Biological Report

for

Estrella Vineyards

Tract 2905

San Luis Obispo County
California

Prepared for

Resource Landholdings, LLC
523 S. Cascade Avenue, Suite E
Colorado Springs, CO 80903

by

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES
1875 Wellsona Road
Paso Robles, CA 93446
(805) 467-1041

January 2007

545.01

Table of Contents

Synopsis 1
1.0 Introduction 2
1.1 Project Location and Description 2
1.2 Responsible Parties 3
2.0 Methods 3
3.0 Results 4
3.1 Existing Conditions 4
3.2 Soils 5
3.3 Habitat Types 8
3.3.1 Agrestal 8
3.3.2 Grassland 8
3.3.3 Oak woodland 8
3.3.4 Aquatic 9
3.4 Plant List 9
3.5 Wildlife List 13
3.6 Special Status Species 18
3.6.1 Introduction to CNPS lists 18
3.6.2 Introduction to CNDDB definitions 18
3.6.3 Special status species list 18
3.6.4 Special status plants that could occur on the property 24
3.6.5 Special status animals that could occur on the property 25
3.6.6 Special status species not expected to occur on the property 28
4.0 Discussion 28
4.1 General Discussion of Property Conditions 28
4.2 Regulatory Framework 28
5.0 Potential Impacts 29
5.1 Potential Habitat Impacts 29
5.1.1 Agrestal 29
5.1.2 Grassland 30
5.1.3 Oak woodland 30
5.1.4 Aquatic 30

5.2 Potential Impacts to Oak Trees 30
5.3 Potential Impacts to Common Wildlife 30
5.3.1 Nesting habitat 30
5.3.2 Reduction of wildlife movement corridors 30
5.3.3 Displacement and/or take 31
5.4 Potential Impacts to Special Status Species 31
5.4.1 San Joaquin and Salinas pocket mice 31
5.4.2 Special status birds 31
5.4.3 Special status reptiles and amphibians 31
5.4.4 American badger 32
5.4.5 San Joaquin kit fox 32
6.0 Mitigation Recommendations 32
6.1 Habitat Mitigations 32
6.1.1 Grassland 32
6.1.2 Aquatic 32
6.2 Oak Tree Mitigations 32
6.3 Common Wildlife Mitigations 33
6.3.1 Nesting habitat 33
6.3.2 Reduction of wildlife movement corridors 33
6.3.3 Displacement and/or take 34
6.4 Mitigations for Special Status Species 34
6.4.1 Western spadefoot toad 34
6.4.2 Special status birds 34
6.4.3 American badger 34
6.4.4 San Joaquin kit fox 35
7.0 References 40
APPENDIX A – Site Maps ..... A - 1
APPENDIX B – Figures ..... B - 1
APPENDIX C – Photographs ..... C - 1
APPENDIX D – Status Codes ..... D - 1
APPENDIX E – CNDDB Reports ..... E - 1

Synopsis

- This biological report examines an approximately 560-acre property (APN 015-014-001, -002, -003, -004, -005, -006, -007, -008) located on Estrella Road, east of the Paso Robles city limits, San Luis Obispo County, California.

- The proposed project is a 24 lot residential development on a large agricultural property along the Estrella River.

- The property consists of four habitat types, in which 96 species of plants were identified during floristic surveys conducted in May, June, and July 2006. The dominant habitat type is agrestal (vineyards), with grassland, oak woodland, and aquatic habitats comprising small areas of the property.

- Seven special status plants and thirteen special status animals have the potential to occur on the property. Two special status animals were identified on the property in 2006.

- Two species of native oak trees occur on the property. All oak tree species are afforded protections by the County of San Luis Obispo.

- This document provides mitigation recommendations designed to reduce impacts to biological resources on the property to a less than significant level.

1.0 Introduction

This biological report provides information regarding botanical, zoological, and aquatic resources on a 560-acre property in Paso Robles, San Luis Obispo County, California. Results are reported for floristic and wildlife surveys of the property, a habitat inventory, and database and literature searches of rare species reports within five miles of the property. Natural communities on the site are identified, rare and special status species that could occur on the property or be affected by the proposed project are discussed, and lists of plant and animal species that were identified or are expected on the property are provided. This report provides agencies and decision makers with information regarding biological resources on the property and assesses potential impacts to biological resources from proposed development on the property. Project plans are still in the conceptual phase; therefore mitigation measures do not address project-specific impacts. General mitigation measures for potential impacts to sensitive biological resources are specified.

1.1 Project Location and Description

The subject property is located on Estrella Road, east of the Paso Robles city limits, in San Luis Obispo County, California (Appendix B, Figure 1). The parcel is on the south side of Estrella Road, bordered on the south by Dusty Place and agriculture fields, the west by Fa-Rouse Way, and the east by an unnamed creek. The property is within the Estrella United States Geological Survey (USGS) 7.5 minute quadrangle (Figure 2). The approximate coordinates for the center of the property are N35° 41' 25" W120° 35' 50". Elevation varies from approximately 740 feet to 882 feet above sea level.

The proposed project is a 24-lot residential development on a large agricultural property currently planted with grape vines. The lots range in size from 1.02 acres to 2.24 acres. Primary and secondary access is from Estrella Road, through the existing vineyards. Vineyards would not be removed for the proposed project. Two drainage crossings would be required for access to the lots.

1.2 Responsible Parties

TABLE 1. RESPONSIBLE PARTIES. Applicant, agent, biological consultant, and lead agency are provided.

Applicant (Owner) Resource Landholdings, LLC. 523 S. Cascade Avenue, Suite E Colorado Springs, CO 80903 (719) 633-1505	**Agent** North Coast Engineering, Inc. 725 Creston Road, Suite B Paso Robles, CA 93446 805-239-3127
Biological Consultant Althouse and Meade, Inc. 1875 Wellsona Road Paso Robles, CA 93446 805-467-1041	**Lead Agency** County of San Luis Obispo Department of Planning and Building County Government Center San Luis Obispo, CA 93408 805-781-5600

2.0 Methods

The subject property was surveyed for biological resources on May26 and 28, June 19, and July 31, 2006. Daniel E. Meade, Ph.D. and Jason Dart, biologists, conducted the surveys. The site was surveyed on foot and photographed. Surveys were conducted throughout the property to compile species lists and search for rare plants and animals. Search methodology consisted of haphazard transects through all habitats, with specific attention given to project areas and areas deemed likely to support rare plants. Habitat types on the property were inspected, described, and mapped. All plant and animal species observed on the site were identified and recorded. Wildlife observations, including animal presence, nests, tracks, and sign, were documented. Birds were identified by sight (using 10 power binoculars) and vocalizations. Plants were identified through field observations and laboratory analysis of collected material.

TABLE 2. BIOLOGICAL SURVEYS. Survey dates, times, weather conditions, and biologist.

Survey Date	Survey Time	Temp.	Wind	Weather Observations	Biologist
5/26/06	8:30 a.m. to 10:30 a.m.	80 °F	0-3 mph	Sunny	D. Meade
5/28/06	9:00 a.m. to 2:00 p.m.	80-90 °F	0-3 mph	Sunny, warm, and calm	J. Dart
6/19/06	11:00 a.m. to 12:30 p.m.	85 °F	0-3 mph	Sunny	J. Dart
7/31/06	10:00 a.m. to 11:00 p.m.	95 °F	5-10 mph	Sunny and hot	J. Dart

We conducted a search of the California Natural Diversity Database (CNDDB December 30, 2006 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California for rare species that could occur within five miles of the project site. The search area included Estrella, Paso Robles, Ranchito Canyon, San Miguel, Creston, and Templeton quadrangles (7.5 minute USGS).

Additional special status species research consisted of reviewing previous biological reports for the area and searching on-line museum and herbarium specimen records for locality data within San Luis Obispo County. We reviewed online databases of specimen records maintained by the Museum of Vertebrate Zoology (MVZ) at the University of California, Berkeley, and the Consortium of California Herbaria. Additional special status species with potential to occur on or near the subject property were added to our special status species list.

Special status species lists produced by database and literature searches were cross-referenced with the known habitat types on the property to identify all potential special status species that could occur on or near the project site. Each special status species with a potential for occurrence on or near the project site is individually discussed. A report was made to the CNDDB if field surveys found special status species on the property.

3.0 Results

3.1 Existing Conditions

The Estrella Vineyard property is situated on an alluvial terrace on the south side of the Estrella River approximately two miles northeast of the Paso Robles Municipal Airport (Appendix B, Figure 4). It is a rural area primarily used for agriculture, but with increasing residential development on the west and south sides of the property. Trellised vineyards comprise more than 200 acres of the property. Vineyard areas are described as an agrestal habitat (section 3.3.1). A single maintenance building and several sheds are located on the property; no residences are present.

At the time of our surveys much of the grassland habitat on the property had been recently tilled in preparation for additional vineyard installations (Photo 1). The proposed development area at the southwest property corner is an upland grassland hilltop, and was also tilled (Photo 2). The condition of the grasslands prior to tillage, and the species composition, is undocumented. A farm field in the northeast corner of the property is situated on a flood terrace of the Estrella River, on the south side of Estrella Road, at the confluence of a major side tributary and the main river. The farm field was fallow during the spring of 2006, but had been tilled earlier in the season and supported a sparse growth of non-native grasses and weeds (Photo 3).

An ephemeral drainage passes through the southwestern property corner (Photo 4). Riparian canopy in the drainage is largely absent. Mature oaks form a sparse woodland along the waterway, and some small shrubby willows are present in the drainage bottom. Wetland conditions are not present in the drainage within the property boundaries. The drainage originates in vineyards south of the property and flows northwest to the Estrella River, with a total length of approximately 2.8 miles. A fork from the main stem of the

drainage originates at a reservoir in the center of the subject property. The reservoir is apparently unable to hold water effectively and was dry during our survey period (Photo 5). Some wetland vegetation was present in the reservoir bottom. Several additional side channels to the main drainage stem are on the property. The side channels are very ephemeral, in various stages of incision, and do not support wetland or riparian vegetation.

A second ephemeral tributary to the Estrella River originates at a reservoir in the north end of the property. The tributary is approximately 0.2 miles from the reservoir to Estrella Road where is passes through a culvert and empties into the river. The nearly vertical walls of this section of the drainage drop more than ten feet to a flat, sandy creek bottom (Photo 6). Riparian vegetation is not present in the drainage within the property boundaries, except for a cottonwood tree at the fence-line and a few oaks on the upper bank.

The reservoir at the head of the small tributary is plumbed for irrigating the vineyards. Plastic lining material in the reservoir bottom was in disrepair. A small amount of water was present during our survey period that supported emergent wetland vegetation and an abundant population of breeding frogs and toads (Photo 7).

Oak woodland habitat on the property consists of blue and valley oak trees on slopes and along waterways. Oak woodlands comprise a small portion of the property but provide the best wildlife habitat on the site.

3.2 Soils

The United Stated Department of Agriculture (USDA) Soil Survey of San Luis Obispo County, California, Paso Robles Area (1983), maps nine soil types on the property (Appendix B, Figure 3): Arbuckle fine sandy loam, 0 to 2 percent slopes (100), Arbuckle-Positas complex, 0 to 2 percent slopes (102), Arbuckle-Positas complex, 30 to 50 percent slopes (104), Arbuckle-Positas complex, 50 to 75 percent slopes (105), Arbuckle-San Ysidro complex, 2 to 9 percent slopes (106), Ayer and Diablo soils, 15 to 30 percent (110), Nacimiento-Los Osos complex, 9 to 30 percent slopes (179), San Ysidro loam, 0 to 2 percent slopes (197), and Still clay loam, 0 to 2 percent (208).

Arbuckle fine sandy loam, 0 to 2 percent slopes (100) is a very deep, nearly level, well drained soil formed in alluvium derived form mixed rocks. Permeability is moderately slow and the available water holding capacity moderate to high. Surface runoff is slow and the hazard of erosion is slight. Included in this soil map unit are about 5 percent San Ysidro loam and 5 percent small areas of Cropley clay and Hanford fine sandy loam. Moderate shrink-swell potential and low strength are limitations for dwellings and buildings. This soil type encompasses land associated with the ephemeral drainage at the southern end of the property.

Arbuckle-Positas complex, 0 to 2 percent slopes (102) consists of rolling soils on terraces. This complex consists of about 40 percent Arbuckle fine sandy loam and 30 percent Positas coarse sandy loam. Areas of these soils are so intricately mixed or so small that it is not practical to separate them in mapping. The Arbuckle soil is a very deep, well drained soil that formed in alluvium derived from mixed rocks. Permeability is moderately slow and the available water holding capacity is moderate to high. Surface

runoff is medium and the hazard of erosion is moderate. The Positas soil is a very deep, well drained soil that formed in alluvium derived form mixed rocks. Permeability is very slow and available water holding capacity is moderate to high. Surface runoff is medium and the hazard of erosion is moderate. This map unit is located in two areas at the southern property boundary, in upland grassland habitat.

Arbuckle-Positas complex, 30 to 50 percent slopes (104) and **Arbuckle-Positas complex, 50 to 75 percent slopes (105)**, differ only in slope steepness. The Arbuckle-Positas complex, 30 to 50 percent slopes (104) consists of steep soils found between flood plains and terraces while the Arbuckle-Positas complex with 50 to 75 percent slopes (105), consists of very steep soils on terrace escarpments. Both complexes consists of approximately 40 percent Arbuckle fine sandy loam and 30 percent Positas coarse sandy loam, with properties as stated for map unit 102. Surface runoff is rapid, and the hazard of erosion is high for both of these map units due to steepness of slope. These Arbuckle-Positas map units are located on slopes and drainages, supporting oak woodlands on the property.

Arbuckle-San Ysidro complex, 2 to 9 percent slopes (106) is the largest map unit of the property and occurs on undulating to gently rolling soils on terraces. This complex consists of approximately 40 percent Arbuckle fine sandy loam and 20 percent San Ysidro loam. Also included in this map unit are areas of Greenfield fine sandy loam, Hanford fine sandy loam, Cropley clay, Rincon clay loam, and Ryer clay loam. The Arbuckle soil is a very deep, well drained soil formed in alluvium from mixed rocks. It has a moderately slow permeability and a moderate to high available water capacity. Surface runoff is medium, and the hazard of erosion is moderate. The San Ysidro soil is a very deep, moderately well drained soil with a very slow permeability and a moderate to high available water capacity. Surface runoff is medium, and the hazard of erosion is moderate. Vineyards comprise the majority of this soil type on the property. About half of the proposed development at the southwest property corner would be on this soil type.

Ayer and Diablo soils, 15 to 30 percent slopes (110) is an undifferentiated unit of soils on hills. This unit is made up of 30 percent Ayar silty clay and 25 percent Diablo clay. Both soils can occur in a mapped area, or either soil can occur separately. Both are deep, well drained soil that formed in material weathered from calcareous sandstone and shale. The Ayer soil has slow permeability, high to very high available water capacity, and rapid surface runoff. The Diablo soil has slow permeability, moderate to very high available water capacity, and rapid surface runoff. Both soils have a high erosion hazard and high shrink-swell potential. Soil erosion can be controlled by maintaining crop residue on or near the surface during periods of rain and the use of annual cover crops and permanent cover crops. Map unit 110 occurs on mild slopes at the southern end of the property.

The **Nacimiento-Los Osos complex, 9 to 30 percent slopes (179)** is present in the southeastern portion of the property. This complex consists of moderately steep soils on hills. This complex is about 30 percent Nacimiento silty clay loam and 20 percent Los Osos clay loam. Included with this soil in mapping are about 10 percent Balcom loam, 10 percent Positas coarse sandy loam, 5 percent Ayar silty clay, 5 percent Diablo clay , and 5 percent Shimmon loam. Five percent is a soil similar to Los Osos soil except that it is calcareous throughout, 5 percent is a soil similar to Los Osos soil except it has a very

gravelly clay subsoil, and 5 percent is small areas of Arbuckle fine sandy loam, Greenfield fine sandy loam, and Rincon clay loam. The Nacimiento soil is a moderately deep, well drained soil that formed in material weathered from calcareous sandstone and shale. It has moderately slow permeability and a low to moderate available water capacity. Surface runoff is rapid, and the hazard of erosion is high. The Los Osos soil has slow permeability and low to moderate available water capacity. Surface runoff is rapid, and the hazard of erosion is high. New vineyards are planned for much of this soil type on the property.

