN-SEP	Blooming period was captured during the winter and spring survey.
Zigadenus brevibracteatus	Death Camas	Likely	APR-JUN	Blooming period was captured during the spring survey.

SPECIAL-STATUS WILDLIFE SPECIES

No special-status wildlife species were observed on the Killen property; however, several special-status wildlife species are known, or expected, to occur in the vicinity of the project site. Specifically, 35 special-status wildlife species (including invertebrates) are tracked by the CNDDB's RareFind3 for the six quadrangles searched. Six (6) of the 35 special-status wildlife species are/were *likely* to occur onsite based on habitat requirements present onsite (at least prior to discing disturbances), including *Aimophila ruficeps canescens* (Southern California Rufous-crowned Sparrow), *Neotoma lepida intermedia* (San Diego Desert Woodrat), *Phrynosoma coronatum blainvillii* (Coast [San Diego] Horned Lizard), *Phrynosoma coronatum frontale* (Coast [California] Horned Lizard), *Toxostoma redivivum* (California Thrasher), and *Trimerotropis occidentaloides* (Santa Monica Grasshopper).

In addition, Santa Monica Mountains Walking Stick (*Timema monikensis*) also has potential to occur onsite at least prior to discing disturbances. This species is listed as a Locally Important Species by Ventura County Planning Division (VCPD 2005). *Timema monikensis* has only been found in a very restricted locality along Decker Road at N34.07.172 and W118.50.441, on *Ceanothus*.

Table 9, Special-Status Wildlife Species Known in the Vicinity of the Killen Property, summarizes the special-status wildlife species reported for the six quads, and provides each species' scientific and common name, status, habitat requirements, and likelihood of occurrence.

Table 9. Special-Status Wildlife Species Known in the Vicinity of the Killen Property

Scientific Name	Common Name	Species Status[12]					Habitat Requirements	Likelihood of Occurrence[13]
		G-Rank	S-Rank	Federal Listing[14]	State Listing	CDFG[15]		
Aimophila ruficeps canescens	Southern Calif. Rufous-crowned Sparrow	G5T2T4	S2S3	-	-	SC	Resident in southern California Coastal Sage Scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass & forb patches.	Likely (prior to discing)
Antrozous pallidus	Pallid Bat	G5	S3	-	-	SC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Possible
Aquila chrysaetos	Golden Eagle	G5	S3	-	-	SC	(Nesting & wintering) rolling foothills mountain areas, Sage-Juniper Flats, desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Unlikely

[12] For special-status species definitions, refer to Tables 1 through 3 in the Methods Section.

[13] Likelihood of occurrence based on species' habitat requirements and the presence of required habitat in the project site.

Observed = Species was directly observed during DMEC's winter or spring 2007 surveys;
Detected = Species was detected by sign during DMEC's winter or spring 2007 surveys;
Likely = Required habitat exists at the project site and/or has been reported onsite or nearby;
Possible = Marginal required habitat exists onsite, and/or required habitat exists in surrounding areas; or
Unlikely = Required habitat does not exist at the project site nor does it exist nearby.

[14] E = Endangered; T = Threatened; C = Candidate.

[15] CDFG Definitions: SC = Species of Special Concern; FP = Fully Protected Species; LC = Species of Local Concern.

Scientific Name	Common Name	Species Status[12]					Habitat Requirements	Likelihood of Occurrence[13]
		G-Rank	S-Rank	Federal Listing[14]	State Listing	CDFG[15]		
Aspidoscelis tigris stejnegeri	Coastal Western Whiptail	G5T3T4	S2S3	-	-	-	Found in deserts & semiarid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	Possible
Buteo regalis	Ferruginous Hawk	G4	S3S4	-	-	SC	(Wintering) open grasslands, sagebrush flats, desert scrub, low foothills & fringes of Pinyon-Juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Possible
Charadrius alexandrinus nivosus	Western Snowy Plover	G4T3	S2	T	-	SC	(Nesting) federal listing applies only to pacific coastal pop. Sandy beaches, salt pond levees, & shores of large alkali lakes. Sandy, gravelly, friable soils.	Unlikely
Cicindela hirticollis gravida	Sandy Beach Tiger Beetle	G5T2	S1	-	-	-	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	Unlikely
Cicindela senilis frosti	Tiger Beetle	G4T1	S1	-	-	-	Inhabits marine shoreline, from central California coast south to salt marshes of San Diego, also found at Lake Elsinore. Inhabits dark-colored mud in the lower zone and dried salt pans in upper zone.	Unlikely
Coelus globosus	Globose Dune Beetle	G1	S1	-	-	-	Inhabitant of coastal sand dune habitat, from Bodega Head in Sonoma County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	Unlikely
Danaus plexippus	Monarch Butterfly	G5	S3	-	-	-	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (Eucalyptus, Monterey Pine, Cypress), with nectar and water sources nearby.	Unlikely
Emys (=Clemmys) marmorata pallida	Southwestern Pond Turtle	G3G4T2T3Q	S2	-	-	SC	Inhabits permanent or nearly permanent bodies of water in many habitat types; below 6,000 ft elev. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks. Need suitable nesting sites.	Unlikely
Eremophila alpestris actia	California Horned Lark	G5T3	S3	-	-	SC	Coastal regions, chiefly from Sonoma Co. to San Diego Co., also main part of San Joaquin Valley & east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Unlikely
Eucyclogobius newberryi	Tidewater Goby	G3	S2S3	E	-	SC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	Unlikely
Eumops perotis californicus	Western Mastiff Bat	G5T4	S3?	-	-	SC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc. Roosts in crevices in cliff	Possible

