

# **APPENDIX C**

## **Biological Resources Information**

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# **APPENDIX C.1**

## **Special-Status Plant Survey for Diamante Estates**

Special-Status Plant Survey

For

**Diamante Estates**

El Dorado County, California

12 June 2008

Prepared For:  
**Diamante Estates, LLC**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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## INTRODUCTION

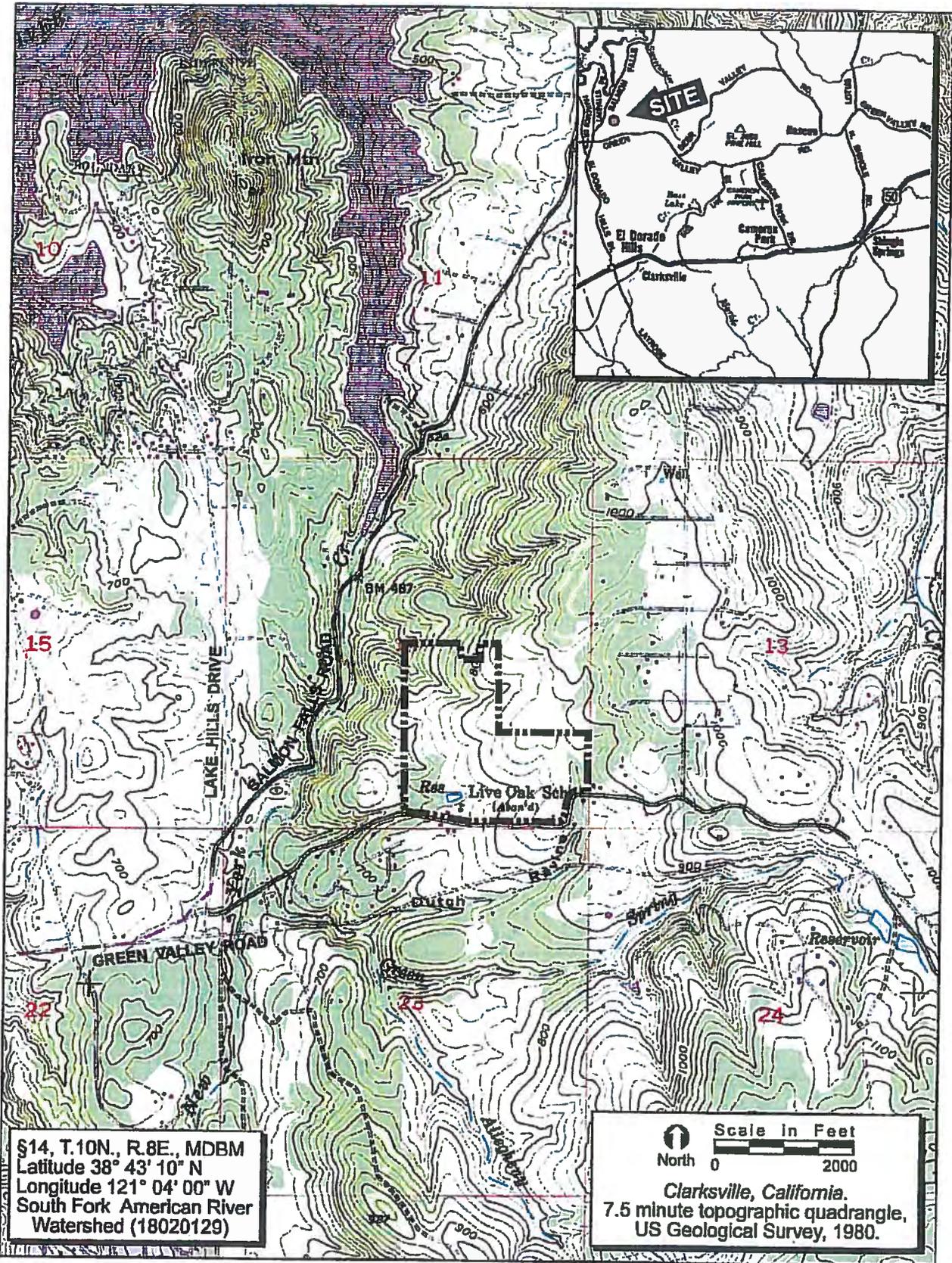
At the request of Diamante Estates, LLC, ECORP Consulting, Inc. (ECORP) conducted a special-status plant survey for the approximately 114±-acre Diamante Estates site in El Dorado County, California. The purpose of this survey was to identify and map the locations of special-status plant species observed within the site.

For the purposes of this report, "special-status species" refers to those plant species which:

- Are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act;
- Are listed or candidates for future listing as threatened or endangered under the California Endangered Species Act;
- Meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- Are considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Lists 1B and 2);
- Are listed on the Review List and Watch List by CNPS (Lists 3 and 4); or
- Are listed as rare under the California Native Plant Protection Act (Fish and Game Code of California, Section 1900 et seq.).

### Site Location

The Diamante Estates site is located north of Malcom Dixon Road, west of Casa Robles Drive, and east of Salmon Falls Road in El Dorado County, California (Figure 1. *Project Site and Vicinity*). The site corresponds to a portion of Section 14, Township 10 North, and Range 8 East (MDBM) of the "Clarksville, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 43' 10" North and 121° 04' 00" West within the South Fork American River Watershed (#18020129, U.S. Department of the Interior, Geological Survey 1978).



**FIGURE 1. Project Site and Vicinity**

2008-030 Diamante Estates

## Existing Site Conditions

The site is composed of gently rolling terrain at an elevational range of approximately 600 feet to 880 feet above mean sea level. The majority of the site is comprised of an open blue oak savannah. The northwestern corner of the site supports an interior live oak woodland. Rock outcrops and historical rock walls and rock dams are present throughout the site. A pond is located in the southern portion of the site, near an old abandoned schoolhouse. The site is undeveloped and currently fallow. The surrounding properties are comprised of rural residences.

The blue oak savannah on-site is dominated by blue oak (*Quercus douglasii*) and non-native annual grasses, including Medusahead grass (*Taeniatherum caput-medusae*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and hedgehog dogtail grass (*Cynosurus echinatus*). Other species commonly observed in this community include miner's lettuce (*Claytonia perfoliata*), filaree (*Erodium botrys*), milk thistle (*Silybum marianum*), winter vetch (*Vicia villosa*), spring vetch (*V. sativa*), goose grass (*Galium aparine*), hedge parsley (*Torilis arvensis*), purple sanicle (*Sanicula bipinnatifida*), Pacific sanicle (*S. crassicaulis*), soap plant (*Chlorogalum* species), cut-leaved geranium (*Geranium dissectum*), and soft geranium (*G. molle*). An inclusion of slightly different vegetation was observed in the vicinity of a waterfall on an ephemeral drainage in the northern portion of the site, just east of the live oak woodland. Species observed within this inclusion included sparse Himalaya blackberry (*Rubus discolor*), poison oak (*Toxicodendron diversilobum*), maidenhair fern (*Adiantum jordani*), shooting star (*Dodecatheon* species), and goldback fern (*Pentagramma triangularis*).

Several acres of closed canopy interior live oak woodland are present in the northwestern corner of the site. This community is dominated by interior live oak (*Quercus wislizenii*), and has a sparse understory due to the closed canopy. Species observed within the understory of the interior live oak woodland include wood rush (*Luzula comosa*), honeysuckle (*Lonicera* species), purple sanicle, poison oak, goosegrass, and soft geranium.

A wetland delineation was conducted at the site in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Potential waters of the U.S.

mapped on-site include wetlands and other waters (Figure 2. *Wetland Delineation*) (ECORP 2008a). Wetlands consist of seeps and seasonal wetland swales. Other waters include ephemeral drainages and a pond. To date, the U.S. Army Corps of Engineers has not conducted a jurisdictional determination of the site.

Seasonal wetland swales are linear wetland features that do not exhibit an ordinary high water mark. Several seasonal wetland swales were observed within the southern half of the site. Within the site, they are primarily dominated by annual grasses such as Mediterranean barley (*Hordeum marinum*) and Italian ryegrass (*Lolium multiflorum*).