The **San Ysidro loam, 0 to 2 percent slopes (197)** occur in small areas of drainageways along the western property boundary. This is a very deep, nearly level, moderately well drained soil formed in alluvium derived from mixed rocks. Included in this map unit are small areas of Arbuckle fine sandy loam, Cropley clay, Greenfield fine sandy loam, and Rincon clay loam. San Ysidro loam has a very slow permeability and a moderate to high available water capacity. Surface runoff is slow, and the hazard of erosion is slight. The subsoil has a high shrink-swell potential. This soil is suitable as rangeland and agriculture.

Still clay loam, 0 to 2 percent (208) is present in the northeast corner of the property, adjacent to Estrella Road. This very deep, nearly level, well drained soil formed in alluvium derived from sedimentary rock. Included in this map unit are small areas of Mocho clay loam and Metz loamy sand. This soil has moderately slow permeability with a high to very high available water capacity. Surface runoff is slow, and the hazard of erosion is slight. This soil is one of the most productive soils in the county. The existing farm field occupies this map unit on the property.

3.3 Habitat Types

Four habitat types are described for the property: agrestal, grassland, oak woodland, and aquatic (reservoir). Native habitats remain only along drainages and steep slopes where agricultural activities have not disturbed the vegetation and soils.

3.3.1 Agrestal

Trellised vineyards occupy more than 200 acres of the property. Vineyards provide temporary cover, and seasonal sources of water and food for a variety of wildlife, although very few animals become permanent residents. Rodents and birds are the most common inhabitants of the vineyard. Larger animals such as fox, bobcat, and coyote may move through the vineyard but are not expected to use the habitat as a significant foraging or denning area. Western spadefoot toad (*Spea hammondii*) breeds in a reservoir on the property surrounded by vineyards. The toads likely aestivate in underground burrows within the vineyard areas.

A farm field in the far northeastern property corner was not planted at the time of our surveys in the late spring and early summer of 2006, but had been tilled. The soils in this field are recognized as prime agricultural land. The field has likely been dry-farmed for many years. Non-native annual grasses and weedy forbs were present.

3.3.2 Grassland

Much of the grassland habitat on the property was tilled in the spring of 2006 prior to our site surveys. Remnant stands of annual and perennial grasses remained on slopes, edges of drainages, and between oak trees. Elongate buckwheat (*Eriogonum elongatum*), locoweed (*Astragalus curtipes*), and a variety of wildflowers are present in the hillside grassland areas, between oak trees. Because these locations have never been tilled the forb and grass diversity is high, and conditions are adequate for special status species. The grassland habitat in the proposed development site is presumed to have been composed of annual grasses with pockets of purple needlegrass (*Nassella pulchra*). Purple needlegrass is a perennial bunchgrass that is the primary component of valley needlegrass grassland, a habitat listed by the California Department of Fish and Game as a sensitive natural community. The extent of the bunchgrass habitat prior to tillage is unknown. Of the thirteen grass species identified on the property, four are native (Table 3).

3.3.3 Oak woodland

Oak woodlands on the property are primarily composed of blue oak trees (*Quercus douglasii*). Some large valley oaks (*Quercus lobata*) occupy the alluvial soils along drainages. A closed-canopy blue oak woodland occupies a steep northeast facing-slope between vineyards and the fallow farm field at the north end of the property. Annual and perennial grasses form the understory. The woodland is likely used for cover by wildlife foraging in the adjacent fields, and by numerous songbird species. Raptor nests were not observed in this woodland area. The oak woodland habitat at the south end of the property is situated on the upper banks and adjacent slopes of the ephemeral drainage. The woodland canopy is intermittent, with sloping grassy meadows between patches of trees (Photo 9). A red-tailed hawk nest in a large oak tree near the drainage was occupied in the spring of 2006. The mosaic of oak woodland and grassland habitats along this

drainage form a quality wildlife area. Deer, fox, coyote, and other small mammals are expected to use the habitat for short-range movements, foraging, hunting, and denning. Reptiles and amphibians are expected to be year round residents, and many common and at least one special status bird were observed in this habitat.

3.3.4 Aquatic

Permanent aquatic habitat on the property is only present in the northern reservoir. The reservoir is not properly sealed and was not capable of maintaining a high water level in the spring of 2006 (Photo 7). The east end of the reservoir was likely dry by the end of the summer, with less than a foot of water remaining at the west end. Emergent wetland vegetation was able to become established in the shallow water which created very good habitat for amphibians. A variety of waterfowl and sandpipers were foraging in the reservoir. Pacific chorus frog (*Pseudacris regilla*), bullfrog (*Rana catesbeiana*), California toad (*Bufo boreas halophilus*), Western spadefoot toad (*Spea hammondii*), spotted sandpiper (*Actitis macularia*), mallard (*Anas platyrhynchos*), long-billed dowitcher (*Limnodromus scolopaceus*), and killdeer (*Charadrius vociferous*) were all observed in the reservoir. Aquatic insects were present; however it is unlikely fairy shrimp habitat due to pumping activities and potential depth of more than ten feet.

Aquatic habitat is present in the ephemeral drainages on the property only during and shortly after rain events. The hydrology of the drainages is interrupted by on- and off-site agricultural reservoirs, which have likely caused a reduction in surface flows. Pool habitat in the drainages is not sufficient to harbor breeding amphibians in most years.

Vernal pools were not observed on the property in the spring of 2006. Nearly all the level terrain is occupied by vineyards, or was tilled in the spring and before. A winter survey has not been conducted. As of January 2007, rainfall has not been sufficient to fill vernal pools or allow growth of annual vernal pool plants.

3.4 Plant List

A floristic survey conducted in May, June, and July 2006 identified 96 species of plants on the property (Table 3). No special status species were observed on site.

TABLE 3. PLANT LIST. The 96 species of plants identified on the property consist of 51 native species and 40 introduced species.

Scientific Name	Special Status	Origin	Common Name
Ferns - 1 Species			
Pentagramma triangularis ssp. *triangularis*	None	Native	Gold-back fern
Trees - 5 Species			
Ailanthus altissima	None	Introduced	Tree of heaven
Populus fremontii ssp. *fremontii*	None	Native	Fremont cottonwood
Quercus douglasii	None	Native	Blue oak

Scientific Name	Special Status	Origin	Common Name
Quercus lobata	None	Native	Valley oak
Salix laevigata	None	Native	Red willow
Shrubs - 8 Species			
Astragalus curtipes	None	Native	Locoweed
Baccharis pilularis	None	Native	Coyote brush
Eriogonum elongatum	None	Native	Elongate buckwheat
Lotus scoparius	None	Native	Deerweed
Marrubium vulgare	None	Introduced	Horehound
Phoradendron villosum	None	Native	Oak mistletoe
Senecio flaccidus var. *douglasii*	None	Native	Shrubby groundsel
Tamarisk sp.	None	Introduced	Tamarisk
Herbs -69 Species			
Amaranthus blitoides	None	Native	Pigweed
Amsinckia menziesii var. *menziesii*	None	Native	Common fiddleneck
Anthemis cotula	None	Introduced	Mayweed
Asclepias eriocarpa	None	Native	Indian milkweed
Asclepias fascicularis	None	Native	Narrow-leaved milkweed
Bloomeria crocea	None	Native	Golden stars
Brassica nigra	None	Introduced	Black mustard
Camissonia campestris	None	Native	Sun cup
Carduus pycnocephalus	None	Introduced	Italian thistle
Castilleja exserta ssp. *exserta*	None	Native	Purple owl's clover
Centaurea melitensis	None	Introduced	Tocolote
Centaurea solstitialis	None	Introduced	Yellow star thistle
Centaurium davyi	None	Native	Centaury
Chaenactis glabriuscula	None	Native	Yellow pincushion
Chamomilla suaveolens	None	Introduced	Pineapple weed
Chondrilla juncea	None	Introduced	Skeleton weed
Chorizanthe staticoides	None	Native	Turkish rugging
Clarkia purpurea ssp. *purpurea*	None	Native	Wine cups
Convolvulus arvensis	None	Introduced	Bindweed
Conyza bonariensis	None	Introduced	Asthmaweed
Crassula tillea	None	Introduced	Moss pygmyweed
Datura wrightii	None	Native	Jimson weed
Delphinium parryi ssp. *parryi*	None	Native	Parry's larkspur

Scientific Name	Special Status	Origin	Common Name
Eleocharis macrostachya	None	Native	Common spikerush
Eremocarpus setigerus	None	Native	Dove weed
Erigeron foliosus var. *foliosus*	None	Native	Leafy daisy
Eriogonum nudum	None	Native	Naked buckwheat
Eriogonum roseum	None	Native	Wand buckwheat
Erodium cicutarium	None	Introduced	Redstem filaree
Erodium moschatum	None	Introduced	Greenstem filaree
Eschscholzia californica	None	Native	California poppy
Filago gallica	None	Introduced	Herba impia
Foeniculum vulgare	None	Introduced	Fennel
Heliotropium curassavicum	None	Native	Heliotrope
Hemizonia pentactis	None	Native	Salinas tarplant
Heterotheca grandiflora	None	Introduced	Telegraph weed
Heterotheca sessiliflora	None	Native	Goldenaster
Hirschfeldia incana	None	Introduced	Mustard
Hypochaeris glabra	None	Introduced	Smooth cat's ear
Hypochaeris radicata	None	Introduced	Rough cat's-ear
Lactuca serriola	None	Introduced	Prickly lettuce
Lagophylla ramosissima ssp. *ramosissima*	None	Native	Slender hareleaf
Lessingia filaginifolia	None	Native	California aster
Lessingia glandulifera ssp. *glandulifera*	None	Native	Valley lessingia
Lotus humistratus	None	Native	Hill lotus
Lotus procumbens	None	Native	Hairy deerweed
Lotus purshianus var. *purshianus*	None	Native	Spanish clover
Lupinus formosus	None	Native	Showy lupine
Lupinus microcarpus	None	Native	Chick lupine
Madia sp.	None	Native	Tarweed
Medicago polymorpha	None	Introduced	California burclover
Melilotus indica	None	Introduced	Annual sweetclover
Navarretia atractyloides	None	Native	Navarretia
Penstemon centranthifolius	None	Native	Scarlet bugler
Plagiobothrys canescens	None	Native	Popcorn flower
Polygonum arenastrum	None	Introduced	Common knotweed
Portulaca oleracea	None	Introduced	Purslane
Potamogeton foliosus var. *foliosus*	None	Native	Pondweed

Scientific Name	Special Status	Origin	Common Name
Rumex crispus	None	Introduced	Curly dock
Scirpus acutus	None	Native	Roundstem tule
Scirpus californicus	None	Native	California tule
Silybum marianum	None	Introduced	Milk thistle
Sonchus oleraceus	None	Introduced	Common sow thistle
Spergularia rubra	None	Introduced	Sand spurrey
Stephanomeria virgata	None	Native	Wire-lettuce
Trifolium hirtum	None	Introduced	Rose clover
Verbena lasiostachys	None	Native	Verbena
Vicia sativa	None	Introduced	Common vetch
Vicia villosa ssp. *villosa*	None	Introduced	Winter vetch
Grasses - 13 Species			
Avena barbata	None	Introduced	Slender wild oat
Avena fatua	None	Introduced	Wild oat
Bromus diandrus	None	Introduced	Ripgut brome
Bromus hordeaceus	None	Introduced	Soft chess brome
Bromus madritensis ssp. *rubens*	None	Introduced	Red top brome
Cynodon dactylon	None	Introduced	Bermuda grass
Elymus elymoides	None	Native	Squirrel-tail
Elymus glaucus	None	Native	Blue wildrye
Hordeum murinum	None	Introduced	Foxtail barley
Nassella pulchra	None	Native	Purple needlegrass
Phalaris lemmonii	None	Native	Canary grass
Taeniatherum caput-medusae	None	Introduced	Medusahead
Vulpia myuros	None	Introduced	Rattail fescue

3.5 Wildlife List

More than 113 animal species have the potential to occur on the property (Table 4). These include at least 8 amphibians, 12 reptiles, 72 birds, and 21 mammals. Several rodent species (e.g., California vole, harvest mouse, etc.) are expected to be residents on the property; however, no trapping was conducted as part of this study. Active pest control associated with the vineyard reduces the number of rodents and rabbits. Most of the upland habitat on the property is or will be converted to vineyards and is poor wildlife habitat. Mammals will move through the seasonal drainage and oak woodlands on the site, and may occasionally forage in the vineyards.

Thirty-two species of birds were observed on the property. Nesting birds were observed in trees, shrubs, and in grassland areas on and near the property. An active red-tailed hawk nest was located in the main drainage. Nesting birds are protected from disturbance by California Department of Fish and Game Code, and by the Migratory Bird Treaty Act of 1918, as regulated by the United States Fish and Wildlife Service.

TABLE 4. WILDLIFE LIST. At least 113 animal species have the potential to occur on the property. The Special Status column indicates listing status of the organism under the Federal Endangered Species Act, the State Endangered Species Act, or by the CDFG (see Appendix D for status definitions). Species observed on the property during our surveys are designated by the check symbol (✓) in the fourth column.

Common Name	Scientific Name	Special Status	Found on the Property	Habitat Type
Amphibians - 8 species				
Arboreal Salamander	*Aneides lugubris*	None		Oak savanna
Black-bellied Slender Salamander	*Batrachoseps nigriventris*	None		Oak woodlands, moist areas, found under cardboard on the site
Western Toad	*Bufo boreas halophilus*	None	✓	Grassland, woodland
Monterey Ensatina	*Ensatina eschscholzi*	None		Riparian, oak woodlands, grasslands
Pacific Chorus Frog	*Pseudacris regilla*	None	✓	Moist habitats near water
California Red-legged Frog	*Rana aurora draytonii*	FT[1]		Streams, creeks, and ponds
Bullfrog	*Rana catesbeiana*	None	✓	Perennial streams, ponds
Western Spadefoot Toad	*Spea hammondii*	CSC[2]	✓	Grassland habitat with seasonal pools
Reptiles - 12 species				
Southwestern Pond Turtle	*Clemmys marmorata pallida*	CSC		Lakes, ponds, streams

[1] FT = Federally Threatened
[2] CSC = California Special Concern species

Common Name	Scientific Name	Special Status	Found on the Property	Habitat Type
Northern Pacific Rattlesnake	*Crotalus oreganus oreganus*	None		Dry, rocky habitats
Ringneck Snake	*Diadophis punctatus*	None		Woodlands, grasslands, chaparral
California Alligator Lizard	*Elgaria multicarinata multicarinata*	None		Open grassland, woodland, chaparral
Western Skink	*Eumeces skiltonianus*	None		Woodland, grassland, chaparral
California Kingsnake	*Lampropeltis getula californiae*	None		Woodland, grassland, streams
California Striped Racer	*Masticophis lateralis lateralis*	None		Chaparral, brush habitats
Coast Horned Lizard	*Phrynosoma coronatum frontale*	CSC		Dune scrub, alkali scrub, chaparral, grasslands
Gopher Snake	*Pituophis catenifer catenifer*	None	✓	Woodland, grassland
Western Fence Lizard	*Sceloporus occidentalis*	None	✓	Wide range
Valley Garter Snake	*Thamnophis sirtalis fitchii*	None		Many habitats near water
Side-blotched Lizard	*Uta stansburiana*	None	✓	Dry habitats
Birds - 72 species				
Spotted Sandpiper	*Actitis macularia*	None	✓	Shorelines
Red-winged Blackbird	*Agelaius phoeniceus*	None	✓	Marshes, fields
Mallard	*Anas platyrhynchos*	None	✓	Lakes, ponds, streams
American Pipit	*Anthus rubescens*	None		Fields, beaches, etc.
Western Scrub Jay	*Aphelocoma californica*	None	✓	Oak and riparian woodlands
Golden Eagle	*Aquila chrysaetos*	CSC		Open or mountainous areas
Great Egret	*Ardea alba*	None		Water habitats, grasslands
Great Blue Heron	*Ardea herodias*	None		Water habitats, grasslands
Great Horned Owl	*Bubo virginianus*	None		Woodland, grassland
Red-tailed Hawk	*Buteo jamaicensis*	None	✓	Open, semi-open country
Red-shouldered Hawk	*Buteo lineatus*	None		Oak and riparian woodlands
California Quail	*Callipepla californica*	None	✓	Oak-riparian canyons, woodlands
Anna's Hummingbird	*Calypte anna*	None	✓	Oak, riparian woodland, sage scrub
Lesser Goldfinch	*Carduelis psaltria*	None	✓	Riparian, oak woodlands
House Finch	*Carpodacus mexicanus*	None	✓	Wide habitat range