Scientific Name	Common Name	Species Status[12]					Habitat Requirements	Likelihood of Occurrence[13]
		G-Rank	S-Rank	Federal Listing[14]	State Listing	CDFG[15]		
							faces, high buildings, trees & tunnels.	
Gila orcuttii	Arroyo Chub	G2	S2	-	-	SC	Los Angeles Basin south coastal streams. Slow water stream sections with mud or sand bottoms. Feed heavily on aquatic vegetation & associated invertebrates.	Unlikely
Microtus californicus stephensi	South Coast Marsh Vole	G5T1T2	S1S2	-	-	SC	Tidal marshes in Los Angeles, Orange and southern Ventura Counties.	Unlikely
Myotis ciliolabrum	Western Small-footed Myotis	G5	S2S3	-	-	-	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines & crevices. Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.	Possible
Myotis yumanensis	Yuma Myotis	G5	S4?	-	-	-	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Unlikely
Neotoma lepida intermedia	San Diego Desert Woodrat	G5T3?	S3?	-	-	SC	Coastal scrub of southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs & slopes.	Likely (prior to disking) – Detected at the Beltrami property (DMEC 2005)
Oncorhynchus mykiss irideus	Southern Steelhead (Southern California ESU)	G5T2Q	S2	E	-	SC	Federal listing refers to pops from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.). Southern Steelhead likely have greater physiological tolerances to warmer water & more variable conditions.	Unlikely
Panoquina errans	Wandering Skipper	G4G5	S1	-	-	-	Southern California coastal salt marshes. Requires moist Saltgrass for larval development.	Unlikely
Passerculus sandwichensis beldingi	Belding's Savannah Sparrow	G5T3	S3	-	E	-	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in *Salicornia* on and about margins of tidal flats.	Unlikely
Pelecanus occidentalis californicus	California Brown Pelican	G4T3	S1S2	E	E	-	(Nesting colony) colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size, which afford immunity from attack by ground-dwelling predators.	Unlikely
Phrynosoma coronatum (blainvillii population)	Coast (San Diego) Horned Lizard	G4G5	S3S4	-	-	SC	Inhabits Coastal Sage Scrub and chaparral in arid and semi-arid climate conditions. Prefers friable, rocky, or shallow sandy soils.	Likely (prior to discing) - Observed at the Beltrami property (DMEC 2005)
Phrynosoma coronatum (frontale population)	Coast (California) Horned Lizard	G4G5	S3S4	-	-	SC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, &	Likely (prior to discing)

Scientific Name	Common Name	Species Status[12]					Habitat Requirements	Likelihood of Occurrence[13]
		G-Rank	S-Rank	Federal Listing[14]	State Listing	CDFG[15]		
							abundant supply of ants & other insects.	
Rallus longirostris levipes	Light-footed Clapper Rail	G5T1T2	S1	E	E	-	Found in salt marshes traversed by tidal sloughs, where Cordgrass and Pickleweed are the dominant vegetation. Require dense growth of either Pickleweed or Cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	Unlikely
Riparia riparia	Bank Swallow	G5	S2S3	-	T	-	(Nesting) colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Unlikely
Sorex ornatus salicornicus	Southern California Saltmarsh Shrew	G5T1?	S1	-	-	SC	Coastal marshes in Los Angeles, Orange & Ventura Counties. Requires dense vegetation and woody debris for cover.	Unlikely
Sterna antillarum browni	California Least Tern	G4T2T3Q	S2S3	E	E	-	(Nesting colony) nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Unlikely
Thamnophis hammondii	Two-striped Garter Snake	G3	S2	-	-	SC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Along streams with rocky beds and riparian growth.	Unlikely
Timema monikensis	Santa Monica Mountains Walking Stick	-	-	-	-	-	Coastal Sage Scrub, Chaparral. Santa Monica Mountains. **Ventura County Locally Important** (VCPD 2005)	Possible
Toxostoma redivivum	California Thrasher	G5	S?	-	-	LC	An endemic of the California Biotic Province (mostly in the western part of the state). Breeds from sea level to the higher parts of the montane chaparral. Breeds in adjacent oak woodlands and pine-juniper scrub as well as in parks and gardens, but only if dense cover is available. Its dispersal is very limited.	Likely (prior to discing) - Observed at the Beltrami property (DMEC 2005)
Trimerotropis occidentaloides	Santa Monica Grasshopper	G1G2	S1S2	-	-	-	Known only from the Santa Monica Mountains. Found on bare hillsides and along dirt trails in chaparral.	Likely (prior to discing)
Tryonia imitator	Mimic Tryonia (=California Brackishwater Snail)	G2G3	S2S3	-	-	-	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	Unlikely
Vireo bellii pusillus	Least Bell's Vireo	G5T2	S2	E	E	-	(Nesting) spring resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathway (willow, *Baccharis*, mesquite).	Unlikely

SPECIAL-STATUS HABITATS

Eight (8) sensitive habitat types are known in the vicinity of the Killen property. Table 10, Special-Status Habitats Observed at, and Known Near, the Killen Property, summarizes the CNDDB search for sensitive habitat types reported for the six quads surrounding and including the project site. Table 10 provides the habitat's name, status, and whether it was observed onsite.

Of the eight sensitive habitats tracked by CNDDB, within the vicinity of the six-quadrangle-search and the Killen property, DMEC observed one sensitive habitat, recently disced Coastal Sage Chaparral Scrub (*Salvia leucophylla-Artemisia californica* Alliance).

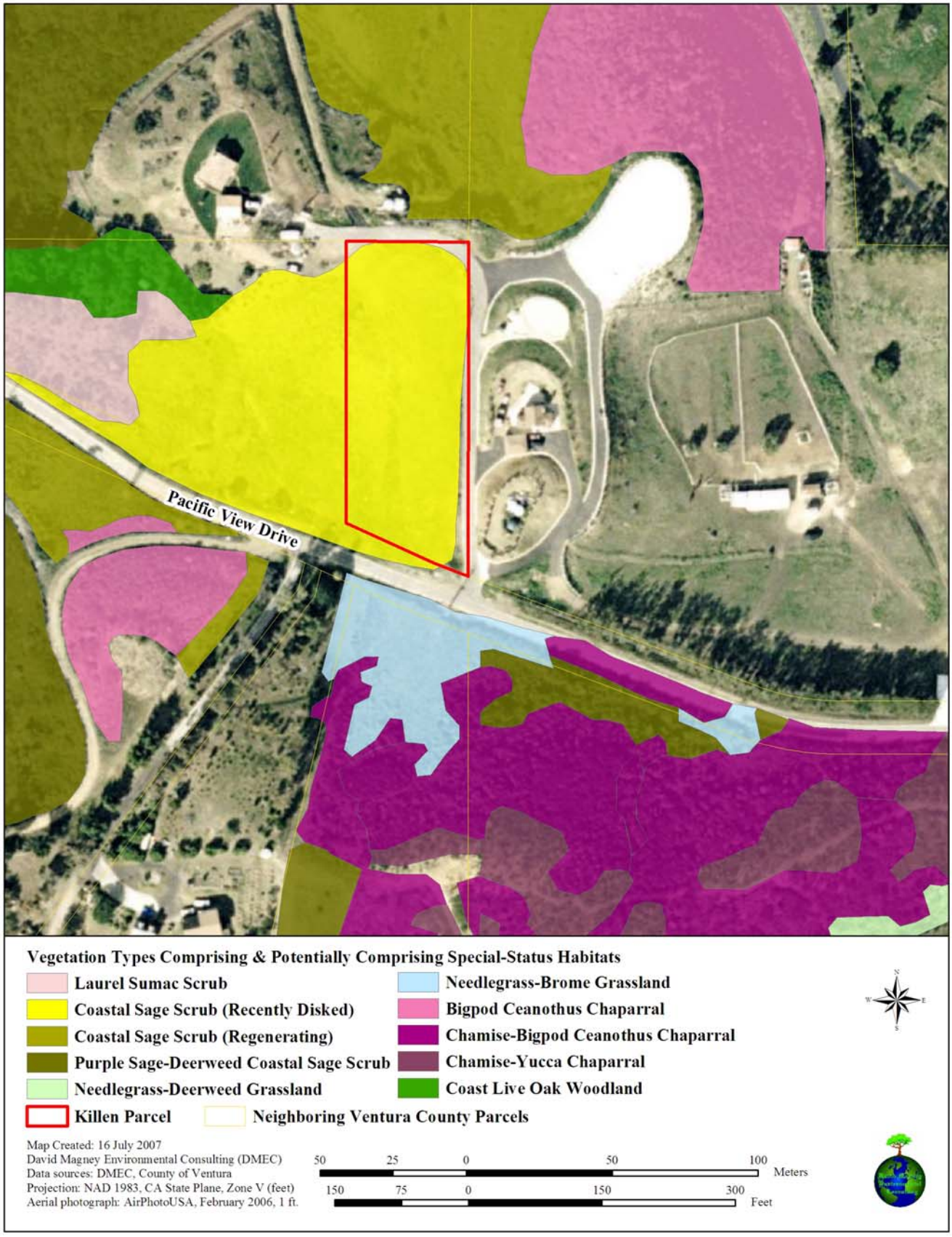
Figure 7, Sensitive Habitats Observed in the vicinity of the Killen Property, shows the distribution of sensitive habitats observed onsite.