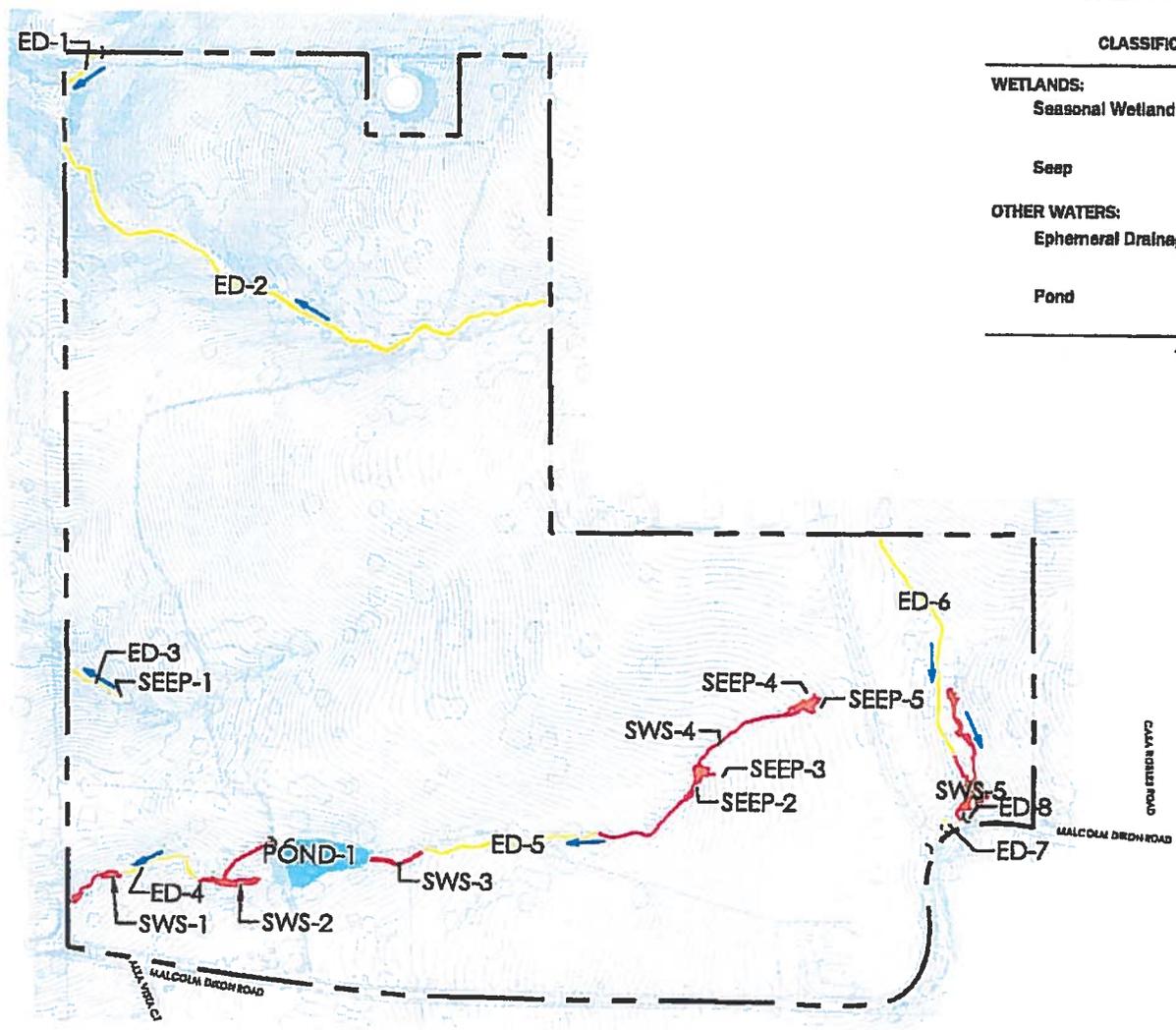
Seeps are seasonally or perennially wet areas resulting from discharge of groundwater to the surface. The majority of the seeps on-site are restricted to the southeastern portion of the site, but one seep is located adjacent to an ephemeral drainage on the western edge of the site. The seeps in the southeastern portion of the site are dominated by iris-leaved rush (*Juncus xiphioides*). Cut-leaved geranium also occurs quite commonly in these features. The seep near the western edge of the site is dominated primarily by unidentifiable grasses.

The ephemeral drainages on-site are linear features that exhibit an ordinary high water mark. These seasonal features appear to convey runoff only for short periods of time immediately following rain events. Due to the relatively small size and shallow nature of these features, they do not appear to be influenced by groundwater. The channels tend to be unvegetated due to the scouring effects of flowing water. Plants observed sparsely within the drainages include Italian ryegrass and chickweed (*Stellaria media*). The northern ephemeral drainage runs through thickets of Himalayan blackberry in a few locations.

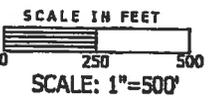
One pond was mapped in the southwestern portion of the site. This feature appears to be relatively deep in portions and, as such, only supports emergent wetland vegetation along its fringes. Vegetation observed along the edges of this feature includes cattail (*Typha latifolia*), curly dock (*Rumex crispus*), Mexican rush (*Juncus mexicanus*), Fremont cottonwood (*Populus fremontii*), weeping willow (*Salix babylonica*), and other willows (*Salix* species).

# WATERS OF THE U.S. ACREAGE<sup>1</sup>

CLASSIFICATION	EXISTING ACREAGE
<b>WETLANDS:</b>	
Seasonal Wetland Swale	0.413
Seep	0.056
<b>OTHER WATERS:</b>	
Ephemeral Drainage	0.329
Pond	0.466
<b>TOTAL:</b>	<b>1.264</b>



Flow Direction  
 Culvert



<sup>1</sup> Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in strict accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Basin Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region and Customs to Sacramento District specifications. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.  
 Delineator: D. Snider

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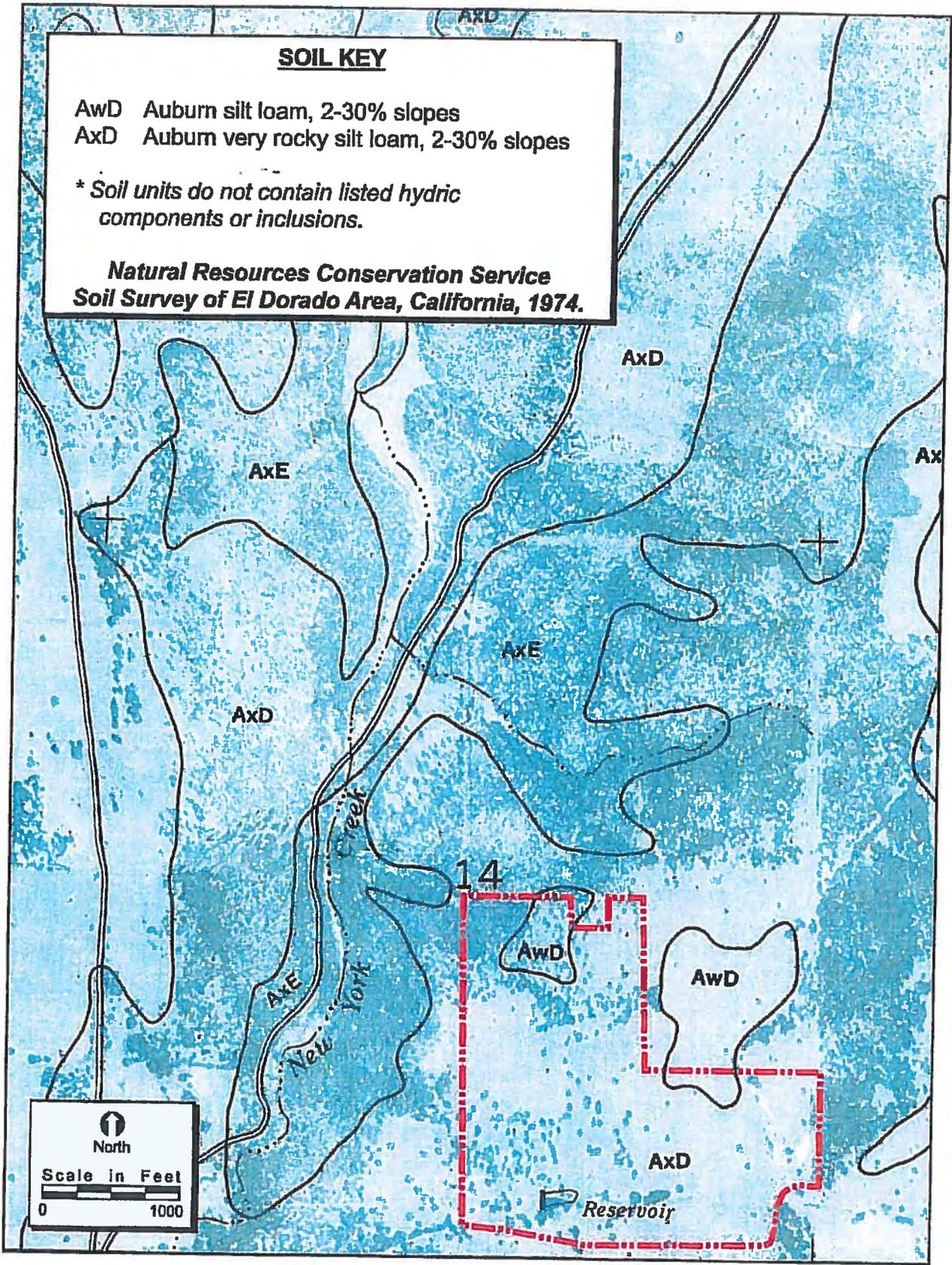
**FIGURE 2. Wetland Delineation**