Common Name	Scientific Name	Special Status	Found on the Property	Habitat Type
Purple Finch	*Carpodacus purpureus*	None		Riparian and woodlands
Turkey Vulture	*Cathartes aura*	None	✓	Open country, oak woodlands
Hermit Thrush	*Catharus guttatus*	None		Woodland and brush
Belted kingfisher	*Cerle alcyon*	None		Riparian, lakes and streams
Killdeer	*Charadrius vociferous*	None	✓	Mud flats, stream banks
Lark Sparrow	*Chondestes grammacus*	None	✓	Woodland edges
Northern Flicker	*Colaptes auratus*	None		Woodlands
Western Wood Pewee	*Contopus sordidulus*	None	✓	Riparian woodlands
American Crow	*Corvus brachyrhynchos*	None	✓	Open oak, riparian woodland,
Common Raven	*Corvus corax*	None	✓	Riparian, chaparral and woodlands
Yellow-rumped Warbler	*Dendroica coronata*	None		Woodlands, brush, open country
Townsend's Warbler	*Dendroica townsendii*	None		Riparian, oak woodlands
White-tailed Kite	*Elanus leucurus*	CSC		Nests in dense live oaks
Pacific-slope Flycatcher	*Empidonax difficilis*	None		Riparian, oak woodlands
Horned Lark	*Eremophila alpestris actia*	CSC		Grassland, oak savanna
Brewer's Blackbird	*Euphagus cyanocephalus*	None		Open habitats
American Kestrel	*Falco sparverius*	None	✓	Open, semi-open country
American Coot	*Fulica americana*	None		Aquatic habitats
Common Yellowthroat	*Geothlypis trichas*	None		Marshes, streamsides
Barn Swallow	*Hirundo rustica*	None		Riparian, grasslands, lakes
Bullock's Oriole	*Icterus bullockii*	None		Oak, riparian woodlands
Dark-eyed Junco	*Junco hyemalis*	None		Oak woodland
Loggerhead Shrike	*Lanius ludovicianus*	CSC	✓	Nests in shrubs, trees near open areas
Long-billed Dowitcher	*Limnodromus scolopaceus*	None	✓	Shorelines, wetlands, marshes
Acorn Woodpecker	*Melanerpes formicivorus*	None	✓	Oak woodland
Song Sparrow	*Melospiza melodia*	None		Oak, riparian woodland
Northern Mockingbird	*Mimus polyglottos*	None	✓	Riparian, chaparral and woodlands. Also urban
Western Screech Owl	*Otus kennicottii*	None		Oak woodland

Common Name	Scientific Name	Special Status	Found on the Property	Habitat Type
Oak Titmouse	*Parus inornatus*	None	✓	Woodland, riparian, oak, conifer
House Sparrow	*Passer domesticus*	None	✓	Urban
Savannah Sparrow	*Passerculus sandwichensis*	None		Open habitats, marshes, grasslands
Cliff Swallow	*Petrochelidon pyrrhonota*	None	✓	Urban; open areas near water
Black-headed Grosbeak	*Pheucticus melanocephalus*	None		Woodlands
Yellow-billed Magpie	*Pica nuttalli*	None		Oak savanna
Nuttall's Woodpecker	*Picoides nuttallii*	None	✓	Oak, riparian woodlands
Downy Woodpecker	*Picoides pubescens*	None		Oak, riparian woodlands
Hairy Woodpecker	*Picoides villosus*	None		Riparian and woodlands
California Towhee	*Pipilo crissalis*	None	✓	Brushy habitats
Bushtit	*Psaltriparus minimus*	None		Woodlands, chaparral
Ruby-crowned Kinglet	*Regulus calundula*	None		Oak, riparian woodlands
Black Phoebe	*Sayornis nigricans*	None		Near water
Say's Phoebe	*Sayornis saya*	None		Open country, grassland
Western Bluebird	*Sialia mexicana*	None	✓	Riparian woodland, ranch land
White-breasted Nuthatch	*Sitta carolinensis*	None		Oak savannah, woodland
Western Meadowlark	*Sturnella neglecta*	None	✓	Open habitats, grasslands
European Starling	*Sturnus vulgaris*	None	✓	Agricultural, livestock areas
Tree Swallow	*Tachycineta bicolor*	None	✓	Oak, riparian woodlands, open areas near water
Violet-green Swallow	*Tachycineta thalassina*	None		Oak, riparian woodlands, open areas near water
Bewick's Wren	*Thryomanes bewickii*	None		Riparian woodland, scrub
American Robin	*Turdus migratorius*	None		Streamsides, woodlands
Western Kingbird	*Tyrannus verticalis*	None	✓	Grasslands, savanna
Barn Owl	*Tyto alba*	None	✓	Agricultural, woodlands
Orange-crowned Warbler	*Vermivora celata*	None		Oak, riparian woodlands
Wilson's warbler	*Wilsonia pusilla*	None		Oak, riparian woodlands
Mourning Dove	*Zenaida macroura*	None	✓	Open and semi-open habitats
Golden-crowned Sparrow	*Zonotrichia atricapilla*	None		Dense woodlands, brushy areas
White-crowned Sparrow	*Zonotrichia leucophrys*	None		Oak, riparian woodlands

Common Name	Scientific Name	Special Status	Found on the Property	Habitat Type
Mammals - 21 species				
Coyote	*Canis latrans*	None		Open woodlands, brushy areas, wide ranging.
Opossum	*Didelphis marsupialis*	None		Woodlands, streams
Feral Cat	*Felis catus*	None		Varied
Black-tailed Jackrabbit	*Lepus californicus*	None		Grasslands
Bobcat	*Lynx rufus*	None		Chaparral and woodlands
Striped Skunk	*Mephitis mephitis*	None		Mixed woods, brush, semi-open country
Long-tailed Weasel	*Mustela frenata*	None		Grasslands
California Vole	*Microtus californicus*	None	✓	Wet areas, grassland, meadows
Mule Deer	*Odocoileus hemionus*	None		Many habitats
Deer Mouse	*Peromyscus maniculatus*	None	✓	All dry land habitats
Raccoon	*Procyon lotor*	None		Streams, lakes, rock cliffs, dens in trees
Mountain Lion	*Puma concolor*	None		Mountainous areas
Western Harvest Mouse	*Reithodontomys megalotis*	None		Grassland, dense vegetation near water
California Ground Squirrel	*Spermophilus beecheyi*	None	✓	Grasslands
Wild Boar	*Sus scrofa*			Woodlands
Desert Cottontail	*Sylvilagus audubonii*	None		Brushy areas
American Badger	*Taxidea taxus*	CSC		Open country
Valley Pocket Gopher	*Thomomys bottae*	None	✓	Variety of habitats
Gray Fox	*Urocyon cinereoargenteus*	None		Chaparral
Red Fox	*Vulpes fulva*	None		Forest and open country
San Joaquin Kit Fox	*Vulpes macrotis mutica*	FE[3]		Open grasslands, scrub

[3]FE = Federally Endangered

3.6 Special Status Species

The CNDDB and the CNPS On-line Inventory of Rare and Endangered Plants of California contain records for 27 special status species within the designated search area (Table 5). The search area included all USGS 7.5 minute quadrangles within five miles of the site: Estrella, Paso Robles, Ranchito Canyon, San Miguel, Creston, and Templeton. Eight additional special status species were added to the list from our knowledge of the area. These species are marked with an asterisk (*). Special status plants were not identified on the property during our surveys in 2006. Two special status animals were observed on site. Sensitive natural communities do not occur on the property.

3.6.1 Introduction to CNPS lists

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The listing categories range from species with a low threat (List 4) to species that are presumed extinct (List 1A). The 1056 plants of List 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable. Most of the plants of List 1B have declined significantly over the last three centuries in California. For an explanation of the CNPS listing scheme and CNDDB status codes, see Appendix D.

3.6.2 Introduction to CNDDB definitions

"Special plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status. Special plants include vascular plants and high priority bryophytes (mosses, liverworts, and hornworts).

"Special Animals" is a general term that refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status. These taxa may be listed or proposed for listing under the State and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

Animals listed as California Special Concern (CSC) species are not listed under State or Federal Endangered Species Acts, but are considered rare or declining in abundance. The Special Concern designation is intended to provide the Department of Fish and Game, consulting biologists, land planners and managers with lists of species that require special consideration during the planning process in order to avert continued population declines and potential costly listing under federal and state endangered species laws.

3.6.3 Special status species list

Table 5 lists all 35 special status species known to occur within at least five miles of the project site. Federal and state status, global and state rank, CNPS listing status (plants), and CDFG designation (animals) for each species are given. Typical blooming period, habitat preference, potential habitat on site, whether or not the species was observed on the property, and the effect of the proposed activity are also provided.

TABLE 5. SPECIAL STATUS SPECIES LIST. Thirty-three special status species were determined by our research to occur in the Estrella, Paso Robles, Ranchito Canyon, San Miguel, Creston, and Templeton quadrangles. Seven special status plants and eleven special status animals have the potential to occur on the subject property. Potential impacts are outlined in section 5.0, and mitigation recommendations are provided in section 6.0.

	Common and Scientific Names	Fed/State Status Global/State Rank CNPS List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
	Plants						
1.	**Oval-leaved Snapdragon*** *Antirrhinum ovatum*	None/none G3/S3.2 List 4	May - November	Heavy, adobe-clay soils on gentle, open slopes, also disturbed areas; 200-1000 m. s SnJV, s SCoRI	No. Appropriate soil and habitat types not present on site.	No	Not Significant
2.	**Salinas Milk-Vetch*** *Astragalus macrodon*	None/none G3/S3.3 List 4	April - July	Eroded pale shales or sandstone, or serpentine alluvium; 300-950 m. SCoR	No. Appropriate soil type not present on site.	No	Not Significant
3.	**Indian Valley Spineflower** *Aristocapsa insignis*	None/none G2/S2.2 List 1B.2	May - September	Foothill woodland on sand or gravel substrates; 300-600 m. ScoRI (Monterey, SLO Counties)	Yes. Appropriate soil and habitat type are present on site.	No	Not Significant
4.	**Round-leaved Filaree** *California (=Erodium) macrophyllum*	None/none G3/S3.1 List 1B.1	March - May	Clay soils in cismontane woodland, valley and foothill grassland; 15-1200 m. ScV, n SnJV, CW, SCo, n ChI	Unlikely. Appropriate heavy clay soil does not occur on site.	No	Not Significant
5.	**Dwarf Calycadenia** *Calycadenia villosa*	None/none G2/S2.1 List 1B.1	May - October	Dry, rocky hills, ridges, in chaparral, woodland, meadows and seeps; <1100 m. c&s ScoRO	Yes. Appropriate soil and habitat type are present on site.	No	Not Significant
6.	**Obispo Indian Paintbrush** *Castilleja densiflora* ssp. *obispoensis*	None/none G5T2/S2.2 List 1B.2	April	Coastal grassland, <100 m. Endemic to SLO County.	Unlikely. Typically restricted to coastal grasslands, but recently reported from Paso Robles.	No	Not Significant
7.	**Lemmon's Jewelflower** *Caulanthus coulteri* var. *lemmonii*	None/none G4T2/S2.2 List 1B.2	March – May	Dry, exposed slopes; 80-800 m. sw SnJV, se SnFrB, e ScoRO, ScoRI	Yes. Moderately appropriate habitat and soils are present on site.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank CNPS List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
				Plants			
8.	**Douglas' Spineflower*** *Chorizanthe douglasii*	None/none G3/S3.3 List 4	April - July	Foothill woodland, pine forest, chaparral, sandy or gravelly soils; 200-1600 m. e ScoRO, ScoRI	Yes. Appropriate soil and habitat types are present on site.	No	Not Significant
9.	**Yellow-flowered Eriastrum** *Eriastrum luteum*	None/none G2/S2.2 List 1B.2	May – June	Drying slopes; <1000 m. SCoR Monterey, SLO Counties	Yes. Appropriate habitat is present on site.	No	Not Significant
10.	**Mesa Horkelia** *Horkelia cuneata* ssp. *puberula*	None/none G4T2/S2.1 List 1B.1	February - September	Dry, sandy coastal chaparral; gen 70-700 m. ScoRO, SCo.	No. Appropriate soil and habitat type not present on site.	No	Not Significant
11.	**Kellogg's Horkelia** *Horkelia cuneata* ssp. *sericea*	None/none G4T1/S1.1 List 1B.1	April - September	Old dunes, coastal sand hills; <200 m. CCo	No. Appropriate soil and habitat type not present on site.	No	Not Significant
12.	**Salinas Valley Goldfields*** *Lasthenia leptalea*	None/none G3/S3.3 List 4	April	Open areas in woods, valley and foothill grassland; <500 m. Monterey & SLO Counties	Yes. Appropriate habitat is present on site.	No	Not Significant
13.	**Jared's Peppergrass** *Lepidium jaredii* ssp. *jaredii*	None/none G1T1/S1.2 List 1B.2	March - May	Alkali bottoms, slopes, washes, <500 m. ScoRI, SnJV	No. Appropriate habitat is not present on site.	No	Not Significant
14.	**Santa Lucia Bush Mallow** *Malacothamnus palmeri* var. *palmeri*	None/none G3T2Q/S2.2 List 1B.2	May - July	Chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, ScoRO	No. Appropriate habitat type not present on site.	No	Not Significant
15.	**Mount Diablo Cottonweed** *Micropus amphibolus*	None/none G3/S3.2? List 3.2?	March - May	Bare, grassy, or rocky slopes; 50-800 m. NcoR, SnFrB, s ScoRO	No. Appropriate habitat is not present on site.	No	Not Significant
16.	**Paso Robles Navarretia*** *Navarretia jaredii*	None/none G3S3.3 List 4	April - July	Open, grassy areas, often in clay or serpentine. 200-500 m. ScoRI, SW	No. Appropriate soil and habitat type not present on site.	No	Not Significant
17.	**Shining Navarretia** *Navarretia nigelliformis* ssp. *radians*	None/none G4T1/S1.1 List 1B.2	May - July	Vernal pools, clay depressions, annual grassland; 100-1000 m. ScoRI	Yes. Moderately appropriate habitat is present on site.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank CNPS List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
				Plants			
18.	**Santa Cruz Microseris** *Stebbinsoseris decipiens*	None/None G2/S2.2 List 1B.2	April - May	Open, sandy, shaly, or serpentine sites, on seaward slopes; 10 - 500 m. n&c CCo	No. Appropriate habitat is not present on site.	No	Not Significant
19.	**San Bernardino Aster** *Symphyotrichum defoliatum*	None/none G3/S3.2 List 1B.2	July - November	Vernally mesic grasslands near ditches, streams, springs, or disturbed areas; 2-2040 m.	No. Appropriate soil and habitat type not present on site.	No	Not Significant

Abbreviations:

CCo: Central Coast
SCo: South Coast
SCoR: South Coast Ranges
ScoRO: Outer South Coast Ranges
ScoRI: Inner South Coast Ranges
SnFrB: San Francisco Bay
TR: Transverse Ranges
WTR: Western Transverse Ranges
SnJV: San Joaquin Valley
SLO: San Luis Obispo
SN: Sierra Nevada
SnJt: San Jacinto Mtns
The: Tehachapi Mtn Area
CW: Central West
SW: South West

	Common and Scientific Names	Fed/State Status Global/State Rank DFG Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
				Animals			
20.	**Pallid Bat** *Antrozous pallidus*	None/none G5/S3 CSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Yes. Appropriate roosting areas may be present in oak trees on site.	No	Not Significant
21.	**Golden Eagle*** *Aquila chrysaetos*	None/none G5/S3 CSC	March 1 through August 31	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	Yes Appropriate nesting habitat is present on site.	No	Not Significant
22.	**Burrowing Owl** *Athene cunicularia*	None/none G4/S2 CSC	March 1 through August 31	Burrows in squirrel holes in open habitats with low vegetation.	Yes. Appropriate habitat is present on site.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank DFG Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
				Animals			
23.	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	Threatened/none G3/S2S3 None	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	No. Appropriate aquatic habitat is not present on site.	No	Not Significant
24.	**Southwestern Pond Turtle** *Clemmys marmorata pallida*	None/none G3G4T2T3Q/S2 CSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	Yes. Appropriate aquatic habitat is present in the reservoirs on site.	No	Not Significant
25.	**White-tailed Kite*** *Elanus leucurus*	None/none G5/S3 Fully Protected	March 1 through August 31	Nests in dense tree canopy near open foraging areas	Yes. Moderately appropriate nesting habitat is present on site.	No	Not Significant
26.	**Horned Lark** *Eremophila alpestris actia*	None/none G5T3/S3 CSC	Spring - Summer	Nests on the ground in open habitats. More common in the interior.	Yes. Moderately appropriate nesting habitat is present on site.	No	Not Significant
27.	**Loggerhead Shrike*** *Lanius ludovicianus*	None/none G4/S4 CSC	March 1 through August 31	Open areas with appropriate perches, near shrubby vegetation for nesting.	Yes. Appropriate foraging and nesting habitat is present on site.	Yes	Not Significant with Mitigation
28.	**San Joaquin Pocket Mouse** *Perognathus inornatus inornatus*	None/none G4T2T3/S2S3 None	n/a	Grasslands and blue oak savannahs with friable soil and occasional shrubs. Also chaparral.	Yes. Appropriate habitat may be present on site.	No	Not Significant
29.	**Salinas Pocket Mouse** *Perognathus inornatus psammophilus*	None/none G4T2?/S2? CSC	n/a	Annual grassland and desert shrub in Salinas Valley, with friable soils.	Yes. Appropriate habitat may be present on site.	No	Not Significant
30.	**Atascadero June Beetle** *Polyphylla nubila*	None/none G1/S1 None	n/a	Known only from sand dunes in Atascadero and San Luis Obispo, San Luis Obispo County.	No. Appropriate soil and habitat type not present on site.	No	Not Significant
31.	**California Red-legged Frog** *Rana aurora draytonii*	Threatened/none G4T2T3/S2S3 CSC	January – March	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation.	Yes. Moderately appropriate habitat is present in reservoirs on site.	No	Not Significant
32.	**Western Spadefoot Toad** *Spea hammondii*	None/none G3?/S3? CSC	January – August	Vernal pools in grassland and woodland habitats	Yes. Spadefoot toads breed in reservoirs on site.	Yes	Not Significant With Mitigation

	Common and Scientific Names	Fed/State Status Global/State Rank DFG Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
				Animals			
33.	**American Badger** *Taxidea taxus*	None/none G5/S4 CSC	February – May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	Yes. Appropriate grassland habitat is present on site.	No	Not Significant
34.	**Lompoc Grasshopper** *Trimerotropis occulens*	None/none G1G2/S1S2 None	n/a	Unknown. Known only from Santa Barbara and San Luis Obispo Counties	Unlikely. Thought to be extirpated from the area. Only source of info is a 1909 collection.	No	Not Significant
35.	**San Joaquin Kit Fox** *Vulpes macrotis mutica*	Endangered/ Threatened G4T2T3/S2S3 None	December – July	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose textured sandy soil and prey base.	Yes. Appropriate grassland habitat is present on site.	No	Not Significant With Mitigation

Habitat characteristics are from the Jepson Manual and the CDNNB.
*not listed in the CNDDB or CNPS for the search area, but possible for the location.

3.6.4 *Special status plants that could occur on the property*

The subject property contains soil and habitat types that are suitable for nine special status plants that are known to occur in the area. Special status plants were not documented on the property in 2006. More than 200 acres of the property are currently planted in vineyards and contain no potential to harbor special status plants. Grassland habitat on the property was plowed in the spring of 2006, reducing the habitat quality for supporting special status plants. Dry, gravelly slopes near drainages provide the best habitat on the property for special status plants.

A. **Indian Valley spineflower** (*Aristocapsa insignis*) is a CNPS List 1B.2 species that is endemic to Monterey and San Luis Obispo Counties. The CNDDB contains records of four documented localities for this species; two in Monterey County and two in San Luis Obispo County. The closest occurrence to the subject property is in Indian Valley (the type locality) near the Salinas River, 10.5 miles northwest (CNDDB occurrence #3). Appropriate sandy substrates occur on the subject property for Indian Valley spineflower. Surveys conducted in May, June, and July 2006 did not find this species on site.

B. **Dwarf calycadenia** (*Calycadenia villosa*) is on CNPS List 1B.1. This species is known from dry, rocky hills and gravelly outwashes in Monterey, San Luis Obispo, Santa Barbara, Fresno and Kern Counties. Dwarf calycadenia blooms from May to October. The CNPS considers this species to be seriously endangered. Occurrences in the CNDDB for San Luis Obispo and Monterey Counties include the vicinity of Nacimiento and San Antonio Lakes, north to Jolon, with scattered occurrences in Parkfield, and in La Panza District, east of Santa Margarita. The closest reported occurrence to the subject property is approximately 11.5 miles south, on slopes around the Creston Cemetery (CNDDB #11). Surveys conducted in May, June, and July 2006 did not find dwarf calycadenia on site.

C. **Lemmon's Jewel-flower** (*Caulanthus coulteri* var. *lemmonii*) is a CNPS List 1B.2 subspecies that grows on dry, exposed slopes in the Coast Ranges. Numerous old collection records are from the Paso Robles area. The closest occurrence is 6.5 miles northwest of the subject property, west of Highway 101 (CNDDB #20). Moderately appropriate habitat is present on dry, gravelly slopes on site. Surveys conducted in May, June, and July 2006 did not find Lemmon's jewel-flower on site.

D. **Douglas' spineflower** (*Chorizanthe douglasii*) is a CNPS List 4.3 species known from San Benito, Monterey, and San Luis Obispo Counties. It is considered rare, but found in sufficient numbers and distributed widely enough within its known range that the threat of extinction is low at this time. This spineflower grows in gravelly or sandy substrates in the Santa Margarita area (Hoover #11352, Crampton #6978, etc.), Adelaida (Rose #36265), Nacimiento River (Hardham #4396), Bee Rock (Bacigalupi #7434), and other areas of San Luis Obispo County. A common species in the same genus, *Chorizanthe staticoides*, was identified on gravelly slopes on the property. Douglas' spineflower was not encountered on the property in 2006.

E. **Yellow-flowered Eriastrum** (*Eriastrum luteum*) is a CNPS List 1B.2 species known only from Monterey and San Luis Obispo Counties. It grows on drying slopes less than 1000 meters in elevation, usually on decomposed granite. Locality records indicate this species occurs locally from southeast San Luis Obispo County (Santa Margarita) to western Monterey County (Jolon, Pleyto). Habitat appropriate for this species is generally steep chaparral hillsides. Appropriate soils are present on the subject property; however the conditions of the habitats on the property are not likely to support this species. Surveys conducted in May, June, and July 2006 did not find yellow-flowered eriastrum on site.

F. **Salinas Valley goldfields** (*Lasthenia leptalea*) is a CNPS List 4.3 species endemic to Monterey and San Luis Obispo Counties. It is limited in distribution but abundant enough within its range to be considered not very endangered by CNPS. It occurs in valley and foothill grassland communities and open grassy areas in low-density foothill woodlands. Moderately appropriate habitat is present on the Estrella Vineyard property for this species. No members of the genus *Lasthenia* were identified on the property in 2006.

G. **Shining Navarretia** (*Navarretia nigelliformis* ssp. *radians*) is a CNPS List 1B.2 subspecies known from vernal pools, valley and foothill grassland, and cismontane woodland habitats in Fresno, Merced, Monterey, San Benito, and San Luis Obispo Counties. In the vicinity of the subject property, shining navarretia is reported in the CNDDB from collection records on Camp Roberts (CNDDB occurrence #47, 48), one record from three miles northeast of Geneseo School (CNDDB occurrence #1), a 1957 collection from one mile north of Creston (CNDDB occurrence #2), and a 1907 collection from "Paso Robles" (CNDDB occurrence #4). Althouse and Meade, Inc. verified this species on the Chandler Ranch in 2005 and mapped it on a private parcel along Huerhuero Creek near Golden Hill Road in 2006 (Althouse and Meade, Inc. 2006). The closest reported occurrence is 4.2 miles southwest from the subject property. Appropriate habitat is present on site; however this species was not encountered on the property during floristic surveys conducted in May, June, and July 2006.

3.6.5 Special status animals that could occur on the property

Thirteen special status animals have the potential to occur on the subject property. Wildlife habitat on site is generally poor due to activities associated with vineyard maintenance and periodic plowing of grasslands.

A. **Pallid bat** (*Antrozous pallidus*) is a California Special Concern species. This is a large, long-eared bat occurring throughout the state from deserts to moist forests. *Antrozous pallidus* is primarily a crevice roosting species and selects roosts where they can retreat from view. They frequently occur in oak woodlands where they roost in tree cavities. The undersides of concrete bridges are also commonly used as roosts. These roost types are generally day or night roosts for one or a few bats. Attics may also be used as roosts. Communal wintering or maternity colonies are more common in rock crevices and caves. Pallid bat could occur in

oak tree cavities on the subject property, but was not documented on site during our daytime surveys.

B. **Golden eagle** (*Aquila chrysaetos*) is a California Special Concern species with no state or federal status. Golden eagles are a fully protected under federal law. They require large trees for nesting and open hunting grounds with abundant prey. Moderately appropriate nesting trees are located on the property. Foraging habitat is limited on the property, but is present in the vicinity. Golden eagles were not observed on the property during our site surveys in 2006.

C. **Burrowing owl** (*Athene cunicularia*) is a rare owl that nests underground in abandoned dens, most notably those of the California ground squirrel. It is a locally common resident in open areas of the interior, from Bitterwater Valley to the Carizzo Plains. Less frequent reports are from coastal grasslands. There are no reports in the CNDDB for burrowing owls in the immediate vicinity of the subject property, however appropriate habitat is present, and transient owls could use the property on occasion. Burrowing owls are occasionally seen from late fall through winter in grasslands of eastern Paso Robles. The closest reported occurrences are from Camp Roberts (CNDDB occurrence #258, 725), more than ten miles northwest of the subject property. No signs of burrowing owls were found on the property during our site surveys in 2006.

D. **Southwestern pond turtle** (*Clemmys marmorata pallida*) is a California Special Concern species that inhabits ponds and slow moving streams with adequate pools. Pond turtles will move up seasonal streams during the winter months, and can over-summer in underground burrows during dry years when ponds are empty. The drainages on site do not have appropriate aquatic habitat to support pond turtles. The reservoirs have late season water and an adequate food base for turtles. Pond turtles were not observed in the reservoirs in the spring of 2006, but appropriate habitat is present.

E. **White-tailed kite** (*Elanus leucurus*) is a California Special Concern species that nests in dense woodlands near meadows, marshes, or grasslands. Moderately appropriate nesting habitat is present in oak trees on the property. Foraging habitat is limited on the property, but is present in the vicinity. Kites were not observed on the property during our surveys in 2006.

F. **Horned lark** (*Eremophila alpestris actia*) is a California Special Concern species known from Sonoma County south to San Diego County, as well as east to the foothills of the Sierra Nevada Mountains. It breeds in open, flat habitats with little vegetation, including grasslands, alkali flats, fallow grain fields, and meadows. Horned larks are common in the interior areas of San Luis Obispo County. They are known to make local movements through the seasons, and may not breed in all areas they are observed. Horned larks were not observed on the Estrella Vineyards property in the spring of 2006.

G. **Loggerhead shrike** (*Lanius ludovicianus*) is a California Special Concern species. It requires open areas with appropriate perches for hunting, and shrubby trees or bushes for nesting. One shrike was observed on the property in June 2006, but nesting was not confirmed. The property provides good foraging and nesting habitat for shrikes.

H. **San Joaquin pocket mouse** (*Perognathus inornatus inornatus*) and **Salinas pocket mouse** (*Perognathus inornatus psammophilus)* are California Special Concern subspecies known from the San Miguel area. There are no recent records of San Joaquin pocket mouse in the vicinity of The property. Salinas pocket mouse is known from grasslands and blue oak woodlands on Camp Roberts, west of the subject property. Small mammal trapping was not conducted as part of this study. The disturbed habitats on the property are possible, but unlikely to harbor rare pocket mice.

I. **California red-legged frog** (*Rana aurora draytonii*) is a federally listed threatened species known from sporadic occurrences throughout San Luis Obispo County. It generally requires seasonal pools or streams that hold water until late summer for successful breeding. Bullfrogs and introduced fish are detrimental to its breeding success, and have severely reduced many populations in larger watercourses and perennial ponds. The closest reported occurrence of red-legged frog to the subject property more than 12 miles southwest (CNDDB occurrence #617, 618). Drainages on the property do not have appropriate aquatic habitat to support breeding red-legged frogs. The reservoirs have attracted bullfrogs and could potentially support red-legged frogs.

   California red-legged frog critical habitat, as designated by USFWS in 2006 (Unit SLO-1) is approximately 13 miles east of the subject property.

J. **Western spadefoot toad** (*Spea hammondii*) is a California Special Concern species known from ephemeral pools in open grassland habitats across the interior region of San Luis Obispo County. Spadefoot toads remain underground for most of the year, emerging to breed in seasonal wetland pools during the rainy season. Development of the larvae from egg to metamorphosis can be very quick, depending upon water temperature. Spadefoot toads are known to breed in seasonal pools in the vicinity Highway 46, east of Paso Robles, as well as in the vicinity of the Paso Robles Municipal Airport. Western spadefoot toad tadpoles were documented in the northern reservoir during amphibian surveys on May 28, 2006 (Photo 8). The reservoir has a dirt road around it, and is surrounded by vineyards on three sides. Upland habitat for adult spadefoot toads is extremely limited.

K. **American badger** (*Taxidea taxus*) is a California Special Concern species known from open grassland habitats throughout San Luis Obispo County and elsewhere in California. Appropriate habitat for foraging and denning badgers is found on the subject property. No signs of badgers were observed on the property during our site surveys in 2006.

L. **San Joaquin kit fox** (*Vulpes macrotis mutica*) is a federally listed endangered species and a state listed threatened species. They are known from the Carizzo Plains and Camp Roberts, with transient individuals known to move between the two populations. The grassland habitat on the property is appropriate for kit fox use. This area is considered within the three to one mitigation ratio area (as per the San Luis Obispo County Standard Kit Fox Mitigation Ratios map, which is found at: http://landarch.larc.calpoly.edu/slocounty/images/MapsPDF/KitFox.pdf).