Table 10. Special-Status Habitats Known Near the Killen Property

Scientific Name	Species Status[16]		Observed Onsite?
	Global Rank	State Rank	
Coast Live Oak Woodland	G4	S4	No (Observed in adjacent parcel to the west)
Coastal Sage Chaparral Scrub (*Salvia leucophylla-Artemisia californica* Alliance)	G3	S3.2	**Yes** (in areas surrounding parcel and was present onsite prior to discing disturbances)
Southern Coast Live Oak Riparian Forest	G4	S4	No
Southern Coastal Salt Marsh	G2	S2.1	No
Southern Riparian Forest	G4	S4	No
Southern Sycamore Alder Riparian Woodland	G4	S4	No
Valley Needlegrass Grassland	G1	S3.1	No
Valley Oak Woodland	G3	S2.1	No

[16] For special-status species definitions, refer to Tables 1 through 4 in the Methods Section.

Figure 7. Sensitive Habitats Observed in the vicinity of the Killen Property



SECTION 5. IMPACT ASSESSMENT

This section discusses the direct and indirect impacts to special-status species, wildlife movement, and sensitive habitats that will result from the proposed development project for the Killen property. Impacts to sensitive biological resources resulting from development and fuel modification are shown in Figure 8, Killen Project Impacts to Sensitive Biological Resources. Refer to Section 6, Mitigation Measures, for mitigation measures that should be implemented to minimize and avoid impacts to biological resources to the maximum extent possible.

SPECIAL-STATUS PLANT SPECIES

Policy 1 of the South Coast portion of the Ventura County *Coastal Area Plan* for the Santa Monica Mountains states that "new development, including all private and public recreational uses, shall preserve all unique native vegetation, such as *Giant Coreopsis* and *Dudleya cymosa* ssp. *marcescens*" (VCPD 2001).

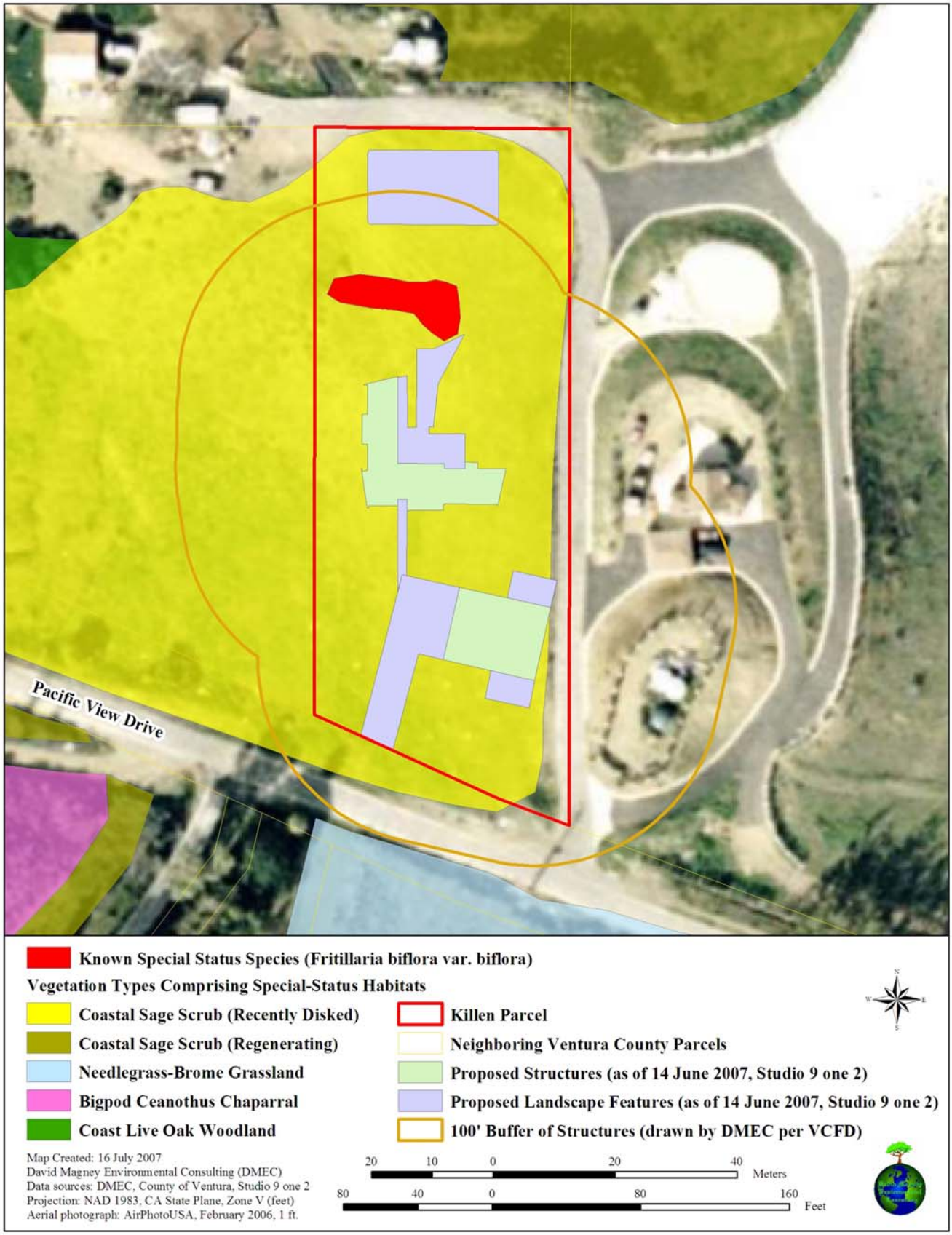
No Federally or State-listed plant species were observed on the Killen property; however, four (4) special-status plant species, considered rare at least at a statewide level, are likely to occur onsite (Table 7 above), based on the presence of the pre-disturbance habitat (Coastal Sage Scrub). In addition, one species of local concern, *Fritillaria biflora* var. *biflora* (Chocolate Lily), was observed onsite (a population of approximately 120 individuals). In addition, approximately 5 individuals of *Fritillaria biflora* and approximately 14 individuals of *Grindelia camporum* var. *bracteosum* (Bracted Gumplant), another species of local concern, were observed in the adjacent parcel to the west (not on the Killen parcel). Both of these observed species are considered Locally Uncommon (Magney 2007) with only 8 known extant populations in Ventura County, including the populations observed onsite (Magney manuscript). No lichen species, special-status or otherwise, were observed onsite.