According to the *Soil Survey of El Dorado Area, California* (U.S. Department of Agriculture, Soil Conservation Service 1974), two soil units, or types, have been mapped within the site (Figure 3. *Natural Resources Conservation Service Soil Types*): (AWD) Auburn silt loam, 2-30% slopes, and (AxD) Auburn very rocky silt loam, 2-30% slopes. Neither of these soils units consists of listed hydric components, or contains hydric inclusions (U.S. Department of Agriculture, Soil Conservation Service 1992).

## **METHODS**

The special-status plant survey included a review of resource agency species lists, literature review, on-line database query, voucher specimen and reference population review, and field surveys. Background information was collected on the potential existence of the special-status plants within or near the site from a variety of sources including:

- California Department of Fish and Game's Natural Diversity Database (CNDDDB) record search for the "Clarksville, California" 7.5-minute quadrangle and the eight surrounding quadrangles (CDFG 2003);
- California Native Plant Society's Inventory of Rare and Endangered Plants record search for the "Clarksville, California" 7.5-minute quadrangle and the eight surrounding quadrangles (CNPS 2008);
- Species List for the "Clarksville, California" 7.5-minute quadrangle and the eight surrounding quadrangles created by the U.S. Fish and Wildlife Service (USFWS) (USFWS 2008);
- *Status of Rare, Threatened, and Endangered Animal and Plants of California 2000-2004* (CDFG 2005);
- *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001);
- *Soil Survey of Colusa County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993);
- *Wetland Delineation for Diamante Estates* (ECORP 2008a); and
- *Special-Status Species Assessment for Diamante Estates* (ECORP 2008b).



**FIGURE 3. Natural Resources Conservation Service Soil Types**

Field surveys were conducted in accordance with guidelines promulgated by U.S. Fish and Wildlife Service (USFWS 2000), California Department of Fish and Game (CDFG 1983), and California Native Plant Society (CNPS 2001). The determinate-level field surveys were conducted on 17 April and 5 and 30 May, 2008 which coincided with the optimum blooming period for each of the potentially occurring special-status plants. ECORP botanist Daria Snider walked meandering transects throughout the site to ensure complete coverage of all suitable habitat, including all aquatic features on-site. A list of field personnel qualifications is included as Attachment A.

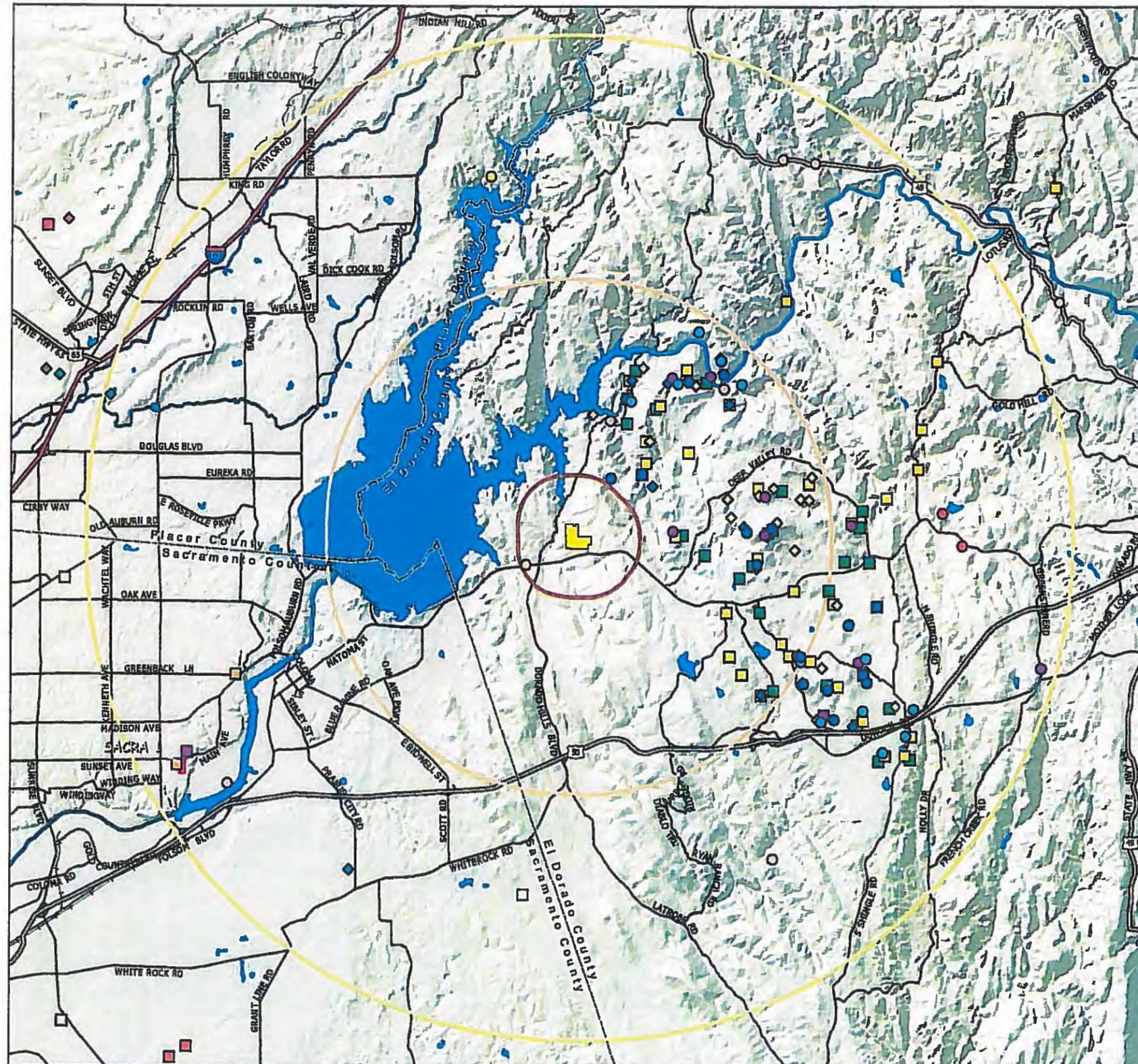
Reference populations for the target species were visited throughout the floristic season to assess bloom phenology and to observe species morphology. When reference populations were not available, mounted herbarium specimens were observed at the U.C. Davis Herbarium. Attachment B identifies the reference source for each of the target species including the location of the population, dates of visits, and phenological stage of the species at the time of the field visits.

Plant species identification, nomenclature, and taxonomy followed *The Jepson Manual: Higher Plants of California* (Hickman 1993). Vegetation community classification was based on the classification systems presented in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer Jr. 1988).