3.6.6 Special status species not expected to occur on the property

The remaining 15 special status species known to occur in the Estrella, Paso Robles, Ranchito Canyon, San Miguel, Creston, and Templeton quadrangles are not expected to occur on the property due to the absence of required soil type, lack of appropriate habitat, or because the project site is substantially outside the known range of the species.

4.0 Discussion

4.1 General Discussion of Property Conditions

More than 200 acres of the 560-acre property are planted in vineyards, with two reservoirs and one maintenance shop supporting the farming operation. The remaining acreage is composed of grasslands and oak woodlands, with ephemeral drainages originating on and passing through the property. The grasslands were tilled in the early spring of 2006 prior to our site surveys. Very little natural habitat remains on the property.

4.2 Regulatory Framework

The California Environmental Quality Act (CEQA) requires the lead agency (in this case, San Luis Obispo County) to determine potential environmental effects of the project. The lead agency must also identify other involved agencies that become responsible or trustee agencies.

All of the plants constituting CNPS List 1B meet the definitions of Sec. 1901, Chapter 10 of the California Native Plant Protection Act (CNPPA) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA (CEQA section 15065).

Rare plants protected under the CNPPA must be fully considered under CEQA (CEQA sections 15380, 15386). Proposed impacts that affect more than 10 percent of a local breeding population generally require mitigation at a minimum 2:1 ratio.

The California Department of Fish and Game (CDFG) recognizes that Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and recommends they be addressed in CEQA projects.

Rare plants and animals protected under the Federal Endangered Species Act (FESA) are protected. The United States Fish and Wildlife Service is the agency that regulates activities affecting federally listed species.

Nesting birds are protected from disturbance by The Migratory Bird Treaty Act of 1918, (as regulated by the United States Fish and Wildlife Service) and by sections 3503, 3503.5, and 3800 of the California Department of Fish and Game code.

Drainages on the property are under the permitting jurisdiction of the U.S. Army Corps of Engineers (Clean Water Act section 404), the California Department of Fish and Game (California code 1603), and the Regional Water Quality Control Board (Clean Water Act section 401). The applicant should demonstrate to the lead agency that all applicable permits have been obtained for work affecting drainages. All work that affects the bed or banks of the drainages, including culverts and bridges, are likely to require USACE, RWQCB, and CDFG authorizations.

5.0 Potential Impacts

Potential impacts to biological resources outlined in this section are based on the Estrella Vineyards Preliminary Grading and Drainage Plan, Tract 2905 map, provided by North Coast Engineering, Inc. The project is clustered in the southwestern property corner, on grassland habitat with adjacent oak woodlands. Access to the development would be on existing roads through the vineyard, which would be widened and paved. Two drainage crossing are required to access the development. Crossing details were not available for review. The following sections address impacts to biological resources that are possible from development within the proposed project areas.

Proposed development on the property could impact common habitats, ephemeral drainages, native oak trees, special status animals, and common wildlife species.

Sections 5.1 through 5.4 address potential impacts to biological resources from development on the 600± acre property. We include in our analysis impacts to both common and special status species, as well as to habitats that are not sensitive. This consideration contributes to understanding cumulative impacts to the environment that may result from the loss of common species and habitat.

5.1 Potential Habitat Impacts

5.1.1 Agrestal

Access roads may result in minor impacts to existing vineyards. Mitigation for impacts to vineyard habitat are not required.

A secondary access from Estrella Road is proposed along the eastern property boundary. The access road would pass through the farm field in the northeastern property corner and connect with existing vineyard roads. The road would permanently remove less than an acre of farmland from use.

5.1.2 *Grassland*

Twenty-four residential lots are proposed in the annual grassland habitat at the southwest corner of the property. The lots range in size from 1.02 acres to 2.24 acres. The project would result in the permanent loss of approximately 40 acres of grassland habitat[4].

5.1.3 *Oak woodland*

The proposed project would not impact oak woodland habitat on the property. Potential impacts to individual oak trees are addressed in section 5.2.

5.1.4 *Aquatic*

The vineyard reservoirs are outside the project area and would not be impacted. Two drainage crossings are proposed over the ephemeral drainage at the south end of the property. Crossing details were not available for review; however crossings at these two locations are likely to require authorization from USACE, RWQCB, and CDFG.

5.2 Potential Impacts to Oak Trees

Blue and valley oak trees occur on the subject property. The County of San Luis Obispo requires mitigation for impacts to oak trees with a diameter at breast height (dbh) of 5 inches or greater to be mitigated. Diameter at breast (dbh) is measured at 4.5 feet from the ground or, if the trunk is split below 4 feet, at the narrowest point below the split. Impacts include any ground disturbance within the critical root zone (CRZ), measured as 1.5 times the diameter of the canopy, or any trimming of branches 4 inches or greater.

Several large oaks are located in the grassland habitat proposed for development. One tree would be entirely encircled by a cul-de-sac accessing Lots 4-9, and would likely be impacted during construction. Building envelopes are not designated in the lots, and trees within lots could be impacted or removed.

5.3 Potential Impacts to Common Wildlife

5.3.1 *Nesting habitat*

Impacts to or take of nesting birds could occur if grading or tree removal/trimming is conducted during nesting season (March 1 through August 31). An occupied red-tailed hawk nest was mapped on the property in 2006 within 300 feet of some of the proposed lots. Take of common nesting birds is prohibited by federal and state code. Impacts to or take of nesting birds can be avoided (see section 6.3.1).

5.3.2 *Reduction of wildlife movement corridors*

Although numerous animal species may occasionally forage on the property, the site is not a significant wildlife movement corridor. The Estrella River that flows past the property on the north side is considered to be a significant wildlife movement corridor, and may facilitate long-range movement of San Joaquin kit fox. Development on the property may alter common wildlife species' patterns of movement across the property, but is not expected to degrade the quality of the Estrella River movement corridor.

[4] Exact acreages shall be calculated from final grading plans.

5.3.3 *Displacement and/or take*

Common wildlife species currently living in the project site or using the site as transients would be permanently displaced from a portion of the property. Take of common species could occur during construction, and as a result of residential use and pets.

5.4 Potential Impacts to Special Status Species

Seven special status plants could potentially occur on the property. Special status plants were not identified on the property during our appropriately timed surveys in 2006. The proposed project is not expected to impact special status plants.

Thirteen special status animals could potentially occur on the property. One special status animal, Western spadefoot toad, was found to be breeding on the property in 2006. Loggerhead shrike was observed on the property, but nesting was not confirmed. Burrowing owl, horned lark, golden eagle, and white-tailed kite could occur on the site but were not observed in 2006. The property is within the known range of San Joaquin kit fox and American badger. California red-legged frog and Southwestern pond turtle could potentially occur in agricultural reservoirs on site. The current farming operation and seasonal tilling of the grassland habitats have severely reduced the potential for special status animals to occur on the property. The potential for project-related impacts to occur to special status animal species can be reduced (see section 6.4).

5.4.1 *San Joaquin and Salinas pocket mice*

San Joaquin and Salinas pocket mice could potentially occur on the property. Occurrence of either species would be very unlikely because of the degraded condition of the habitats from farming and land management strategies such as seasonal tilling of grasslands.

5.4.2 *Special status birds*

Five special status birds have the potential to occur on the property. Appropriate nesting habitat for all five species is present. Disturbance and/or take could occur if any of these species nest in proposed project areas in the future. Impacts to or take of special status bird species can be avoided (see section 6.4.2).

5.4.3 *Special status reptiles and amphibians*

Western spadefoot toads were detected in larval form in the northern reservoir near Estrella Road. Adults were not observed. A second reservoir, to the south, was dry at the time of our surveys, but could potentially attract breeding adult spadefoot toads if water was present. Adult spadefoot toads take refuge in rodent burrows in grassland habitat for the remainder of the year outside the breeding season. The proposed agricultural subdivision project is proposed on disturbed grassland habitat at the far south end of the property, over 3000 feet from the documented breeding site. The project would not impact spadefoot toad breeding sites. Construction activities associated with the access roads could result in take of aestivating spadefoot toads during the dry season. Construction of the access roads during the rainy season could result in take of spadefoot toads moving to the reservoir to breed.

California red-legged frog was not observed on the property and would be very unlikely to occur. The proposed project is not expected to impact California red-legged frog.

Southwestern pond turtle was not observed on the property and is not expected to occur. The proposed project would not impact Southwestern pond turtle.

5.4.4 American badger

Badgers were not occupying habitat on the property during the 2006 spring season. Development on the property would permanently remove potential badger habitat. Indirect impacts to badgers include the loss of potential foraging and denning habitat. Direct impacts could occur if a badger takes up residence on the site. The loss of grassland habitat usable by badgers is not a significant impact, although the cumulative loss of habitat in the region has negatively affected badger populations in the area.

5.4.5 San Joaquin kit fox

The project site is within the known range of San Joaquin kit fox. Development on the property will permanently remove approximately 40 acres of San Joaquin kit fox habitat. Loss of habitat for San Joaquin kit fox must be mitigated.

6.0 Mitigation Recommendations

We recommend the following biological resource (BR) mitigation measures to reduce project impacts to a less than significant level.

6.1 Habitat Mitigations

6.1.1 Grassland

Annual grassland habitat in the Paso Robles region is considered potential habitat for the federally endangered San Joaquin kit fox. Loss or permanent degradation of grassland habitat in this area is a significant but mitigable impact (see section 6.4.4). The subject property is within the three-to-one mitigation ratio area (acres replaced per acres impacted).

6.1.2 Aquatic

Culverts or bridges in ephemeral drainages would require permits from the Army Corps of Engineers, California Department of Fish and Game, and certification from the Regional Water Quality Control Board. A wetland determination should be made at each of the crossing sites.

6.2 Oak Tree Mitigations

If project construction requires impacts or removal of native oak trees, the following mitigation recommendations shall be implemented.

BR-1. **Prior to issuance of grading permits,** oak tree canopies and trunks within 50 feet of proposed disturbance zones shall be mapped and numbered by a qualified biologist or arborist and a licensed land surveyor. Data collected for each tree

shall include diameter at breast height (4.5 feet) of each stem/trunk, canopy diameter, tree height, tree health, and habitat notes (cavities for birds or bats), raptor nests, wood rat nests, and unique features.

BR-2. **An oak tree protection plan shall be prepared** for the project and approved by the County.

BR-3. **Impacts to the oak canopies or root zones shall be avoided where practicable.** Impacts include any ground disturbance within 1.5 times the diameter of the canopy drip-line.

BR-4. **Impacts to oaks shall be mitigated by planting additional oaks on site.** Oaks removed shall be replaced in kind at a 4:1 ratio. Oaks impacted shall be replaced in kind at a 2:1 ratio. Replacement trees shall be one-gallon oaks, of local origin, and of the same species as was impacted. Replacement trees shall be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least seven years.

6.3 Common Wildlife Mitigations

6.3.1 Nesting habitat

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-5. **Within one week of ground disturbance or tree removal/trimming activities,** if work occurs between March 1 and August 31, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands shall not be conducted during the breeding season from March 1 to August 31. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. Construction activities shall observe a 300-foot buffer for active raptor nests. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements.

6.3.2 Reduction of wildlife movement corridors

Impacts to significant wildlife movement corridors are not anticipated from the proposed project; therefore no mitigation is recommended.

6.3.3 *Displacement and/or take*

Wildlife expected to occur on the property includes common species such as gray fox, mule deer, coyote, bobcat, striped skunk, and several species of rodents. Mitigations for impacts to common wildlife species are usually not required.

6.4 Mitigations for Special Status Species

6.4.1 *Western spadefoot toad*

Spadefoot toads were documented breeding on the property. They are active during the rainy season, particularly at night. Aestivation occurs in grasslands adjacent to breeding sites.

BR-6. The project shall not conduct work after sunset.

BR-7. Construction activities shall be limited to days without significant rainfall.

BR-8. Work shall not be conducted that would affect standing water in any reservoirs, drainages, or pools on the property, from January through May.

BR-9. A biological monitor shall be present during all primary grading conducted on the access roads within 1000 feet of the northern reservoir.

6.4.2 *Special status birds*

In order to reduce the potential for disturbance of nests of special status birds, the applicant shall implement BR-5 one week before ground-breaking activities if work would be conducted between March 1 and August 31.

6.4.3 *American badger*

American badger could occur on the property. Development on the property will result in a net loss of badger habitat. Mitigation is not required for loss of badger habitat. To ensure take of live badgers does not occur, the following mitigation recommendation shall be implemented:

BR-10. A pre-construction survey shall be conducted within thirty days of beginning work on the project to identify if badgers are using the site. The results of the survey shall be sent to the project manager, CDFG, and the County of San Luis Obispo.

If the pre-construction survey finds potential badger dens, they shall be inspected to determine whether they are occupied. The survey shall cover the entire property, and shall examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope shall be used to examine the den to the end. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows

during construction activity, no grading shall occur within 100 feet of active badger dens between February and July. Between July 1 and February 1 all potential badger dens shall be inspected to determine if badgers are present. During the winter badgers do not truly hibernate, but are inactive and asleep in their dens for several days at a time. Because they can be torpid during the winter, they are vulnerable to disturbances that may collapse their dens before they rouse and emerge. Therefore, surveys shall be conducted for badger dens throughout the year. If badger dens are found on the property during the pre-construction survey, the CDFG wildlife biologist for the area shall be contacted to review current allowable management practices.

6.4.4 San Joaquin kit fox

San Joaquin kit fox could occur on the property. Development on the property would result in a net loss of kit fox habitat. The following mitigation recommendations are designed to reduce the potential for direct impacts to kit fox to a less than significant level.

BR-11. Prior to issuance of grading and/or construction permit(s), the applicant shall submit evidence to the County of San Luis Obispo (County) that states that one or a combination of the following four San Joaquin kit fox mitigation measures has been implemented:

i. Provide for the protection in perpetuity, through acquisition of a fee or a conservation easement of suitable habitat in the kit fox corridor area (e.g. within the San Luis Obispo County kit fox habitat area, northwest of Highway 58), either on-site or off-site, and provide for a non-wasting endowment to provide for management and monitoring of the property in perpetuity. Lands to be conserved shall be subject to the review and approval of the California Department of Fish and Game (CDFG) and the County.

   Mitigation alternative (i) requires that all aspects of this program must be in place before County permit issuance or initiation of any ground disturbing activities.

ii. Deposit funds into an approved in-lieu fee program, which would provide for both the protection in perpetuity of suitable habitat in the kit fox corridor area within San Luis Obispo County and a non-wasting endowment for management and monitoring of the property in perpetuity.

   Mitigation alternative (ii) can be completed by providing funds to The Nature Conservancy (TNC) pursuant to the Voluntary Fee-Based Compensatory Mitigation Program (Program). The Program was established in an agreement between CDFG and TNC to preserve San Joaquin kit fox habitat and to provide a voluntary mitigation alternative to project proponents who must mitigate the impacts of projects in accordance with CEQA. A fee would be charged per acre. This fee must be paid after

CDFG provides written notification about your mitigation options but prior to City permit issuance and initiation of any ground disturbing activities.

iii. Purchase the appropriate number of mitigation credits, as determined by the San Joaquin habitat evaluation form and reviewed by CDFG. The credits would be obtained from a CDFG-approved conservation bank, which would provide for the protection in perpetuity of suitable habitat within the kit fox corridor area and provide for a non-wasting endowment for management and monitoring of the property in perpetuity.

At this time, there is an approved conservation bank in San Luis Obispo County. The Palo Prieto Conservation Bank is expected to be operational in the near future. Purchase of credits must be completed prior to County permit issuance and initiation of any ground disturbing activities.

iv. If none of the above measures (i, ii, or iii) are available, the applicant may enter into a Mitigation Agreement with CDFG, including depositing funds into an escrow account (or other means of securing funds acceptable to the CDFG) which would ensure the protection in perpetuity of the appropriate number of mitigation acres as determined by use of the San Joaquin kit fox habitat evaluation form and review by CDFG of suitable habitat within the kit fox corridor area and provide for a non-wasting endowment for management and monitoring in perpetuity. CDFG can provide a draft agreement to review; a signed Mitigation Agreement shall be submitted prior to County permit issuance and initiation of any ground disturbing activities.