The proposed project may result in impacts to the *likely* special-status plant species, considered rare at least at a statewide level, if they become reestablished back onsite, which is a potentially significant impact. The proposed project likely will not impact individuals of the locally uncommon *Grindelia camporum* var. *bracteosum*; however, the proposed project will impact several individuals of the locally uncommon *Fritillaria biflora* (actual number to be impacted is unknown at this time). Since the whole population is not being lost, this is considered a less-than-significant impact. However, Mr. Killen shall protect the rest of the remaining individuals of the population on his property to the maximum extent possible (refer to Section 6 for mitigation measures) to ensure long-term viability of population onsite.

If the population becomes unviable due to direct or indirect impacts of the proposed development (such as soil disturbance and/or regular disturbance from annual fuel modification), the impact would be considered a significant adverse impact. Therefore, impacts to *Fritillaria biflora* onsite are considered a potentially significant (and potentially mitigable) impact. Significance is ultimately determined by the success of the *Fritillaria biflora* preservation effort over the long run.

DMEC expects several additional locally rare or uncommon plant species to inhabit or frequent the property, especially prior to vegetation removal. The proposed development poses a potentially significant impact to locally important plant species since several locally rare species were directly observed by DMEC across the street at the Betrami property (DMEC 2005), and since special-status plant species may become established, or may re-establish, onsite prior to any construction activities. The presence of Ventura County Locally Important plant species nearby represents a potentially significant impact, especially if an entire plant population is destroyed or is reduced in size such that it is no longer viable.

Figure 8. Killen Project Impacts to Sensitive Biological Resources



SPECIAL-STATUS WILDLIFE SPECIES

No special-status wildlife species were observed onsite or within the proposed impact areas. In addition, no bird nests or migratory nesting bird species were observed onsite. However, habitat for special-status wildlife species once existed onsite, and studies conducted by DMEC at the Beltrami property (just across the street from the Killen property) found special-status species on that property. Therefore, based on Table 9 (above), Special-Status Wildlife Species Known in the Vicinity of the Killen Property, six special-status wildlife species are/were *likely* to occur onsite (at least prior to discing disturbances), including: *Aimophila ruficeps canescens* (Southern California Rufous-crowned Sparrow), *Neotoma lepida intermedia* (San Diego Desert Woodrat), *Phrynosoma coronatum blainvillii* (Coast [San Diego] Horned Lizard), *Phrynosoma coronatum frontale* (Coast [California] Horned Lizard), *Toxostoma redivivum* (California Thrasher), and *Trimerotropis occidentaloides* (Santa Monica Grasshopper).

Since the potential exists for impacts to occur to these species resulting from the proposed project, the impact is considered a potentially significant impact. Measures should be taken to avoid contact with or harm to wildlife species during construction (refer to Section 6 for measures to minimize impacts). Indirect and cumulative impacts due to wildlife habitat loss will also result. The indirect loss of wildlife habitat is a significant but partially mitigable impact since it can only be partially mitigated for by implementing a portion of habitat restoration onsite. The cumulative impact is also considered significant but partially mitigable since the loss of habitat is permanent and contributes to the overall cumulative loss of wildlife habitat for special-status wildlife species in the Santa Monica Mountains and the region.

WILDLIFE MOVEMENT

The Killen property is not mapped as any particular wildlife movement category and exists within an "island" of non-wildlife-habitat and unprotected land; however, the project site is surrounded by what is mapped as wildlife habitat (non-core and privately held). No local wildlife travel routes were observed onsite during the timing of the survey; however, wildlife travel routes may have been lost due to recurring discing disturbances to the project site soil.

Future development of the Killen property may directly temporarily impact wildlife movement or migration at or near the project site due to noise, lighting, dust, poison, and human presence (refer to Section 6 for measures to minimize these impacts). The temporary direct impacts are considered less than significant when the measures outlined in Section 6 are implemented to minimize these temporary impacts. Permanent and cumulative impacts to wildlife movement resulting from loss of native natural vegetation and species-specific wildlife habitat are considered less than significant since the project site is not mapped as any particular wildlife movement category.

SENSITIVE HABITATS

One sensitive habitat exists within the Killen property (Coastal Sage Chaparral Scrub [*Salvia leucophylla-Artemisia californica* Alliance]). Impacts to *Salvia leucophylla-Artemisia californica* Alliance have resulted from repeated discing and vegetation clearing onsite. In addition, the proposed development and associated fuel modification will impact a total of approximately 1.3 acres

of this Coastal Sage Scrub Alliance (including 0.88 acre of direct and indirect impacts onsite, and 0.42 acre of indirect impact offsite). Direct impacts (discing and development) and indirect impacts (fuel modification) to this sensitive habitat are considered significant, since the impact is only partially mitigable onsite. Adequate space does not exist onsite to mitigate for the 1.3 acre of Coastal Sage Scrub lost, and offsite mitigation is likely infeasible. The cumulative impact is also considered significant since the loss of habitat is permanent and contributes to the overall cumulative loss of sensitive habitat in the Santa Monica Mountains and the region.

COASTAL HABITATS (ENVIRONMENTALLY SENSITIVE HABITAT AREAS)

One of the goals of the *Coastal Area Plan* of the Ventura County General Plan is to preserve and protect the upland habitats of the Santa Monica Mountains. The South Coast sub-area contains numerous environmentally sensitive habitat areas (ESHA). Therefore, a special overlay zone classification has been applied to most of the land easterly and southeasterly of the U.S. Navy Pacific Missile Test Center at Point Mugu. This special "Santa Monica Mountains" overlay zone was implemented in order to recognize that Santa Monica Mountains are a coastal resource of statewide and national significance. The Santa Monica Mountains contain some of the most significant inland habitats in the County's coastal zone. The mountains provide habitats for several unique, rare, or endangered plant and animal species. Such habitats may be easily damaged by human activities. Therefore, development in the overlay zone area requires case-by-case consideration, and, where applicable, shall be consistent with Sections 30230 and 30231 of the Coastal Act. All new upland development shall be sited and designed to avoid adverse impacts on sensitive environmental habitats. (VCPD 2001.)