## **RESULTS AND DISCUSSION**

### **Previously Documented Special-Status Plant Occurrences**

There are no previously documented occurrences of special-status plants within the site in the CNDDDB (CDFG 2003). However, several special-status plant species occurrences have been documented within an approximate 10-mile (16-kilometer [km]) radius of the site (Figure 4. *CNDDDB Occurrences of Special-Status Plant Species*). These are: Jepson's onion (*Allium jepsonii*, CNPS List 1B), big-scale balsamroot (*Balsamorhiza macrolepis*, CNPS List 1B), Stebbin's morning glory (*Calystegia stebbinsii*, federal endangered, California endangered, CNPS List 1B),



**Map Features**

- |                                  |                              |                       |                         |
|----------------------------------|------------------------------|-----------------------|-------------------------|
| <b>Administrative Boundaries</b> | <b>Distance From Project</b> | <b>Transportation</b> | <b>Aquatic Features</b> |
| Project Boundary <sup>1</sup>    | 1 mile                       | Interstate            | Lakes and Reservoirs    |
| City Boundary                    | 5 mile                       | State Highway         | Rivers                  |
| County Boundary                  | 10 mile                      | Roads                 |                         |
|                                  |                              | Railroads             |                         |

**CNDDDB Occurrences <sup>2</sup>**

**Plants**

- Jepson's Onion
- Big-scale Balsamroot
- Stebbins' Morning-glory
- Pine Hill Ceanothus
- Red Hills Soaproot
- Brandegee's Clarkia
- Hispid Bird's-beak
- Dwarf Downingia
- Pine Hill Fiannelbush
- El Dorado Bedstraw
- Boggs Lake Hedge-hyssop
- Bisbee Peak Rush-rose
- Legenere
- Pincushion Neveaetia
- Sacramento Orcutt Grass
- Layne's Ragwort
- Hartweg's Golden Sunburst
- Sanford's Arrowhead
- El Dorado County Mule Ears

**Critical Habitat**

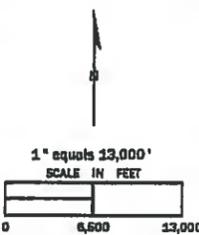
- Sacramento Orcutt Grass <sup>3</sup>

*This map may include multiple species' occurrences at each location, some of which may not be visible on this graphic. The CNDDDB occurrences shown may not reflect the actual location of the occurrence.*

**NOTES**

- <sup>1</sup> Project Boundary: GC Wallace
- <sup>2</sup> CDFG California Natural Diversity Database (CNDDDB), June 2008 Update (GIS Shapefile)
- <sup>3</sup> USFWS Sacramento Orcutt Grass Final Critical Habitat, February 2008

*CNDDDB Occurrences Located on USGS 7.5' Quadrangles: Buffalo Creek, Carmichael, Citrus Heights, Clarksville, Coloma, Folsom SE, Folsom, Garden Valley, Latrobe, Pilot Hill, Placerville, Rocklin, Roseville & Shingle Springs, CA*



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06/09/2008 GIS Specialist: JDS

**Figure 4. CNDDDB Occurrences of Special-Status Plant Species**

2008-030 Diamante Estates



Pine Hill ceanothus (*Ceanothus roderickii*, federal endangered, California rare, CNPS List 1B), Red Hills soaproot (*Chlorogalum grandiflorum*, CNPS List 1B), Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*, CNPS List 1B), Pine Hill flannelbush (*Fremontodendron decumbens*, federal endangered, California rare, CNPS List 1B), El Dorado bedstraw (*Galium californicum* ssp. *sierrae*, federal endangered, California rare, CNPS List 1B), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*, California endangered, CNPS List 1B), Bisbee Peak rush-rose (*Helianthemum suffrutescens*, CNPS List 3), pincushion navarretia (*Navarretia myersii* ssp. *myersii*, CNPS List 1B), Sacramento Orcutt grass (*Orcuttia viscida*, federal endangered, California endangered, CNPS List 1B), Layne's ragwort (*Packera layneae*, federal threatened, California rare, CNPS List 1B), Hartweg's golden sunburst (*Pseudobahia bahiifolia*, federal endangered, California endangered, CNPS List 1B), Sanford's arrowhead (*Sagittaria sanfordii*, CNPS List 1B), and El Dorado County mule ears (*Wyethia reticulata*, CNPS List 1B). The results of the CNDDDB query for the "Clarksville, California" 7.5-minute quadrangle are included as Attachment C. Each of the special-status plant species known to occur within the vicinity of the site was evaluated for its potential to occur on-site.

One additional species located outside of the 10-mile (16-km) radius around the site was also evaluated for its potential to occur on-site due to the presence of suitable habitat. This species is oval-leaved viburnum (*Viburnum ellipticum*, CNPS List 2).

### **Target Species**

Based on the information listed above, vegetation communities and conditions present within the site, and data on known species' distribution, a list of potentially occurring special-status plants was developed. The target special-status plant species for this survey were big-scale balsamroot, Brandegee's clarkia, Hartweg's golden sunburst, Sanford's arrowhead, and oval-leaved viburnum (Table 1).

### **Excluded Species**

Ten species (i.e., Jepson's onion, Stebbin's morning glory, Pine Hill ceanothus, Red Hills soaproot, Pine Hill flannelbush, El Dorado bedstraw, Bisbee Peak rush-rose, Layne's ragwort,

**Table 1 – Potentially Occurring Special-Status Plants**

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Approximate Survey Dates
<b>Plants</b>						
Big-scale balsamroot	<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	-	-	1B	chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils (300' - 5,000')	March-June
Brandegee's clarkia	<i>Clarkia biloba</i> ssp. <i>brandegeee</i>	-	-	1B	chaparral and cismontane woodland, often on roadcuts, (240' - 3,000')	May-July
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	FE	CE	1B	clay, often acidic soils, in cismontane woodland and valley and foothill grassland (50' - 490')	March-April
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	-	-	1B	assorted shallow freshwater marshes and swamps (0' - 2,130')	May-October
Oval-leaved viburnum	<i>Viburnum ellipticum</i>	-	-	2	chaparral, cismontane woodland, and lower montane coniferous forest (700' - 4,600')	May-June

**Status Codes:**

FE - Federal ESA listed, Endangered.

CE - California ESA or Native Plant Protection Act listed, Endangered.

1B - California Native Plant Society/Rare or Endangered in California and elsewhere.

2 - California Native Plant Society/Rare or Endangered in California, more common elsewhere.

and El Dorado County mule ears) were not included as target species though there are documented occurrences of these species within the vicinity of the site. These species require serpentinite, volcanic, or gabbroic soils, or soils of the Pine Hill or Ione formations, none of which are present on-site. As a result, these species were excluded from consideration in this survey.

Three additional species that occur in the vicinity of the site (i.e., Bogg's Lake hedge-hyssop, pincushion navarretia, and Sacramento Orcutt grass) were not included as target species for this site. These species occur in depressional seasonal wetlands and vernal pools, which are not present on-site. The seasonal wetland swales on-site do not appear to have sufficient hydrology to support these species. As a result, these species were excluded from consideration in this survey.

### **Species Accounts**

#### *Big-Scale Balsamroot*

Big-scale balsamroot is not listed pursuant to either the federal or California Endangered Species Acts; however, it is designated as a CNPS List 1B species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grasslands, and occasionally on serpentine soils (CNPS 2001). Big-scale balsamroot blooms from March through June, and is known to occur at elevations ranging from 300 to 4,600 feet above mean sea level (CNPS 2001). Big-scale balsamroot is endemic to California, and the current range of this species includes Alameda, Butte, Colusa, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, and Tehama counties (CNPS 2001).

One occurrence of big-scale balsamroot has been reported within 10 miles (16 km) of the site (CDFG 2003). This occurrence (CNDDDB Occurrence No. 14) is located approximately 7 miles (12 km) north of the site (CDFG 2003) near "Rattlesnake Bend" on the American River. This population is presumed extirpated due to inundation of the area by Folsom Lake. The nearest population that is presumed extant (CNDDDB Occurrence No. 1) is located 17 miles (28 km) northwest of the site in Lincoln. Vegetation communities throughout the site support suitable

habitat for this species. During the surveys in 2008, big-scale balsamroot was not observed on-site.

### *Brandegee's Clarkia*

Brandegee's clarkia is not listed pursuant to either the federal or California Endangered Species Act; however, it is designated as a CNPS List 1B plant. This species is an herbaceous annual that occurs in chaparral and cismontane woodlands, often along roadcuts (CNPS 2001, 2008). Brandegee's clarkia blooms from May through July, and it is known to occur at elevations ranging from 740 to 3,000 feet above mean sea level. Brandegee's clarkia is endemic to California, and the current range of this species includes Butte, El Dorado, Nevada, Placer, Sierra, and Yuba counties (CNPS 2008).