BR-12. Prior to issuance of grading and/or construction permits, the applicant shall provide evidence that they have retained a qualified biologist acceptable to the County. The retained biologist shall perform the following monitoring activities:

i. **Prior to issuance of grading and/or construction permits and within 30 days prior to initiation of site disturbance and/or construction,** the biologist shall conduct a pre-activity (i.e. pre-construction) survey for known or potential kit fox dens and submit a letter to the County reporting the date the survey was conducted, the survey protocol, survey results, and what measures were necessary (and completed), as applicable, to address any kit fox activity within the project limits.

ii. **The qualified biologist shall conduct weekly site visits during site-disturbance activities** (i.e. grading, disking, excavation, stock piling of dirt or gravel, etc.) that proceed longer than 14 days, for the purpose of monitoring compliance with required Mitigation Measures BR-11 through BR-21. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends monitoring for some other reason (see BR-12iii). When weekly monitoring is required, the biologist shall submit weekly monitoring reports to the County.

iii. **Prior to or during project activities,** if any observations are made of San Joaquin Kit fox, or any known or potential San Joaquin kit fox dens are discovered within the project limits, the qualified biologist shall re-assess the probability of incidental take (e.g. harm or death) to kit fox. At the time a den is discovered, the qualified biologist shall contact USFWS and the CDFG for guidance on possible additional kit fox protection measures to implement and whether or not a Federal and/or State incidental take permit is needed. If a potential den is encountered during construction, work shall stop until such time the USFWS determines it is appropriate to resume work.

If incidental take of kit fox during project activities is possible, **before project activities commence,** the applicant must consult with the USFWS. The results of this consultation may require the applicant to obtain a Federal and/or State permit for incidental take during project activities. The applicant should be aware that the presence of kit foxes or known or potential kit fox dens at the project site could result in further delays of project activities.

iv. **In addition,** the qualified biologist shall implement the following measures:

1. **Within 30 days prior to initiation of site disturbance and/or construction**, fenced exclusion zones shall be established around all known and potential kit fox dens. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord, or survey laths or wooden stakes prominently flagged with survey ribbon. Each exclusion zone shall be roughly circular in configuration with a radius of the following distance measured outward from the den or burrow entrances:
   - Potential kit fox den: 50 feet
   - Known or active kit fox den: 100 feet
   - Kit fox pupping den: 150 feet
2. All foot and vehicle traffic, as well as all construction activities, including storage of supplies and equipment, shall remain outside of exclusion zones. Exclusion zones shall be maintained until all project-related disturbances have been terminated, and then shall be removed.
3. If kit foxes or known or potential kit fox dens are found on site, daily monitoring by a qualified biologist shall be required during ground disturbing activities.

Monitoring: Required prior to issuance of a grading and/or construction permit. Compliance will be verified by the County Planning Division.

BR-13. Prior to issuance of grading and/or construction permits, the applicant shall clearly delineate the following as a note on the project plans: "*Speed signs of 25 mph (or lower) shall be posted for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox*". Speed limit signs shall be installed on the project site **within 30 days prior to initiation of site disturbance and/or construction.**

BR-14. During the site disturbance and/or construction phase, grading and construction activities after dusk shall be prohibited unless coordinated through the County, during which additional kit fox mitigation measures may be required.

BR-15. Prior to issuance of grading and/or construction permit and within 30 days prior to initiation of site disturbance and/or construction, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid or reduce impacts on sensitive biological resources (i.e. San Joaquin kit fox). At a minimum, as the program relates to the kit fox, the training shall include the kit fox's life history, all mitigation measures specified by the County, as well as any related biological report(s) prepared for the project. The applicant shall notify the County shortly prior to this meeting. A kit fox fact sheet shall also be developed prior to the training program, and distributed at the training program to all contractors, employers and other personnel involved with the construction of the project.

BR-16. During the site-disturbance and/or construction phase, to prevent entrapment of the San Joaquin kit fox, all excavations, steep-walled holes and trenches in excess of two feet in depth shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Trenches shall also be inspected for entrapped kit fox each morning prior to onset of field activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped kit fox. Any kit fox so discovered shall be allowed to escape before field activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.

BR-17. During the site-disturbance and/or construction phase, any pipes, culverts, or similar structures with a diameter of four inches or greater, stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved. If necessary, the pipe may be moved only once to remove it from the path of activity, until the kit fox has escaped.

BR-18. During the site-disturbance and/or construction phase, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of only in closed containers. These containers shall be regularly removed from the site. Food items may attract San Joaquin kit foxes onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

BR-19. Prior to, during and after the site-disturbance and/or construction phase, use of pesticides or herbicides shall be in compliance with all local, State and Federal regulations. This is necessary to minimize the probability of primary or secondary poisoning of endangered species utilizing adjacent habitats, and the depletion of prey upon which San Joaquin kit foxes depend.

BR-20. During the site-disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures a San Joaquin kit fox or who finds any such animal either dead, injured, or entrapped shall be required to report the incident immediately to the applicant and County. In the event that any observations are made of injured or dead kit fox, the applicant shall immediately notify the USFWS and CDFG by telephone. In addition, formal notification shall be provided in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured shall be turned over immediately to CDFG for care, analysis, or disposition.

BR-21. Prior to final inspection, or occupancy, whichever comes first, should any long internal or perimeter fencing be proposed or installed, the applicant shall do the following to provide for kit fox passage:

i. If a wire strand/pole design is used, the lowest strand shall be no closer to the ground than 12 inches.
ii. If a more solid wire mesh fence is used, 8" x 12" openings near the ground shall be provided every 100 yards
iii. Upon fence installation, the applicant shall notify the County to verify proper installation. Any fencing constructed after issuance of a final permit shall follow the above guidelines

Monitoring (San Joaquin Kit Fox Measures BR-11 to BR-21): Compliance will be verified by the County of San Luis Obispo in consultation with the California Department of Fish and Game. As applicable, each of these measures shall be included on construction plans.

7.0 References

Althouse and Meade, Inc. December 2006. Biological Report for an Outdoor Recreational Resort, APN 025-431-037, -038, -039, Golden Hill Road, City of El Paso de Robles, California.

California Natural Diversity Database (CNDDB) Rarefind. 2006. The California Department of Fish and Game Natural Diversity Data Base, version 3.0.5. December 30, 2006 data.

California Native Plant Society (CNPS). 2006. Inventory of Rare and Endangered Plants (online edition, v6-05c). California Native Plant Society. Sacramento, CA. http://www.cnps.org/inventory

Consortium of California Herbaria web site. 2006. Regents of the University of California. Updated March 17, 2006.

Douglas Wood & Associates, Inc. 2000. Chandler Ranch Master Plan, Draft Environmental Impact Report. State Clearinghouse No. 1999061008. June.

Hickman, James C. 1993. The Jepson Manual. University of California Press, Berkeley and Los Angeles, California.

Holland, V.L. and David J. Keil. 1995. California Vegetation. Kendall/Hunt Publishing Company, Dubuque, Iowa.

Hoover, Robert F. 1970. The Vascular Plants of San Luis Obispo County, California. University of California Press. Berkeley, Los Angeles, and London.

Sawyer, John O. and Todd Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento, California.

Sibley, David Allen. 2001. The Sibley Guide to Bird Life & Behavior. National Audubon Society. Alfred A. Knopf, New York.

SMASCH Project. 2002. Specimen Management System for California Herbaria. http://www.mip.berkeley.edu/www_apps/smasch/

Stebbins, Robert C. 2003. A Field Guide to Western Reptiles and Amphibians, 3rd edition. Houghton Mifflin Company, Boston, New York.

United States Department of Agriculture, National Cooperative Soil Survey. 1983. Soil Survey of San Luis Obispo County, California, Paso Robles Area.

APPENDIX A – Site Maps

- **Estrella Vineyards Preliminary Grading and Drainage Plan, Tract 2905**
- **Estrella Vineyards Lot Exhibit with Biological Constraints**

NCE

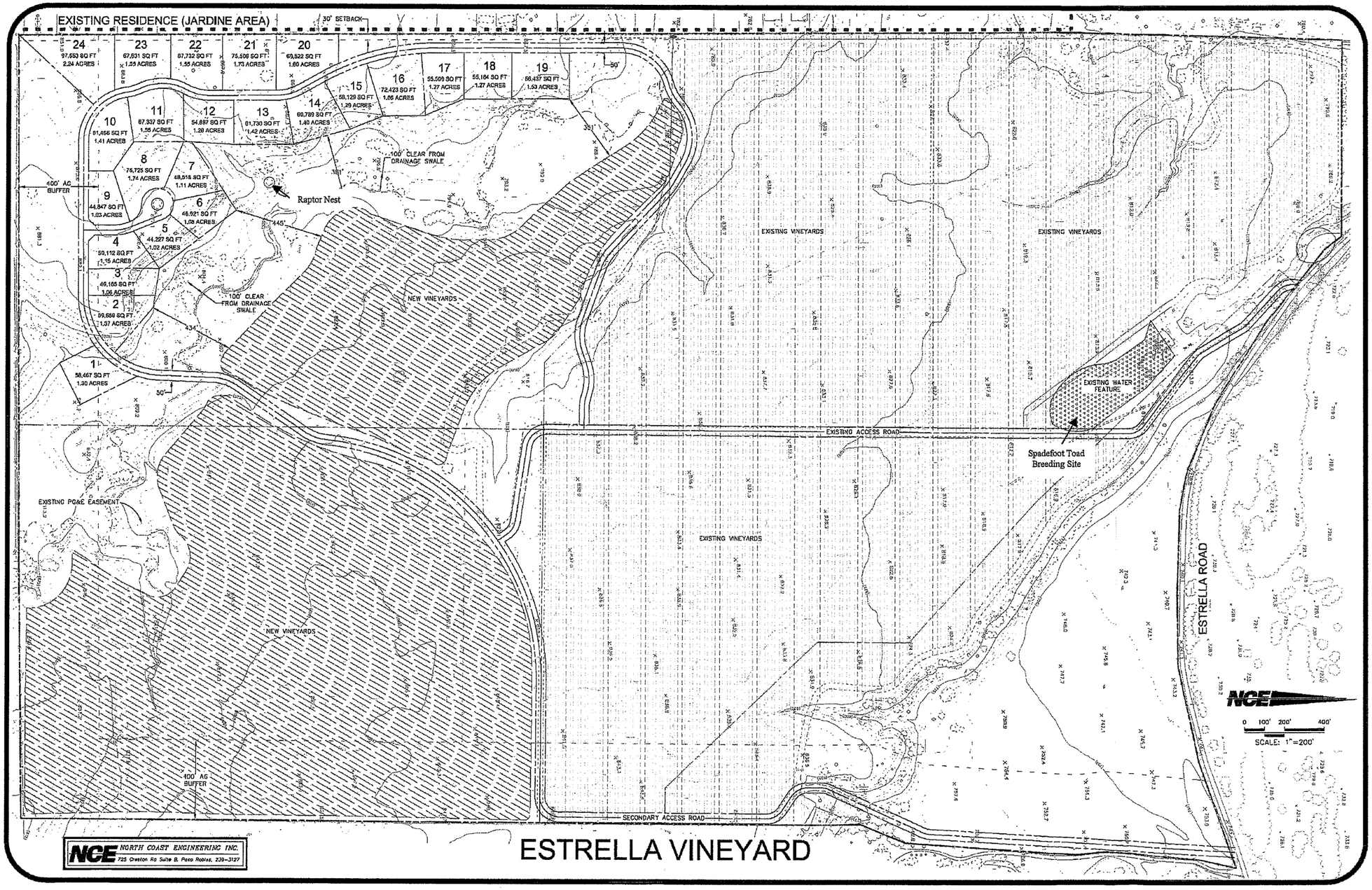
0 150' 300' 600'

SCALE: 1"=300'

ESTRELLA VINEYARDS
PRELIMINARY GRADING & DRAINAGE
TRACT 2905

NCE NORTH COAST ENGINEERING INC.
725 Creston Rd Suite B, Paso Robles, 239-3127

NORTH COAST ENGINEERING INC. copyright © 2005



NORTH COAST ENGINEERING INC. copyright © 2006

APPENDIX B – Figures

- **Figure 1. Location Map**
- **Figure 2. USGS Topographic Map**
- **Figure 3. USDA Soils Map**
- **Figure 4. Aerial Photograph**
- **Figure 5. CNDDB GIS Map**

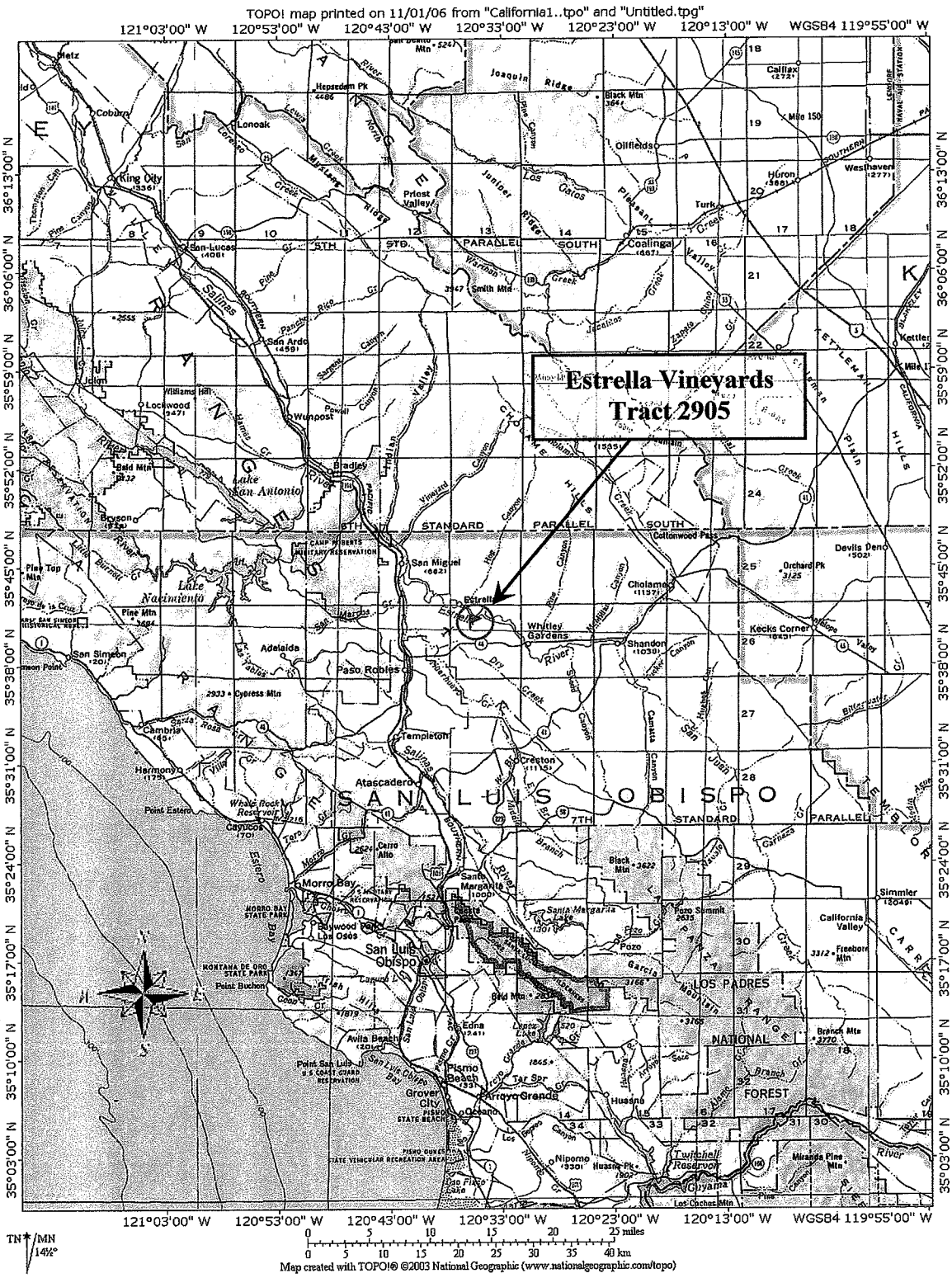


FIGURE 1. LOCATION MAP. The subject property (red circle) is located northeast of the City of Paso Roble, in the Estrella USGS 7.5 minute quadrangle.