The Killen property exists within the ESHA of the Santa Monica Mountains. The 1.3 acres of Coastal Sage Scrub that have collectively been removed onsite as a result of discing activities and that will result from development and associated fuel modification is considered sensitive habitat, within the Coastal Zone, and qualifies as ESHA. Direct impacts and indirect impacts to this coastal habitat are considered significant, since the impact is only partially mitigable onsite. Adequate space does not exist onsite to mitigate for the 1.3 acre of ESHA Coastal Sage Scrub lost, and offsite mitigation is likely infeasible. The cumulative impact is also considered significant since the loss of this habitat is permanent and contributes to the overall cumulative loss of coastal habitat in the Santa Monica Mountains.

WETLAND HABITATS

No impacts to riparian vegetation, County defined wetlands, federal jurisdictional waters (including wetlands), or state jurisdictional wetlands are expected to result from the proposed project; however, runoff may be increased and water quality of the northern drainage (offsite) may be negatively influenced by development. The impacts to water quality onsite are likely a less-than-significant impact. However, it should be noted that although the property is only one acre, and although the proposed development is relatively small, the project contributes to the cumulative development in the area, which increases the total amount of runoff in the vicinity and affects the general water quality of nearby streams.

SECTION 6. MITIGATION MEASURES

Figure 9, Minimum Mitigation for Killen Project Impacts, illustrates the currently proposed project and the area of mitigation proposed for the Killen property project. Figure 10, Recommended Development Relocation and Mitigation for Killen Project Impacts, is a schematic showing how the Killen development could be modified to minimize impacts. The project illustrated in Figure 10 eliminates or relocates the horse arena, and relocates the residence further south to minimize impacts to sensitive biological resources and increase the mitigation area to the maximum extent possible onsite. DMEC recommends the project be similarly redesigned to the schematic in Figure 10, over the proposed project in Figure 9, since (1) the *Fritillaria biflora* population will have an increased chance of survival/viability, (2) the mitigation area will be increased for mitigating impacts from past discing and future permanent development, and (3) *Fritillaria biflora* will be on the outer limits of the fuel modification zone further reducing the chance of impacting the population. Specifically, the mitigation area proposed in Figure 9 is 10,183 square feet (sq. ft.) (0.24 acre), while the mitigation area recommended in Figure 10 is 12,204 sq. ft. (0.28 acre), and is summarized below:

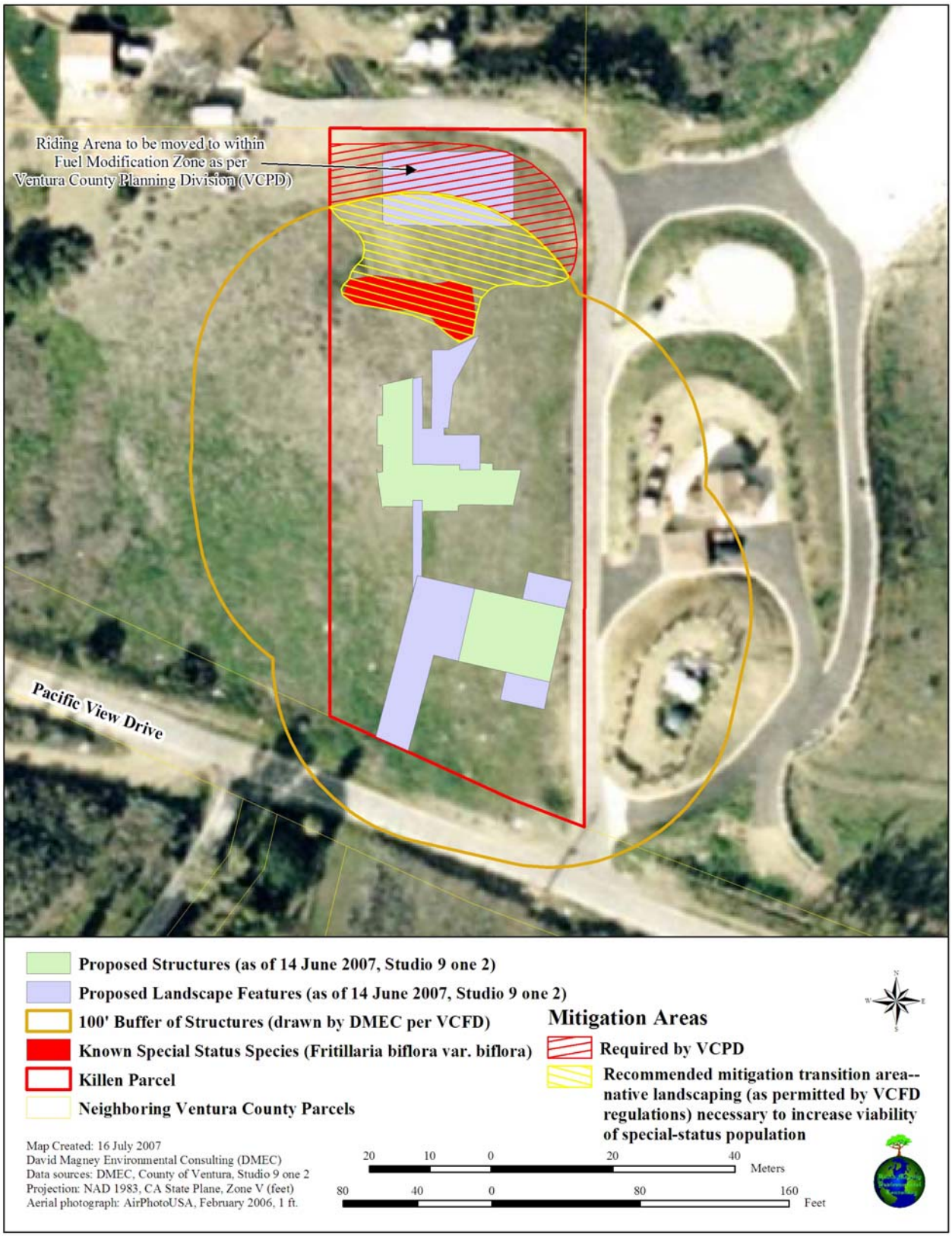
- **Proposed Mitigation** (mitigation area available with current development plans) (Figure 9):
  - Coastal Sage Scrub Mitigation Site (red hatching) = 4,207 sq. ft. (0.10 acre);
  - Recommended Mitigation Transition Area Preserving *Fritillaria* Population (yellow hatching and solid red) = 5,976 sq. ft. (0.14 acre);
  - Total Mitigation Area Proposed in Figure 9 = 10,183 sq. ft. (0.24 acre).
- **Recommended Mitigation** (minimizes impacts to the maximum extent) (Figure 10):
  - Coastal Sage Scrub Mitigation Site (red hatching) = 10,314 sq. ft. (0.24 acre);
  - Recommended Mitigation Transition Area Preserving *Fritillaria* Population (yellow hatching and solid red) = 1,890 sq. ft. (0.04 acre);
  - Total Mitigation Area Proposed in Figure 10 = 12,204 sq. ft. (0.28 acre).