Seven occurrences of Brandegee's clarkia have been reported within 10 miles (16 km) of the site (CDFG 2003). The nearest of these occurrences (CNDDDB Occurrence No. 25) is located approximately 0.9 miles (1.5 km) west of the site (CDFG 2003) along Green Valley Road. This population is presumed to be extant. Vegetation communities throughout the site support suitable habitat for this species. During the surveys in 2008, Brandegee's clarkia was not observed on-site.

### *Hartweg's Golden Sunburst*

Hartweg's golden sunburst is listed as endangered pursuant to both the federal and California Endangered Species Acts, and it is designated as a CNPS List 1B species. This species is an herbaceous annual that occurs on clay soils that are often acidic in cismontane woodlands, and valley and foothill grasslands (CNPS 2001). Hartweg's golden sunburst blooms from March to April, and it is known to occur at elevations ranging from 50 to 500 feet above mean sea level (CNPS 2001). Hartweg's golden sunburst is endemic to California, and the current range of this species includes El Dorado, Fresno, Madera, Merced, Stanislaus, Tuolumne and Yuba counties (CNPS 2008). However, this species is believed to be extirpated from Yuba County (CNPS 2008).

One occurrence of Hartweg's golden sunburst has been reported within 10 miles (16 km) of the site (CDFG 2003). This occurrence (CNDDDB Occurrence No. 36) is located approximately 2 miles (3 km) northeast of the site (CDFG 2003) along Sweetwater Creek. This population is presumed to be extant. Vegetation communities throughout the site support suitable habitat for this species. During the surveys in 2008, Hartweg's golden sunburst was not observed on-site.

### *Sanford's Arrowhead*

Sanford's arrowhead is not listed pursuant to either the federal or California Endangered Species Acts; however, it is designated as a CNPS List 1B species. This species is a rhizomatous, herbaceous perennial that occurs in shallow marshes and freshwater swamps (CNPS 2001). Sanford's arrowhead blooms from May through October, and it is known to occur at elevations ranging from sea level to 2,000 feet above mean sea level (CNPS 2001). Sanford's arrowhead is endemic to California, and the current range of this species includes Butte, Del Norte, Fresno, Merced, Mariposa, Orange, Placer, Sacramento, San Joaquin, Shasta, Tehama, and Ventura counties (CNPS 2008). However, this species is believed to be extirpated from Orange and Ventura counties (CNPS 2008).

One occurrence of Sanford's arrowhead has been reported within 10 miles (16 km) of the site (CDFG 2003). This occurrence (CNDDDB Occurrence No. 64) is located approximately 7 miles (12 km) southwest of the site (CDFG 2003) near Carson Creek. This population is presumed to be extant. The pond on-site supports suitable habitat for this species. During the surveys in 2008, Sanford's arrowhead was not observed on-site.

### *Oval-Leaved Viburnum*

Oval-leaved viburnum is not listed pursuant to either the federal or California Endangered Species Acts; however, it is designated as a CNPS List 2 species. This species is a deciduous shrub that occurs in chaparral, cismontane woodland, and lower montane coniferous forest communities. Oval-leaved viburnum blooms from May through June, and it is known to occur at elevations ranging from 700 to 4,600 feet above mean sea level (CNPS 2001). The current

range of this species in California includes Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer Shasta, and Sonoma counties (CNPS 2008).

Oval-leaved viburnum has not been reported within 10 miles (16 km) of the site (CDFG 2003). The nearest occurrence of oval-leaved viburnum to the site (CNDDDB Occurrence No. 5) is located approximately 15 miles (24 km) east of the site (CDFG 2003) in Placerville. This population is presumed to be extant. The interior live oak woodland on-site supports suitable habitat for this species. During the surveys in 2008, oval-leaved viburnum was not observed on-site.

### **Field Survey Results**

No special-status plants were observed within the site during the determinate-level field surveys conducted on 17 April and 5 and 30 May, 2008. A complete list of plant species encountered during this survey is included as Attachment D.

### **CONCLUSION**

ECORP conducted a determinate-level special-status plant survey for the Diamante Estates site in El Dorado County, California on 17 April and 5 and 30 May, 2008. The target special-status plant species for this survey were big-scale balsamroot, Brandegee's clarkia, Hartweg's golden sunburst, Sanford's arrowhead, and oval-leaved viburnum. No special-status plants were observed on-site during the 2008 field surveys.

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## **LIST OF ATTACHMENTS**

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Attachment A – Statement of Qualifications

Attachment B – Target Species Reference Source

Attachment C – California Natural Diversity Database Plant Occurrences for the  
"Clarksville, California" 7.5-minute Quadrangle

Attachment D – Plant Species Observed On-Site (17 April and 5 and 30 May, 2008)

# ATTACHMENT A

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## Statement of Qualifications

**Daria Snider B.S.**  
**Botanist ECORP Consulting, Inc.**

Daria Snider is a botanist/biologist and trained wetland delineator specializing in biological resource assessment, plant taxonomy, plant ecology, habitat type assessment, invasive plant species, and California floristics. Mrs. Snider has three years of professional experience conducting field surveys for a variety of special-status plants throughout California. Her experience includes special-status plant surveys, general floristic surveys, floristic habitat assessments, vegetation mapping, riparian restoration design and monitoring, valley elderberry longhorn beetle surveys, and wetland delineation. Her botanical expertise extends throughout the Central Valley and mountain regions of northern California, with an emphasis on vernal pool, grassland, oak woodland, and riparian communities.

**ATTACHMENT B**

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Target Species Reference Source

**Target Species Reference Source**

<b>Name</b>	<b>Location of Observation</b>	<b>Dates of Observation</b>	<b>Phenology</b>	<b>Remarks</b>
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	UC Davis Herbarium	18 March 20008	Mounted herbarium specimens.	The flowers of this species are large discoid heads, and the leaves are glaucous, tomentose, and highly dissected.
Brandegee's darkia <i>Clarkia biloba</i> ssp. <i>brandegeei</i>	Along Iowa Hill Road, east of Colfax in Placer County, CA. CNDDDB Occurrence #46.	12 and 22 May, 2008	<i>Clarkia</i> species were vegetative during 12 May visit, but were in full bloom during 22 May visit.	Distinctive heart-shaped petals were observed.
Hartweg's golden sunburst <i>Pseudobahia bairdii</i>	UC Davis Herbarium	18 March 20008	Mounted herbarium specimens.	A small member of the Asteraceae family. Very similar to <i>Lasthenia</i> species, but glaucous and tomentose.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	Antelope Station Park, Sacramento County	27 May 2008	Several flowering plants were observed.	Distinctive triangular stems were noted.
Oval-leaved viburnum <i>Viburnum ellipticum</i>	Along Lake Clementine Trail in Placer County, CA. CNDDDB Occurrence #20.  UC Davis Herbarium	Reference population observed on 11 April 2008.  Herbarium specimens observed on 18 March 2008.	Shrubs were vegetative during reference population visit, but readily identifiable by their distinctive leaves.  Mounted herbarium specimens were observed during herbarium visit.	Herbarium specimens had dense inflorescences of white flowers, and distinctive dentate leaves. Although the specimens at the reference population were not in bloom at the time of visit, the plant was readily differentiated from other shrubs by the dentate leaves.

**ATTACHMENT C**

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California Natural Diversity Database Plan Occurrences for the "Clarksville, California"  
7.5 minute Quadrangle

***Ceanothus roderickii***

Pine Hill ceanothus

Element Code: PDRHAD4190

Status: \_\_\_\_\_ NDDB Element Ranks: \_\_\_\_\_ Other Lists: \_\_\_\_\_  
Federal: Endangered Global: G2  
State: Rare State: S2.1 CNPS List: 1B.2

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: GABBROIC SOILS; OFTEN IN "HISTORICALLY DISTURBED" AREAS WITH AN ENSEMBLE OF OTHER RARE PLANTS. 260-630M.

Occurrence No. 20 Map Index: 22145 EO Index: 16646 Dates Last Seen: \_\_\_\_\_  
Occ Rank: Unknown Element: 1986-XX-XX  
Origin: Natural/Native occurrence Site: 1986-XX-XX  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1993-01-25

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.73531° / -121.05130° Township: 10N  
UTM: Zone-10 N4286207 E669375 Range: 08E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 12 Qtr: SW  
Elevation: 860 ft Symbol Type: POINT Meridian: M

Location: WEST OF SWEETWATER CREEK, 0.5 KM (0.25 MI) NW OF LANDING STRIP AND 2.5 KM (1.5 MI) NNE OF LIVE OAK SCHOOL.