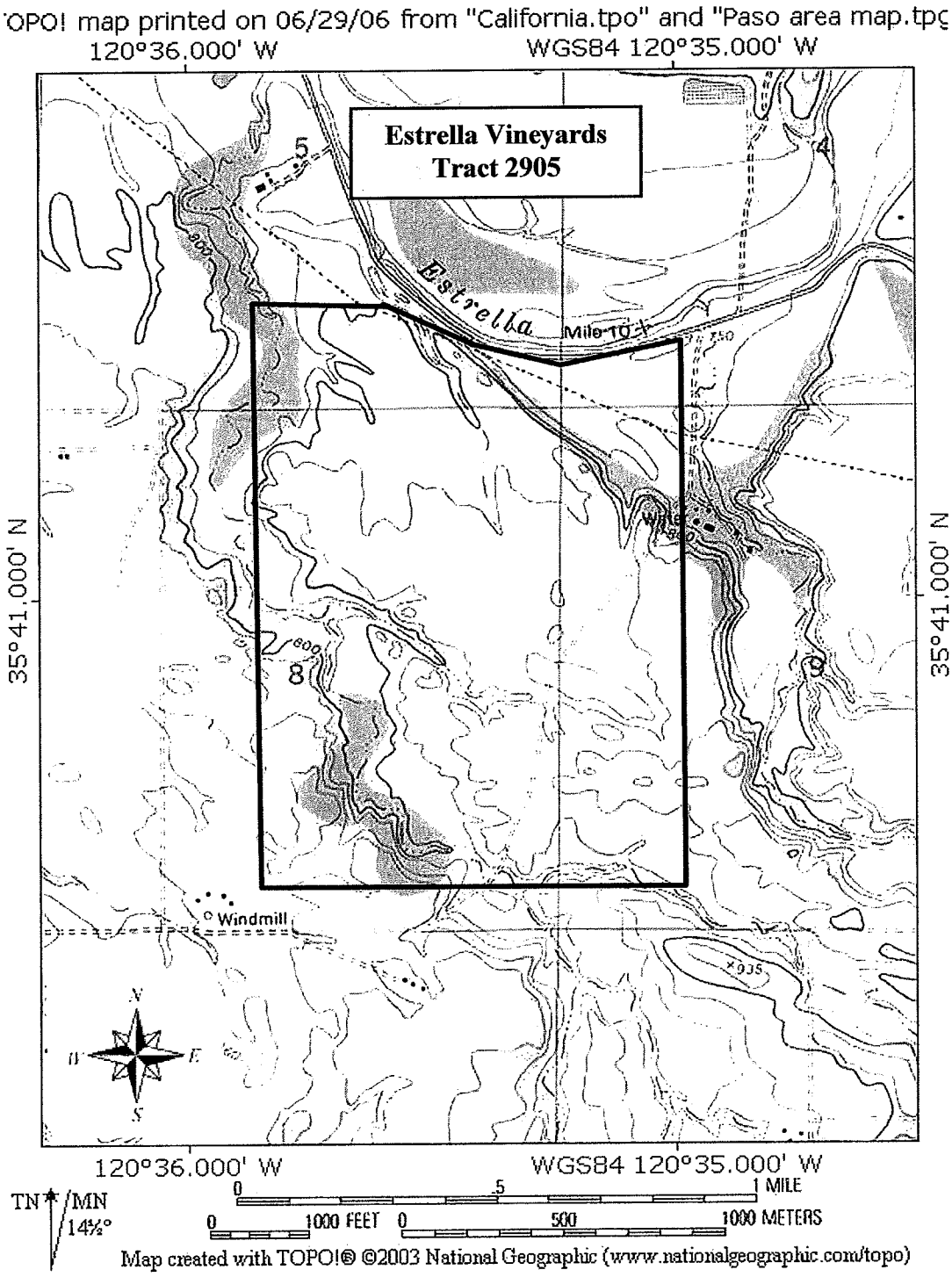


FIGURE 2. USGS TOPOGRAPHIC MAP. The 560-acre property is located on Estrella Road in the Estrella USGS topographic quadrangle. The approximate property boundaries are shown in black.

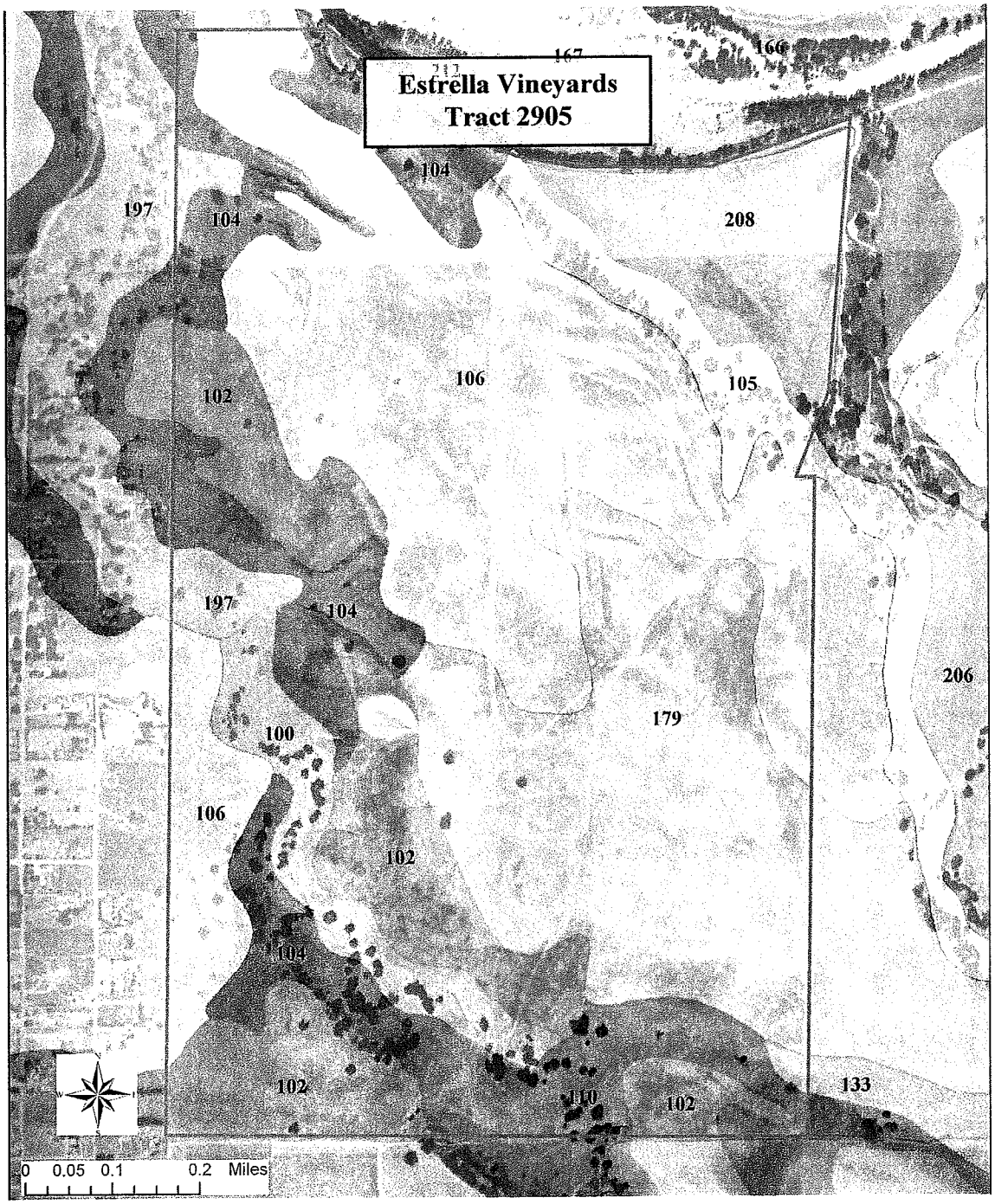


FIGURE 3. USDA SOILS MAP. The approximate property boundaries of the subject property are outlined in red on the USDA Soil Survey of San Luis Obispo County, California, Paso Robles (1983) map. Nine soil types occur on the property: Arbuckle fine sandy loam, 0 to 2 percent slopes (100), Arbuckle-Positas complex, 0 to 2 percent slopes (102), Arbuckle-Positas complex, 30 to 50 percent slopes (104), Arbuckle-Positas complex, 50 to 75 percent slopes (105), Arbuckle-San Ysidro complex, 2 to 9 percent slopes (106), Ayer and Diablo soils, 15 to 30 percent (110), Nacimiento-Los Osos complex, 9 to 30 percent slopes (179), San Ysidro loam, 0 to 2 percent slopes (197), and Still clay loam, 0 to 2 percent (208).

FIGURE 4. 1993 AERIAL PHOTOGRAPH. Approximate property boundaries are shown in red on an aerial photograph of the site. The proposed development area is indicated by the arrow.

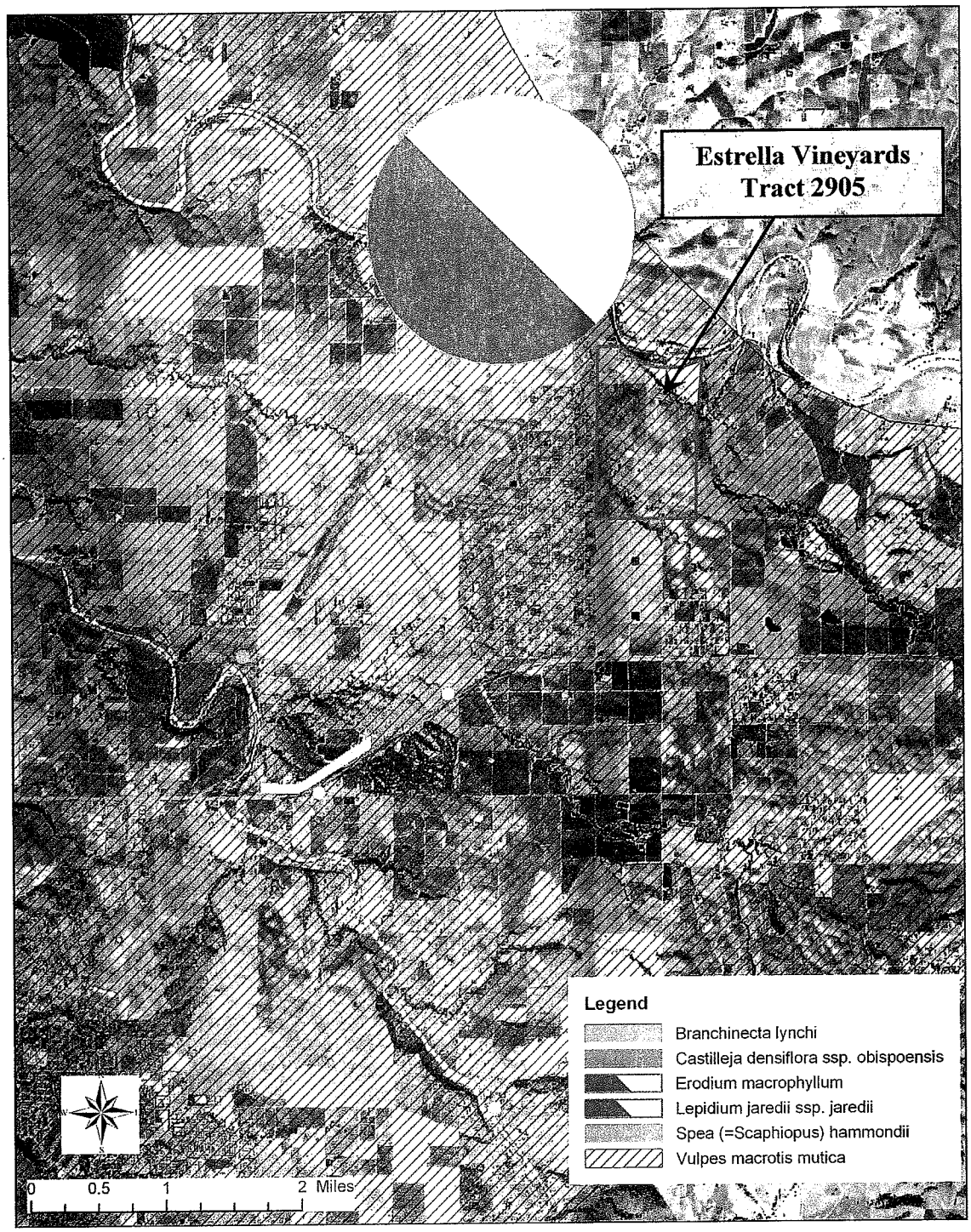


FIGURE 5. CNDDB GIS DATA. Polygons are shown for all special status species with locality data in the California Natural Diversity Database in the vicinity of the property. The approximate property boundaries are shown in red.

APPENDIX C – Photographs

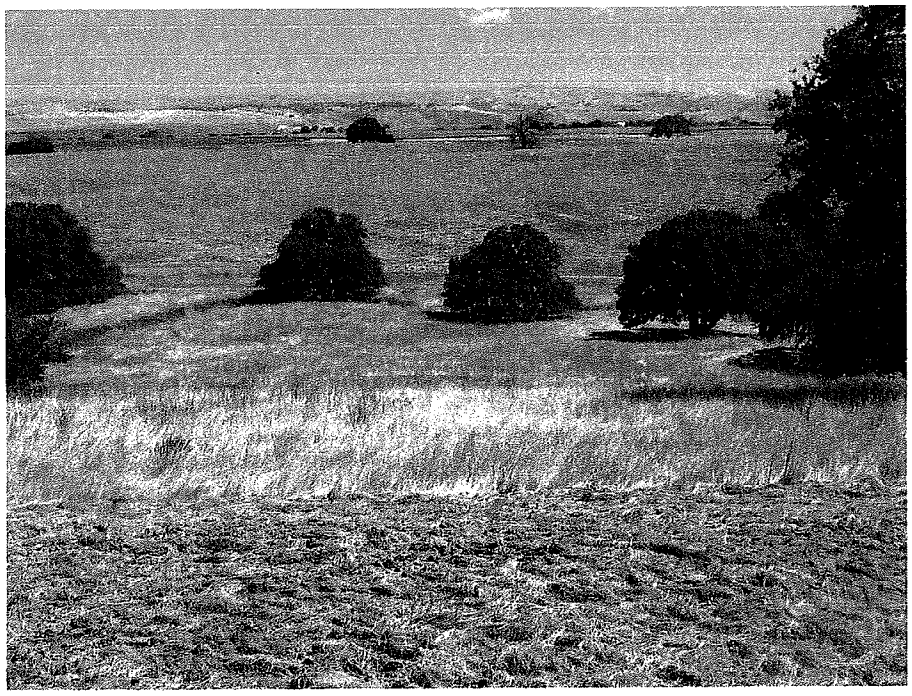


Photo 1. View north from the proposed development area of tilled fields being prepared for additional vineyard installations.