The following subsections provide mitigation measures for impacts to sensitive biological resources observed and potentially occurring onsite that will result from the proposed development of the Killen property. Mitigation for impacts to sensitive biological resources is not expected to be limited to the measures recommended and discussed below.

SPECIAL-STATUS PLANT SPECIES

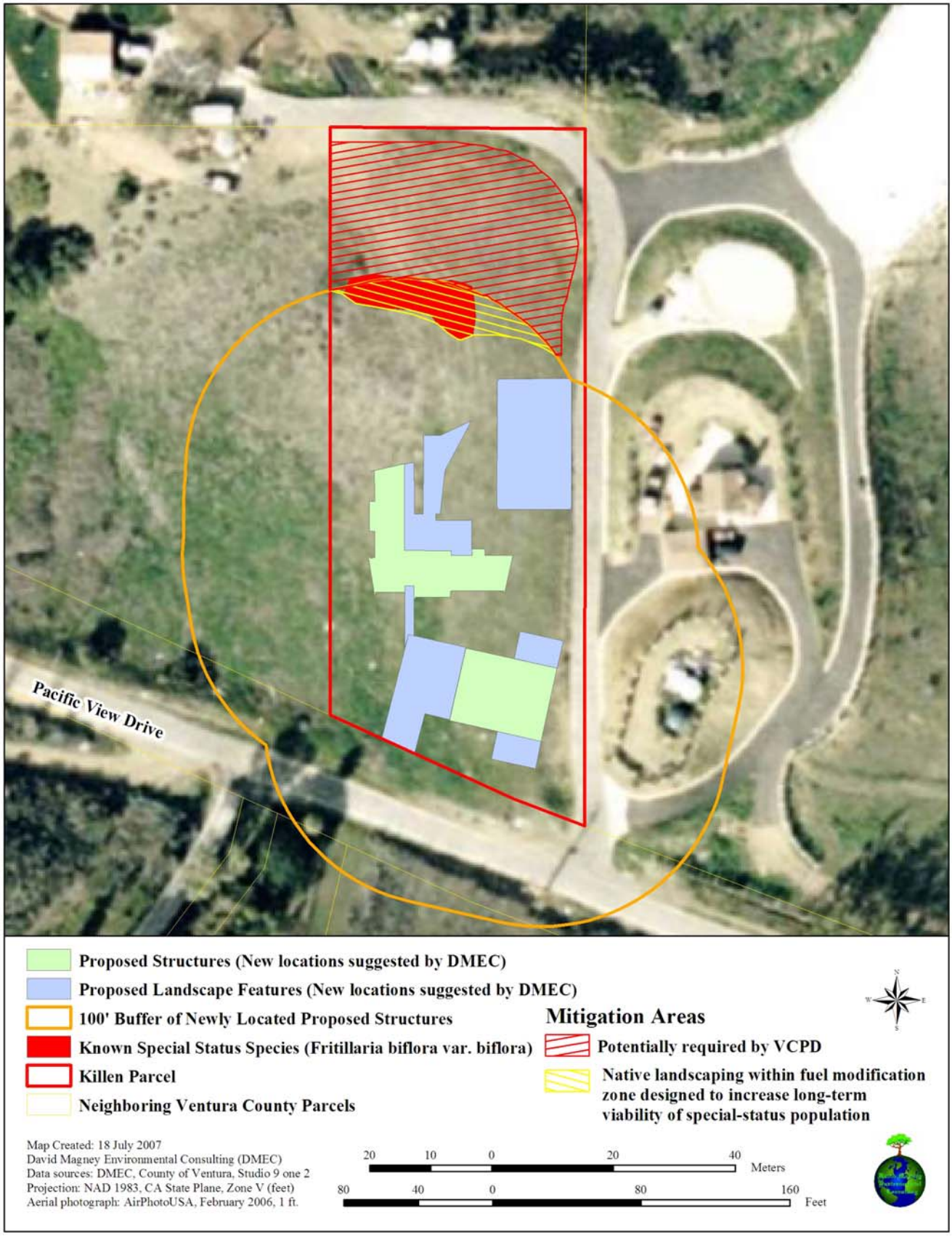
The proposed project will impact several individuals of *Fritillaria biflora* var. *biflora.* Since the whole population is not being lost, this is considered a less-than-significant impact. However, Mr. Killen shall protect the rest of the remaining individuals of the entire population on his property to the maximum extent possible to ensure the long-term viability of the population onsite. The remaining individuals of the population will be fenced off, and/or will be included within a larger mitigation site (if implementing the recommended mitigation in Figure 10), and preserved onsite and incorporated into the Killen property landscape. Regardless, impacts to *Fritillaria biflora* onsite are considered potentially significant (but potentially mitigable). The level of significance ultimately is determined by the success of the *Fritillaria biflora* preservation effort over the long run.

Figure 9. Minimum Mitigation for Killen Project Impacts*



*The northern bounds of the mitigation area in Figure 9 does not extend all the way to the access road immediately north of the mitigation site, as a 10-foot fuel modification zone will likely be required along that access road.

Figure 10. Recommended Development Relocation and Mitigation for Killen Project Impacts



DMEC recommends the *Fritillaria biflora* population be protected within the mitigation area depicted in Figure 10 (above) to (1) minimize impacts to the population to the maximum extent possible, (2) to maintain or increase the population's viability over time since the population will be located immediately adjacent to the required mitigated Coastal Sage Scrub habitat, and (3) to locate the population as far out of the fuel modification zone as possible. Redesigning the development plans (moving the development south) will move the associated fuel modification zone south. This will allow the *Fritillaria biflora* population to be on the outer boundary of the fuel modification zone. Fire thinning on the outer zone boundary can typically be negotiated with the Fire Department to be conducted at a lesser degree, especially if special-status species mitigation exists within the outer zone, to ultimately result in fewer impacts to the population over time. The *Fritillaria biflora* population preserved onsite shall be monitored for a minimum of five (5) years to document the health of the individuals, and the population as a whole over time, and to determine if additional/extended mitigation and monitoring is required.