Location Detail: LOCATED IN THE NE 1/4 OF THE SW 1/4 OF SECTION 12.

General: MAP DETAIL IS ONLY SOURCE OF INFORMATION FOR THIS SITE.

Owner/Manager: UNKNOWN

***Chlorogalum grandiflorum***

Red Hills soaproot

Element Code: PML1LOG020

Status \_\_\_\_\_ NDDB Element Ranks \_\_\_\_\_ Other Lists \_\_\_\_\_  
 Federal: None Global: G2  
 State: None State: S22 CNPS List: 18.2

Habitat Associations

General: CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.

Micro: OCCURS FREQUENTLY ON SERPENTINE OR GABBRO, BUT ALSO ON NON-ULTRAMAFIC SUBSTRATES; OFTEN ON "HISTORICALLY DISTURBED" SITE

Occurrence No. 20 Map Index: 18633 EO Index: 17313 Dates Last Seen \_\_\_\_\_  
 Occ Rank: Good Element: 2007-05-14  
 Origin: Natural/Native occurrence Site: 2007-05-14  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2008-02-26

Quad Summary: Shingle Springs (3812058/510B), Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.71815° / -120.99243° Township: 10N  
 UTM: Zone-10 N4287413 E574534 Range: 09E  
 Area: 40.0 acres Mapping Precision: SPECIFIC Section: 16 Qtr: S  
 Elevation: 1,800 ft Symbol Type: POLYGON Meridian: M

Location: PINE HILL, ABOUT 2 MILES WNW OF RESCUE, NORTHWEST OF SHINGLE SPRINGS.

Location Detail: MAPPED AS 8 POLYGONS IN THE S1/2 OF SECTION 16 AND THE NE 1/4 OF THE NW 1/4 OF SECTION 21.

Ecological: GABBRO CHAPARRAL WITH ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, PINUS SABINIANA, SALVIA SONOMENSIS, RHAMNUS CROCEA, WYETHIA BOLANDERI, CEANOETHUS RODERICKII, C. LEMMONII, ETC. ON ROCKY SOIL.

Threat: PORTIONS OF THE WESTERN PART OF THIS OCCURRENCE ARE THREATENED BY DEVELOPMENT.

General: PART OF SITE EXPERIMENTALLY BURNED IN 1983. LESS THAN 1000 PLANTS SEEN IN 1982 AND 1984. THOUSANDS OF PLANTS OBSERVED IN 1998. APPROXIMATELY 16 PLANTS IN THE 3 WESTERNMOST POLYGONS IN 2007. INCLUDES FORMER OCCURRENCE #21.

Owner/Manager: CDF, PVT

Occurrence No. 36 Map Index: 30914 EO Index: 3843 Dates Last Seen \_\_\_\_\_  
 Occ Rank: Unknown Element: 1985-XX-XX  
 Origin: Natural/Native occurrence Site: 1985-XX-XX  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 1985-03-03

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.71831° / -121.02787° Township: 10N  
 UTM: Zone-10 N4287475 E571450 Range: 09E  
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 18 Qtr: SE  
 Elevation: 1,280 ft Symbol Type: POINT Meridian: M

Location: 0.5 MILE WEST OF DEER VALLEY ROAD AND 0.2 MILE SOUTH OF MARTEL CREEK, NORTH OF BASS LAKE.

Location Detail: MAPPED JUST TO THE WEST OF 1381' ELEVATION MARKER IN THE NW 1/4 OF THE SE 1/4 OF SECTION 18.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL PROVIDED BY WILSON.

Owner/Manager: UNKNOWN

**Clarkia biloba ssp. brandegeae**

Brandegee's clarkia

Element Code: PDONA05053

Status: \_\_\_\_\_ NDDB Element Ranks: \_\_\_\_\_ Other Lists: \_\_\_\_\_  
 Federal: None Global: G4G5T2  
 State: None State: S2.2 CNPS List: 1B.2

Habitat Associations: \_\_\_\_\_

General: CHAPARRAL, CISMONTANE WOODLAND.  
 Micro: OFTEN IN ROAD CUTS. 295-885M.

Occurrence No. 25 Map Index: 58254 EO Index: 58270 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Fair Element: 2003-05-19  
 Origin: Natural/Native occurrence Site: 2003-05-19  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2006-07-05

Quad Summary: Clarkville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.71002° / -121.08387° Township: 10N  
 UTM: Zone-10 N4286340 E666602 Range: 08E  
 Area: Mapping Precision: NON-SPECIFIC Section: 22 Qtr: NE  
 Elevation: 855 ft Symbol Type: POLYGON Meridian: M

Location: NORTHEAST OF THE INTERSECTION OF GREEN VALLEY ROAD AND FRANCISCO ROAD, SOUTH OF VILLAGE CENTER DRIVE IN EL DORADO HILLS.

Location Detail: LOCATED NEAR THE SOUTH END OF THE PROPERTY, ON TOP OF A RISE ADJACENT TO GREEN VALLEY ROAD. MAPPED WITHIN THE NE 1/4 OF SECTION 22.

Ecological: HIGHLY DISTURBED NON-NATIVE ANNUAL GRASSLAND. MAJOR COMPONENTS ARE BROMUS DIANDRUS, TRIFOLIUM HIRTUM, TAENIATHERUM CAPUT-MEDUSAE, AND LOTUS PURSHIANUS. SITE ALSO SUPPORTS A SMALL QUERCUS DOUGLASII WOODLAND.

Threat: AREA IS PLANNED FOR DEVELOPMENT. DOMINATED BY NON-NATIVE ANNUAL GRASSES.

General: 500 PLANTS SEEN IN 2003.

Owner/Manager: PVT

***Fremontodendron decumbens***

Pine Hill flannelbush

Status  
 Federal: Endangered  
 State: Rare

NODD Element Ranks  
 Global: G1  
 State: S1.2

Element Code: PDSTE03030

Other Lists  
 CNPS List: 1B.2

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: ROCKY RIDGES; GABBRO OR SERPENTINE ENDEMIC; OFTEN AMONG ROCKS AND BOULDERS. 420-585M.

Occurrences No. 5      Map Index: 12203      EO Index: 3845      Dates Last Seen  
 Occ Rank: Unknown      Origin: Natural/Native occurrence      Element: 1985-XX-XX  
 Presence: Presumed Extant      Site: 1985-XX-XX  
 Trend: Unknown      Record Last Updated: 1995-03-21

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.72885° / -121.00682°      Township: 10N  
 UTM: Zone-10 N4288573 E673257      Range: 09E  
 Radius: 80 meters      Mapping Precision: SPECIFIC      Section: 17      Qtr: NE  
 Elevation: 1,500 ft      Symbol Type: POINT      Meridian: M

Location: SOUTHEAST OF DEER VALLEY ROAD AND WEST OF STARBUCK ROAD, WEST OF PINE HILL.  
 Location Detail: MAPPED ABOUT 200 M SOUTH OF DEER VALLY ROAD AND 200 M WEST OF STARBUCK ROAD. WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 17.  
 Ecological: IN GABBRO SOIL ON A ROCKY OUTCROP ON THE CREST OF A SMALL RIDGE. GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS AND ADENOSTOMA.  
 Threat: NO THREATS IN 1983, BUT FUTURE RESIDENTIAL DEVELOPMENT WOULD THREATEN THIS OCCURRENCE.  
 General: 54 PLANTS SEEN IN 1983.  
 Owner/Manager: PVT

Occurrences No. 6      Map Index: 12207      EO Index: 3844      Dates Last Seen  
 Occ Rank: Unknown      Origin: Natural/Native occurrence      Element: 1985-XX-XX  
 Presence: Presumed Extant      Site: 1985-XX-XX  
 Trend: Unknown      Record Last Updated: 1995-01-26

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.72341° / -121.00556°      Township: 10N  
 UTM: Zone-10 N4287972 E673379      Range: 09E  
 Area: 8.3 acres      Mapping Precision: SPECIFIC      Section: 17      Qtr: NE  
 Elevation: 1,410 ft      Symbol Type: POLYGON      Meridian: M

Location: EAST OF DEER VALLEY ROAD AND WEST OF STARBUCK ROAD, WEST OF PINE HILL.  
 Location Detail: TWO COLONIES MAPPED; 12 PLANTS AT THE 1478' SUMMIT OF HILL, 1 PLANT EAST OF SUMMIT ALONG STARBUCK ROAD. WITHIN THE SE 1/4 OF THE NE 1/4 OF SECTION 17.  
 Ecological: IN GABBRO SOIL ON A ROCKY OUTCROP ON THE CREST OF A SMALL RIDGE. GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS AND ADENOSTOMA.  
 Threat: NO THREATS IN 1983, BUT FUTURE RESIDENTIAL DEVELOPMENT WOULD THREATEN THIS OCCURRENCE.  
 General: 13 PLANTS SEEN IN 2 COLONIES IN 1983.  
 Owner/Manager: PVT

***Galium californicum ssp. sierrae***

El Dorado bedstraw

Status  
 Federal: Endangered  
 State: Rare

NDDB Element Ranks  
 Global: GST1  
 State: S1.2

Element Code: PDRUB0N0E7

Other Lists  
 CNPS List: 1B.2

Habitat Associations

General: CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.