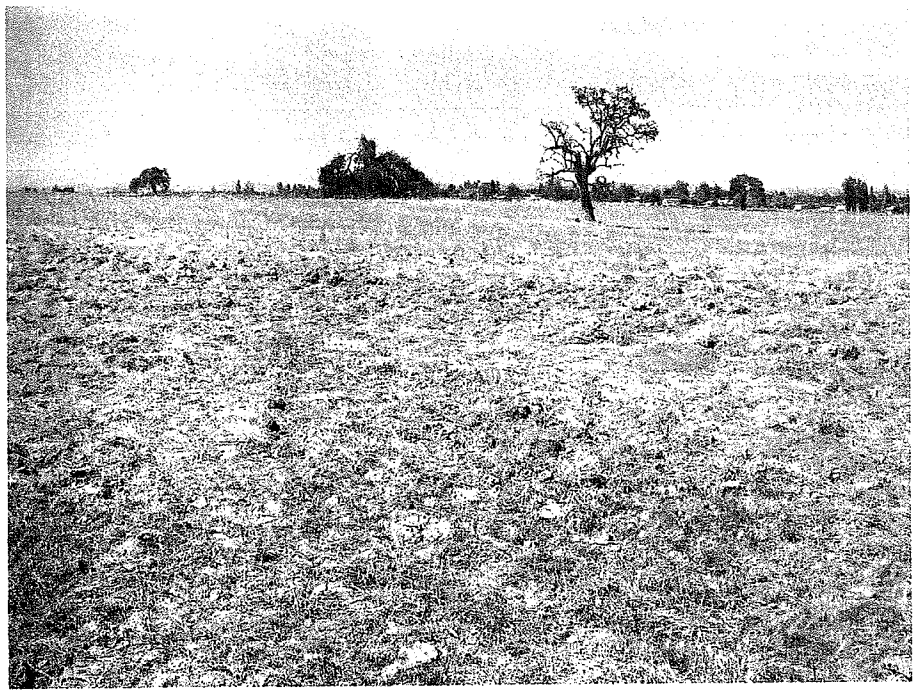


Photo 2. The proposed development area was tilled in the spring of 2006, prior to biological surveys. Several isolated trees remain in the grassland habitat.

Photo 3. View north of the farm field in the northeast property corner. A secondary access road would pass through the eastern edge of the farm field.

Photo 4. The ephemeral drainage at the south end of the property supports an intermittent oak canopy and ephemeral surface flows.

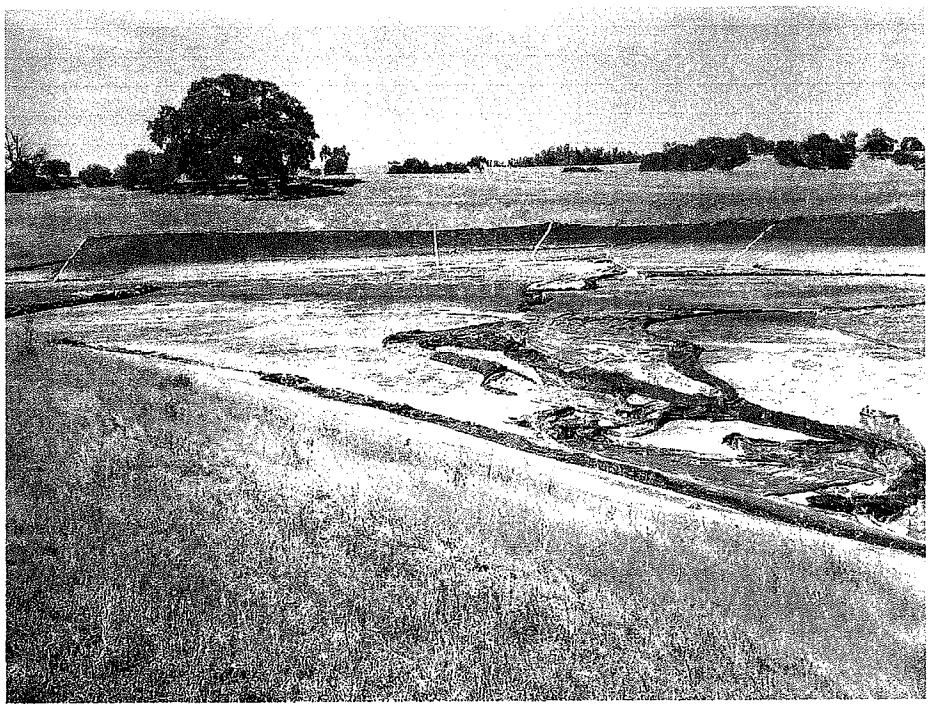


Photo 5. A large reservoir in the center of the property is in disrepair and did not hold water during our spring 2006 surveys.

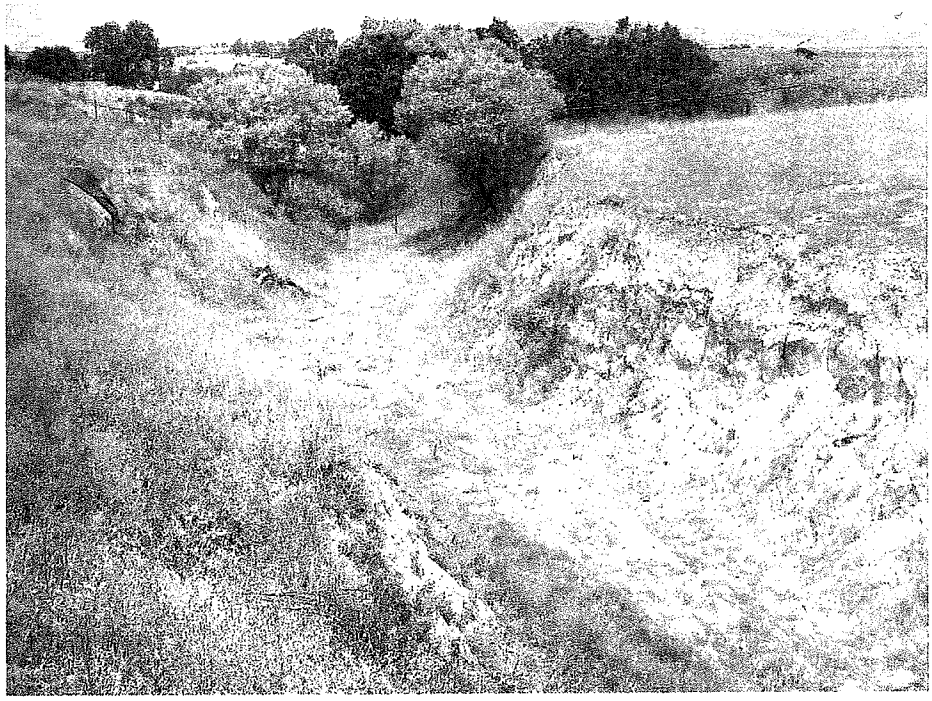


Photo 6. A steep-walled ephemeral drainage originates at the northern reservoir and flows through the property, beneath Estrella Road, to Estrella River.

Photo 7. The northern reservoir held water at least until the end of July 2006. Western spadefoot toads breed in the reservoir.

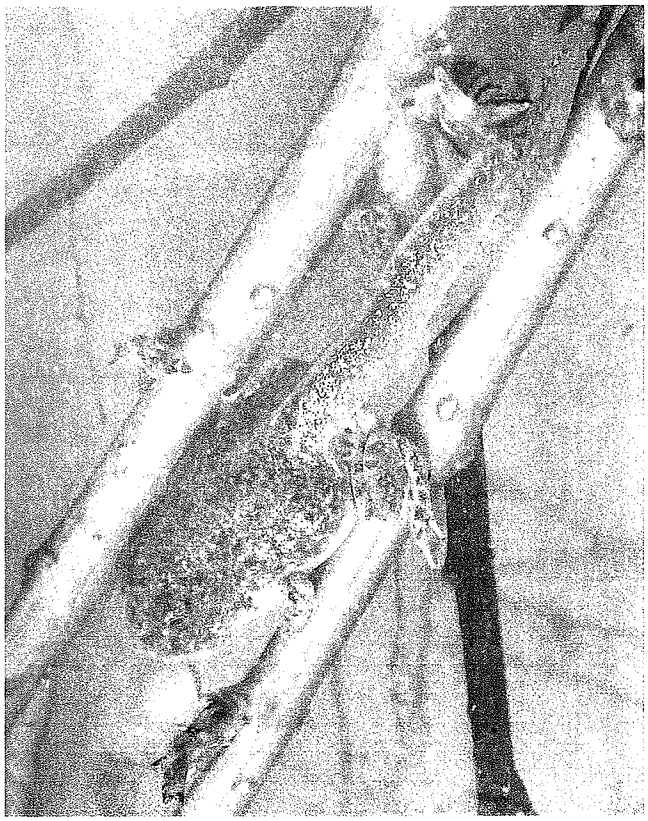


Photo 8. Western spadefoot toad (*Spea hammondii*) metamorph in the northern reservoir on the Estrella Vineyard property. Photo taken May 28, 2006.

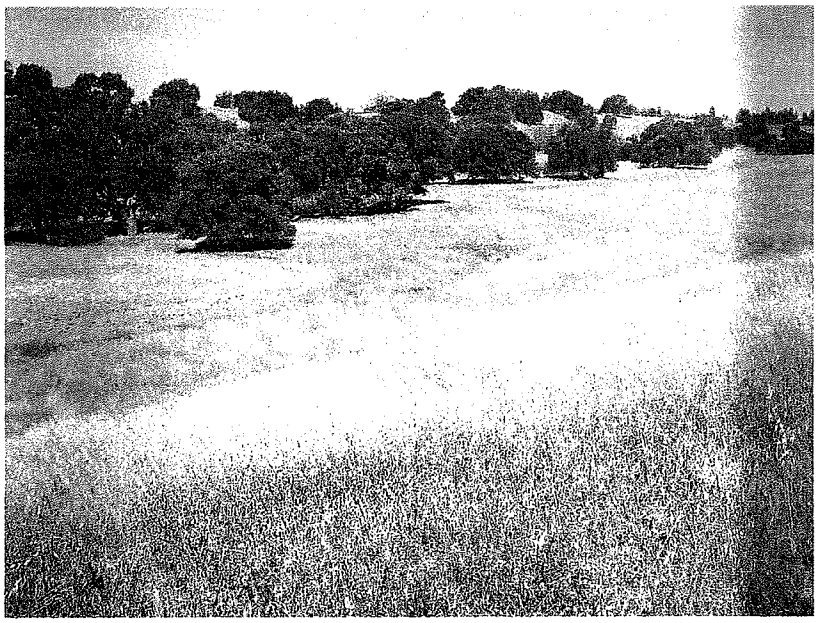


Photo 9. View southwest of oak woodland habitat along the ephemeral drainage at the south end of the property.

APPENDIX D – Status Codes

Status Codes

Element Ranking

NDDB Codes

Each plant or animal (element) is given a number based on its taxonomy and accession into the natural diversity database (NDDB).

Global Ranking

G1 = Less than 6 viable element occurrences (EO's), OR less than 1,000 individuals, OR less than 2,000 acres

G2 = 6-20 EO's OR 1,000-3,000 individuals OR 2,000-10,000 acres.

G3 = 21-100 EO's OR 3,000-10,000 individuals OR 10,000-50,000 acres.

G4 = Apparently secure. This rank is clearly lower than G3 but 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. NO THREAT RANK.

State Ranking

(Same as Global ranking, plus threat designation attached to the S-rank)

S1 = Less than 6 viable element occurrences (EO's), OR less than 1,000 individuals, OR less than 2,000 acres.

- S1.1 = very threatened
- S1.2 = threatened
- S1.3 = no current threats known

S2 = 6-20 EO's OR 1,000-3,000 individuals OR 2,000-10,000 acres.

- S2.1 = very threatened
- S2.2 = threatened
- S2.3 = no current threats known

S3 = 21-100 EO's OR 3,000-10,000 individuals OR 10,000-50,000 acres.

- 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= Population or stand demonstrably secure to ineradicable in California. NO THREAT RANK.

Note: By adding a question mark to the rank: e.g., S2? This represents more certainty than S2S3, but less than S2.

California Native Plant Society's (CNPS) Lists and R-E-D Code (Rarity, Endangerment, Distribution)

The CNPS Ranking Working Group was formed to review the ranking system in the CNPS *Inventory of Rare and Endangered Plants* (*Inventory*) and discuss needed modifications. This group decided to discontinue the use of the R-E-D (Rarity-Endangerment-Distribution) Code and to instead convey this information in a clearer way through modifying the CNPS List and including other information in the *Inventory*. This decision and the associated modifications were approved by the CNPS Board of Directors at their August 2005 meeting.

A new Threat Code extension has been added following the CNPS List (e.g. 1B.1, 2.2 etc.). This extension replaces the E (Endangerment) value from the R-E-D Code. The main difference is that the number coding is now reversed to reduce confusion and represent this information in parallel with the threat rankings that the California Natural Diversity Database (CNDDB) uses. Therefore the logic is reversed so that the lower the number, the higher the corresponding threat level.

CNPS Lists

1A = Presumed extinct in California.
1B = Rare or Endangered in California and elsewhere.
2 = Rare or Endangered in California, more common elsewhere.
3 = Plants for which we need more information (Review list).
4 = Plants of limited distribution (Watch list).

New Threat Code extensions and their meanings:

.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 or no current threats known)

R-E-D Code (Discontinued)

R (Rarity)
1 Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
2 Distributed in a limited number of occurrences, occasionally more if each occurrence is small.
3 Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.

E (Endangerment)
1 Not endangered.
2 Endangered in a portion of its range.
3 Endangered throughout its range.

D (Distribution)
1 More or less widespread outside California.
2 Rare outside California.
3 Endemic to California.

APPENDIX E – CNDDB Reports

- **Western Spadefoot Toad (*Spea hammondii*)**

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: 5 - 28 - 2006
month (mm) date (dd) year (yyyy)

Scientific Name: Spea hammondii

Common Name: Western Spadefoot Toad

Species Found? ☑ yes ☐ no _____ If not, why?
Total No. Individuals _____ Subsequent Visit? ☑ yes ☐ no
Is this an existing NDDB occurrence? _____ ☑ no ☐ unk.
Yes, Occ. #
Collection? If yes: _____ _____
Number Museum / Herbarium

Reporter: Jason Dart
Address: Althouse and Meade Inc.
1875 Wellsona Road Paso Robles, CA 93446
Email Address: jason@althouseandmeade.com
Phone: (805) 467-1041

Plant Information
Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information
Age Structure: 0 # adults 4 # juveniles _____ # unknown
☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ resting ☐ other

Location ***(please also attach or draw map on back)***
Estrella Vineyards, Estrella Road, San Luis Obispo County, California. 0.8 miles east of the intersection of Tower Road and Jardine Road, 1.1 miles north of Highway 46 East.

County: San Luis Obispo Landowner / Mgr.: Private
Quad Name: Estrella Elevation: 800 ft.
T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____ T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____
UTM: Zone: _____ (10, 11) Datum: NAD27 _____ (NAD83, NAD27, WG584, other)
Source: USGS Map Software (GPS, map & type, etc.) Point Accuracy: _____ Meters
UTM Coordinates N35.68908 / W120.58969

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
Four Spea hammondii tadpoles were observed in a vineyard reservoir. Two were metamorphosing. One was caught with a dip-net for species verification. The water was about 1 foot deep with emergent cattails and bulrush in patches. Water clarity was good. Leafy pondweed (Potamogeton foliosus) and algae (Charn) were abundant in the water column. Also present were Rana catesbeiana, Bufo boreas, and Pseudacris regilla.

Other rare species? None.

Site Information Overall site quality: ☐ Excellent ☐ Good ☐ Fair ☑ Poor
Current / surrounding land use: The reservoir is 75% surrounded by vineyards, with Estrella Road on the open side. A 24-lot residential development primary access road is proposed that will pass the reservoir
Visible disturbances / possible threats: Reservoir maintenance, vineyard maintenance, tilling surrounding grasslands, road widening and paving.
Comments: Very little upland habitat is available for aestivation.

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: Previous experience with the species.

Photographs: *(check one or more)*

	Slide	Print
Plant / animal	☐	☑
Habitat	☐	☑
Diagnostic feature	☐	☑

May we obtain duplicates at our expense? ☑ yes ☐ no

FG/WHDAB/1747 Rev.11/99