Although winter and spring surveys have been conducted, the severe drought of 2006-2007 almost certainly limited the number of annual and perennial plant species that germinated this year, leaving high potential for one or more special-status species that may occur onsite to go undetected. Ideally, field surveys should be conducted during seasons and years when climatic conditions have not limited detection.

Additional botanical surveys, including a pre-construction survey, should be conducted prior to any development activities to determine if any special-status biological resources have become established or have reestablished onsite. The extent of any additional special-status species should be delineated to determine if an entire population exists onsite and to determine the extent of the impacts to each potential species resulting from the proposed project. In the event that mitigation measures are necessary - due to loss of any individuals of special-status plant species considered rare statewide, loss of an entire locally rare plant population, or loss of population viability - a detailed mitigation plan should be developed to minimize impacts and to ensure successful mitigation for impacts to special-status plant species.

If mitigation is required for impacts to special-status plant species, a detailed mitigation plan should be developed to minimize impacts and to ensure successful mitigation for impacts to special-status plant species. Mitigation ratios for any significant impacts to special-status plant species is recommended generally at a 10:1 ratio, but this ratio may vary depending upon the status of the species impacted and how well the species is expected to be reestablished. The mitigation plan should include but not be limited to the following measures:

- Conducting floristic surveys prior to any construction to delineate the extent of the impacts to the population and individual plants resulting from the proposed project;
- Flagging off plants to be avoided outside of the development envelope;
- Preserving the topsoil within the development envelope as a seed bank to promote special-status species revegetation;
- Collecting seeds of special-status plant species in the immediate vicinity of the project site, to ensure that the genetic integrity of the local landscape remains intact;
- Relocating individuals to be impacted to a designated mitigation site;
- Sowing the seed back onsite (and outside of any potential fuel modification zones) after construction activities have been completed. (A qualified botanist should be present during implementation of mitigation measures to aid in successful mitigation.); and
- Maintaining and monitoring restoration/planting sites for a minimum of five (5) years to determine mitigation success/failure, and implementing remedial measures to satisfy mitigation objectives.

SPECIAL-STATUS WILDLIFE SPECIES

Habitat for special-status wildlife species once existed onsite, and studies conducted by just across the street from the Killen property found special-status species. Six special-status wildlife species are/were *likely* to occur on the Killen property. Since the potential exists for impacts to occur to these species resulting from the proposed project, the impact is considered a potentially significant impact.

Measures should be taken to ensure no harm or impacts to any wildlife species (special-status or otherwise) during construction activities. Prior to grading or activities, a qualified biologist should survey the construction areas to determine if wildlife species are foraging, frequenting, or nesting on or adjacent to the construction areas. If any special-status wildlife species are expected to be impacted during construction of the proposed development, a mitigation plan will be developed and implemented by a County approved Biologist to minimize impacts and to ensure successful mitigation for impacts to special-status wildlife species. This mitigation plan shall include, but not be limited to the measures discussed in the following paragraphs.

A County approved Biologist shall develop a mitigation plan to safely relocate the sensitive wildlife species (may include trapping) and install appropriate temporary fencing prior to development to prevent re-entry. If any state or federal endangered or threatened listed species are detected during the pre-development surveys, then the County, and the respective regulatory agencies, will be immediately notified, and development will not be permitted until such time as a letter of no-effect or the appropriate take permit(s) is issued. A County approved Biologist shall also be present during development to ensure that sensitive wildlife species will not be directly disturbed, harmed, or lost.

If a special-status wildlife species is observed onsite, the biological monitor shall be notified to implement all measures necessary to protect the sensitive species. Regardless, if *any* wildlife species, including special-status wildlife species, are observed during construction activities, the contractor shall allow the animal to escape or a qualified biologist shall relocate the animal to a preserved/undeveloped area with similar required habitat. The equipment operators shall be informed of the species' presence and/or be provided with pictures in order to help avoid impacts.

WILDLIFE MOVEMENT

Temporary impacts impeding use of the resources onsite or nearby include noise, lighting, dust, poison, and human presence. The temporary direct impacts are considered less than significant. Permanent and cumulative impacts to wildlife movement resulting from loss of native natural vegetation and species-specific wildlife habitat are considered less than significant since the project site is not mapped as any particular wildlife movement category.

Although the impact to wildlife movement is considered less than significant, the following mitigation measures will be required to reduce impacts to wildlife movement to the minimum extent possible:

- Avoid removing natural vegetation to the maximum extent possible within the project area;
- Avoid contact with, or aggravating, any wildlife that may be encountered;
- Reduce noise levels during the night hours between 10:00 P.M. and 5:00 A.M.;
- Reduce night lighting; and
- Restrict the use of chemicals or poisons around construction areas and completed project.

SENSITIVE HABITATS

Direct and indirect impacts to the sensitive Coastal Sage Scrub habitat onsite are considered significant since the impacts are only partially mitigable onsite. DMEC recommends the mitigation schematic represented in Figure 10 (above) to increase the area of mitigation onsite in order to minimize impacts to the sensitive habitat and to restore the sensitive habitat to the maximum extent.

To mitigate for impacts to sensitive habitat, a detailed mitigation plan should be developed to minimize impacts and to ensure successful mitigation for impacts to sensitive habitats. The mitigation plan should include, but not be limited to, the following:

- Collect seeds of plant species from the sensitive habitat in the immediate vicinity of the project site, to ensure that the genetic integrity of the local landscape remains intact;
- Revegetate and enhance the preserved sensitive habitat within the property boundaries by hand-sowing seeds and planting container plants of native indigenous plant species;
- Control and remove invasive exotic plant species from the restoration site(s) to enhance species richness and create a less competitive growing environment for native successional and planted species;
- Implement erosion control measures, as necessary, to protect the integrity of the restoration site and to allow plantings and natural natives to germinate;
- Facilitate natural habitat regeneration and habitat succession to aid in the restoration effort;
- Increase native plant species richness, structural diversity, native vegetative cover, and increase forage, cover, and nesting habitat for terrestrial wildlife frequenting and inhabiting the vicinity of the property;
- Monitor work of the planting contractors to keep impacts to biological resources during mitigation implementation to the minimum extent possible; and
- Monitor the restoration plantings and restoration site for a minimum of five (5) years to ensure that success is achieved.

COASTAL HABITATS (ESHA)

The 1.3 acres of Coastal Sage Scrub that has been removed onsite as a result of discing activities and that will result from development and associated fuel modification is a sensitive habitat, within the Coastal Zone, and considered ESHA. Impacts to Coastal Sage Scrub ESHA is considered a significant impact, since the impacts can only be partially mitigated onsite. DMEC recommends the mitigation schematic represented in Figure 10 (above) to increase the area of mitigation onsite in order to minimize impacts to the coastal habitat, and to restore the impacted coastal habitat to the maximum extent possible.