Micro: MORE OFTEN IN PINE-OAK WOODLAND THAN IN CHAPARRAL; RESTRICTED TO GABBROIC SOILS. 100-585M.

Occurrence No. 12      Map Index: 49114      EO Index: 49114      Dates Last Seen  
 Occ Rank: Excellent      Element: 1994-08-16  
 Origin: Natural/Native occurrence      Site: 1994-08-16  
 Presence: Presumed Extant  
 Trend: Unknown      Record Last Updated: 2002-10-23

Quad Summary: Clarksville (3812161/511A), Pilot Hill (3812171/527D)

County Summary: El Dorado

Lat/Long: 38.74609° / -121.03649°      Township: 10N  
 UTM: Zone-10 N4290431 E670636      Range: 08E  
 Area: 12.8 acres      Mapping Precision: SPECIFIC      Section: 08      Qtr: W  
 Elevation: 1,050 ft      Symbol Type: POLYGON      Meridian: M

Location: RIDGE BETWEEN SWEETWATER & CRACKER CREEKS, NORTH OF CLARKSVILLE, EAST OF FOLSOM LAKE.

Location Detail: 5 COLONIES MAPPED AS 4 POLYGONS FROM TOP OF 1361' PEAK & ALONG THE E EDGE OF RIDGE, EXTENDING DOWN A SEASONAL DRAINAGE FOR 1000 FT TO ABOUT 100 FT ABOVE CRACKER CRK. MAPPED WITHIN THE W 1/2 OF SEC 8 & THE NE 1/4 OF THE NW 1/4 OF SEC 7.

Ecological: ON OPEN RESCUE STONY LOAM SOILS, GROWING AMONGST ROCKS AND BOULDERS IN THE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ERIODICTYON CALIFORNICUM, ET AL.

Threat: PROPOSED HOUSING DEVELOPMENT.

General: 5 COLONIES OBSERVED BY WOOD AND FRASER IN 1994. FROM NORTH TO SOUTH, NUMBER OF PLANTS AT EACH COLONY: 100, 1, 3, 30, AND 1. SITE SHOULD BE PRESERVED AS OPEN SPACE.

Owner/Manager: PVT-KANAKA VALLEY RANCH

***Helianthemum suffrutescens***

Bisbee Peak rush-rose

Status: \_\_\_\_\_ Element Code: PDCIS020FO  
 Federal: None NDDB Element Ranks: \_\_\_\_\_ Other Lists: \_\_\_\_\_  
 State: None Global: G2Q CNPS List: 3.2  
 State: S2.2

Habitat Associations: \_\_\_\_\_

General: CHAPARRAL

Micro: OFTEN ON SERPENTINE, GABBROIC, OR IONE FORMATION SOILS; IN OPENINGS IN CHAPARRAL. 45-510M.

Occurrence No. 20 Map Index: 12156 EO Index: 7482 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Excellent Element: 1994-06-16  
 Origin: Natural/Native occurrence Site: 1994-06-16  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2003-03-07

Quad Summary: Clarksville (3812161/511A), Pilot Hill (3812171/527D)  
 County Summary: El Dorado

Lat/Long: 38.76331° / -121.02848° Township: 11N  
 UTM: Zone-10 N4282355 E671205 Range: 09E  
 Area: Mapping Precision: NDN-SPECIFIC Section: 36 Qtr: E  
 Elevation: 1,000 ft Symbol Type: POLYGON Meridian: M

Location: SOUTH OF S FORK AMERICAN RIVER, ABOUT 0.4 MILE EAST OF SALMON FALLS RD EXTENDING EAST ABOUT 1.5 MI, WEST OF FOLSOM LAKE.  
 Location Detail: HILLS SOUTH OF S FORK AMERICAN BETWEEN SALMON FALLS RD AND KANAKA VALLEY. WITHIN SE 1/4 SE 1/4 SECTION 25, SOUTH HALF OF SW 1/4 SECTION 30, EAST HALF OF SECTION 36, NORTH HALF OF SECTION 31, WEST HALF OF SECTION 6, AND NW 1/4 SECTION 7.  
 Ecological: CHAPARRAL DOMINATED BY ARCTOSTAPHYLOS VISCIDA AND ADENOSTOMA FASCICULATUM. ASSOCIATED WITH ERIOIDICTYON CALIFORNICUM, BACCHARIS PILULARIS SPP. CONSANGUINEA, SALVIA SONOMENSIS, CALYSTEGIA STEBBINSII, CEANOETHUS RODERICKII, ET AL.  
 Threat: RECREATIONAL USE: TARGET SHOOTING, ORVS, PROPOSED HOUSING DEVELOPMENT.  
 General: SEEN 1981-1984, 1987. 682 PLANTS SEEN AT SCATTERED SITES IN 1994. SITE SHOULD BE PRESERVED. RARE ASSOCIATES INCLUDE CALYSTEGIA STEBBINSII, CEANOETHUS RODERICKII, SENECIO LAYNEAE, AND WYETHIA RETICULATA. INCLUDES FORMER OCCURRENCE #17.  
 Owner/Manager: PVT

Occurrence No. 29 Map Index: 42833 EO Index: 42833 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Fair Element: 1997-05-25  
 Origin: Natural/Native occurrence Site: 1997-05-25  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2000-04-26

Quad Summary: Clarksville (3812161/511A), Shingle Springs (3812068/510B)  
 County Summary: El Dorado

Lat/Long: 38.72047° / -121.00059° Township: 10N  
 UTM: Zone-10 N4287655 E673819 Range: 09E  
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 16 Qtr: SW  
 Elevation: 1,400 ft Symbol Type: POINT Meridian: M

Location: IMMEDIATELY WEST OF PINE HILL, ABOUT 0.6 MILE WEST OF PINE HILL SUMMIT, NORTHWEST OF SHINGLE SPRINGS.  
 Location Detail: AT BASE OF WEST SLOPE OF PINE HILL. FROM DEVELOPED AREA OF CHAPEL AND RETREAT, TAKE ROAD TO OCCUPIED MOBILE HOME. ONE PLANT ON THE SOUTH SIDE OF ROAD, ONE PLANT BEHIND MOBILE HOME. MAPPED WITHIN THE NW 1/4 OF THE SW 1/4 OF SECTION 16.  
 Ecological: GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS SPP., ADENOSTOMA FASCICULATUM, AND CEANOETHUS SPP. ON GABBRO SOILS; SOUTHEAST EXPOSURE. SEVERAL LARGE POPULATIONS OF WYETHIA RETICULATA ALSO ON PROPERTY.  
 Threat: DEVELOPMENT AND ROAD WIDENING ARE THREATS.  
 General: 2 PLANTS OBSERVED IN 1997. THE RARE WYETHIA RETICULATA IS ALSO ON THIS PROPERTY.  
 Owner/Manager: PVT

Occurrence No. 35 Map Index: 50450 EO Index: 50450 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Good Element: 1994-06-16  
 Origin: Natural/Native occurrence Site: 1994-06-16  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2003-03-07

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.73278° / -121.03557° Township: 10N  
 UTM: Zone-10 N4288955 E670748 Range: 09E  
 Area: 1.3 acres Mapping Precision: SPECIFIC Section: 07 Qtr: SW  
 Elevation: 900 ft Symbol Type: POLYGON Meridian: M

Location: WEST-FACING SLOPE ABOVE THE CONFLUENCE OF SWEETWATER AND MARTEL CREEKS, NNE OF CLARKVILLE, EAST OF FOLSOM LAKE.  
 Location Detail: HALFWAY UP THE SLOPE. MAPPED WITHIN THE SW 1/4 OF THE SW 1/4 OF SECTION 7.  
 Ecological: ON RESCUE STONY LOAM SOILS, GROWING AMONGST ROCKS AND BOULDERS IN A MODERATELY OPEN AREA OF A GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SPP. VISCIDA, ET AL.