To partially mitigate for impacts to coastal habitats, a detailed mitigation plan should be developed to minimize impacts and to ensure successful mitigation for impacts to Coastal Sage Scrub considered ESHA, including but not limited to that listed above in the Sensitive Habitats mitigation measures.

WETLAND HABITATS

Since no impacts to riparian vegetation, County defined wetlands, federal jurisdictional waters (including wetlands), or state jurisdictional wetlands are expected to result from the proposed project, no mitigation measures are required.

SECTION 7. ACKNOWLEDGEMENTS

This report was written by Cher Batchelor. David Magney reviewed and edited this report. William Abbott created all graphics for this report. Ms. Batchelor conducted the winter biological resources survey in January 2007. Ms. Batchelor and Mr. Abbott conducted the spring biological resources survey in May 2007.

SECTION 8. CITATIONS

REFERENCES CITED

Boyd, S. 1999. *Vascular Flora of the Liebre Mountains, Western Transverse Ranges, California*. November. Rancho Santa Ana Botanic Garden, Claremont, California.

Burt, W.H. and R.P. Grossenheider. 1976. *A Field Guide to the Mammals: North America North of Mexico*. 3rd edition. (The Peterson Field Guide Series.) Houghton Mifflin Company. Boston, Massachusetts.

California Department of Fish and Game (CDFG). 2006. Special Animals List. February 2006. The Resources Agency, Biogeographic Data Branch. (available at http://www.dfg.ca.gov/whdab/pdfs/SPAnimals.pdf).

_____. 2007. California Natural Diversity Database search of RareFind3. (Updated 28 April 2007) The Resource Agency, State of California, Sacramento, California.

California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California*. Sixth edition. (Special Publication No. 1.) September. Rare Plant Scientific Advisory Committee, David Tibor, Convening Editor, Sacramento, California.

_____. 2006. *Inventory of Rare and Endangered Plants of California*. Sixth edition. Rare Plant Scientific Advisory Committee, David Tibor, Convening Editor, Sacramento, California. September. Changes to the *Inventory* as published on CNPS website (http://www.cnps.org/programs/Rare_Plant/inventory/changes/changes_accepted.htm).

Consortium of California Herbaria. 2007. Database of plant specimen vouchers for plants collected within California and deposited at one or more California public herbaria. Available at: http://ucjeps.berkeley.edu/consortium/. Updated 2 February 2007.

David Magney Environmental Consulting (DMEC). 2005. *Biological Resources Assessment for Deals Flat Property on Pacific View Drive*. December, 2005. (PN 05-0171.) Ojai, California. Prepared for Ventura County Planning Division, Ventura, California, on behalf of Marco Beltrami, Malibu, California.

Davis, F.W., P.A. Stine, D.M. Stoms, M.I. Borchert, and A.D. Hollander. 1985. Gap Analysis of the Actual Vegetation of California: 1. The Southwestern Region. *Madroño* 42(1):40-78.

Fiedler, P. 1991. *Mitigation Related Transplantation, Translocation and Reintroduction Projects Involving Endangered and Threatened and Rare Plant Species in California*. California Department of Fish and Game, Sacramento, California.

Flora of North America Editorial Committee. 1993-2007. *Flora of North America*. Oxford University Press. New York, New York. Volumes 1 through 26 (incomplete).

Hickman, J. ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California.

Jennings, M.R. 1983. *An Annotated Checklist of the Amphibians and Reptiles of California*. California Department of Fish and Game. 69(3):151-171.

Magney, D.L. Manuscript. *A Flora of Ventura County, California*. David Magney Environmental Consulting, Ojai, California.

_____. 2007. *Checklist of Ventura County Rare Plants*. 23 January 2007. California Native Plant Society, Channel Islands Chapter, Ojai, California. Available at http://www.cnpsci.org.

National Geographic. 2002. *Field Guide to the Birds of North America* (Fourth Edition). Washington, D.C.

Penrod, K., C. Cabañero, P. Beier, C. Luke, W. Spencer, E. Rubin, R.M. Sauvajot, S. Riley, an D Kamradt. 2006. *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection*. June 2006. South Coast Wildlands, Idyllwild, California. http://www.scwildlands.org. (Accessed 5 June 2007.)

Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). (Biological Report 88[26.10].) U.S. Fish and Wildlife Service, Ft. Collins, Colorado.

Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California.

Stebbins, R.C. 1985. *A Field Guide to Western Reptiles and Amphibians*. (The Peterson Field Guide Series.) Houghton Mifflin Company, Boston, Massachusetts.

Ventura County Planning Division (VCPD). 2001. *Coastal Area Plan of the Ventura County General Plan*. Last amended 20 November 2001. Ventura, California.

_____. 2005. *Ventura County Locally Important Species*. 5 May 2005. Ventura, California.

Zedler, P., S. DeSimone, J. Giessow, D. Lawson, J. Else, and S. Bliss. February 1997. *The Plant Communities of Camp Pendleton Marine Corps Base, California*. San Diego State University, Department of Biology, Ecology Program. San Diego, California.

PERSONAL COMMUNICATIONS

Lohmus, Natasha, California Department of Fish and Game. Telephone conversation of 29 March 2007 regarding Migratory Bird Treaty Act or Fish and Game Code Section 3503.

APPENDIX.
KILLEN PROPERTY PHOTODOCUMENTATION

WINTER PHOTOGRAPHS (JANUARY 2007)


Left: View west of Killen property showing disced soils and very little remaining native/natural vegetation.
Right: View north/northeast, from the highest elevation on the Killen property, view of Boney Mountain in the background and almost bare soils in the foreground.


Left: View south from middle of the Killen property showing drilling equipment in the background.
Right: View north/northwest showing condition of the Killen property and a portion of the adjacent property.


Left & Right: View of parcels to the north of the Killen property showing remnant Coastal Sage Scrub habitat in foreground (the lighter-colored scrub), and chaparral habitat in the background (the darker taller stand).

SPRING PHOTOGRAPHS (MAY 2007)


Left: View west of Killen property and adjacent property showing annual nonnative groundcover with Quercus agrifolia *Alliance in the background (off the Killen property). Right: View northeast showing remaining/sprouting vegetation.*


Left: View north/northwest of the Killen property. Right: View northwest into adjacent parcel.


Left: View west. Right: View southwest.

Left: One plant (not flowering) of a population of approximately 120 individuals of Fritillaria biflora *var*. biflora *(Chocolate Lily), a special-status plant species (Locally Uncommon) found on the Killen property.*

Left: Flowering individual of Chocolate Lily found onsite. Right: Expired flower of Chocolate Lily plant found onsite.