***Hellanthemum suffrutescens***

Bisbee Peak rush-rose

\_\_\_\_\_ Status \_\_\_\_\_

NDDB Element Ranks

Element Code: PDCISQ20FD

\_\_\_\_\_ Other Lists \_\_\_\_\_

Federal: None

Global: G2Q

CNPS List: 3.2

State: None

State: S2.2

\_\_\_\_\_ Habitat Associations \_\_\_\_\_

General: CHAPARRAL

Micro: OFTEN ON SERPENTINE, GABBROIC, OR IONE FORMATION SOILS; IN OPENINGS IN CHAPARRAL. 45-610M.

.Threat: NO THREATS NOTED IN 1994.

General: 3 PLANTS OBSERVED IN 1994. SITE QUALITY IS EXCELLENT, BUT POPULATION IS VERY SMALL. SITE SHOULD BE PROTECTED AS OPEN SPACE.

Owner/Manager: PVT-KANAKA VALLEY RANCH

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**Packera layneae**

Layne's ragwort

<b>Status</b>	<b>NDDB Element Ranks</b>	<b>Element Code: PDA5T8H1V0</b>
Federal: Threatened	Global: G2	Other Lists
State: Rare	State: S2.1	CNPS List: 1B.2

**Habitat Associations**  
 General: CHAPARRAL, CISMONTANE WOODLAND.  
 Micro: ULTRAMAFIC SOIL; OCCASIONALLY ALONG STREAMS. 200-1000M.

Occurrence No. 16	Map Index: 12131	EO Index: 16665	<b>Dates Last Seen</b>	
Occ Rank: Good			Element: 1994-06-16	
Origin: Natural/Native occurrence			Site: 1994-06-16	
Presence: Presumed Extant				
Trend: Unknown			Record Last Updated: 2007-07-10	

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.73977° / -121.03785°	UTM: Zone-10 N4289727 E670533	Area: 4.0 acres	Elevation: 880 ft	Mapping Precision: SPECIFIC	Symbol Type: POLYGON	Township: 10N	Range: 09E	Section: 07	Meridian: M	Qtr: NW
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**Location:** ALONG THE SOUTH-FACING SLOPE BELOW THE SOUTH END OF A HIGH RIDGE NORTH OF CROCKER CREEK.  
**Location Detail:** 1939 COLLECTION FROM "ABOVE SANDBAR IN FORKS OF SWEETWATER CREEK, 2 MILES ABOVE ITS MOUTH, SIERRA FOOTHILLS" ATTRIBUTED TO THIS SITE.  
**Ecological:** ON RESCUE STONY LOAM SOILS, GROWING ON A STEEP SOUTH-FACING SLOPE IN OPENINGS OF A MODERATELY DENSE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE: ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ETC.  
**Threat:** NDNE.  
**General:** 50 PLANTS OBSERVED IN 1994.  
**Owner/Manager:** PVT

Occurrence No. 18	Map Index: 12197	EO Index: 7632	<b>Dates Last Seen</b>	
Occ Rank: Unknown			Element: 1986-XX-XX	
Origin: Natural/Native occurrence			Site: 1986-XX-XX	
Presence: Presumed Extant				
Trend: Unknown			Record Last Updated: 2007-07-19	

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.69518° / -121.00769°	UTM: Zone-10 N4284832 E673263	Radius: 80 meters	Elevation: 1,340 ft	Mapping Precision: SPECIFIC	Symbol Type: POINT	Township: 10N	Range: 09E	Section: 29	Meridian: M	Qtr: NE
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**Location:** ON BASS LAKE ROAD, WEST OF DEER CREEK, JUST EAST OF ROAD TO BASS LAKE.  
**Ecological:** ON RESCUE HEAVILY ERODED SOIL ASSOCIATED WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS.  
**Threat:** ROAD MAINTENANCE IS A THREAT.  
**General:** POPULATION BURNED IN FALL OF 1982, BUT POP. RETURNED. 1973 COLLECTION BY CRAMPTON ATTRIBUTED TO THIS SITE.  
**Owner/Manager:** UNKNOWN

Occurrence No. 18	Map Index: 12198	EO Index: 22483	<b>Dates Last Seen</b>	
Occ Rank: Unknown			Element: 1986-XX-XX	
Origin: Natural/Native occurrence			Site: 1986-XX-XX	
Presence: Presumed Extant				
Trend: Unknown			Record Last Updated: 2007-07-19	

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.68226° / -121.00843°	UTM: Zone-10 N4283406 E673403	Radius: 80 meters	Elevation: 1,360 ft	Mapping Precision: SPECIFIC	Symbol Type: POINT	Township: 10N	Range: 09E	Section: 32	Meridian: M	Qtr: NE
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**Location:** EAST OF BASS LAKE, ON WOODLEIGH COURT AND BASS LAKE ROAD.  
**Ecological:** ON RESCUE HEAVILY ERODED SOIL ASSOCIATED WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS. SOME INDIVIDUALS UNDER MATURE CHAPARRAL NEAR ROAD.  
**Threat:** ROAD MAINTENANCE IS A THREAT.  
**General:** POPULATION REPORTED DESTROYED BY TYLER DUE TO ROAD CONSTRUCTION IN 1982. APPARENTLY REDISCOVERED IN 1988 BY WILSON. PLANT NUMBERS INCREASING IN ERODED AREAS (TYLER, 1985). INCLUDES FORMER OCCURRENCES #20, 22.  
**Owner/Manager:** UNKNOWN

**Packera layneae**

Layne's ragwort

_____ Status _____	NDDB Element Ranks	_____ Element Code: PDA8T9H1V0 _____	_____ Other Lists _____
Federal: Threatened	Global: G2		
State: Rare	State: S2.1		CNPS List: 18.2

\_\_\_\_\_ Habitat Associations \_\_\_\_\_  
 General: CHAPARRAL, CISMONTANE WOODLAND.  
 Micro: ULTRAMAFIC SOIL; OCCASIONALLY ALONG STREAMS. 200-1000M.

Occurrence No. 21	Map Index: 12210	EO Index: 22481	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1986-03-18
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-05-17

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.67693° / -121.00201°	Township: 10N
UTM: Zone-10 N4282820 E673801	Range: 08E
Radius: 80 meters	Section: 33
Elevation: 1,420 ft	Meridian: M
	Qtr: SE

Location: 1 AIRMILE DUE E OF BASS LAKE.  
 Ecological: ON RESCUE HEAVILY ERODED SOIL WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS.  
 Threat: SUBDIVISION ROAD WIDENING A THREAT.  
 General: POPULATION REPORTED TO BE EXTIRPATED BY TYLER IN 1982 DUE TO ROAD WIDENING. APPARENTLY REDISCOVERED BY WILSON IN 1986.  
 Owner/Manager: UNKNOWN

Occurrence No. 38	Map Index: 22131	EO Index: 8138	_____ Dates Last Seen _____
Occ Rank: Fair			Element: 1986-XX-XX
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2001-02-20

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.71774° / -121.02898°	Township: 10N
UTM: Zone-10 N4287302 E671533	Range: 09E
Area: 43.8 acres	Section: 18
Elevation: 1,180 ft	Meridian: M
	Qtr: SE

Location: MARTEL CREEK DRAINAGE, MOSTLY ON HILL (EL. 1381) SOUTH OF MARTEL CREEK, 2.5 MI NORTH OF BASS LAKE, NNE OF CLARKSVILLE.  
 Location Detail: SEVERAL COLONIES SCATTERED NORTH AND SOUTH (MOSTLY SOUTH) OF MARTEL CREEK FROM ABOUT 0.8 TO 1.5 MILES UPSTREAM FROM CONFLUENCE WITH SWEETWATER CREEK, MOSTLY WITHIN THE SE 1/4 OF SECTION 18.  
 Ecological: ASSOCIATES INCLUDE SALVIA SONOMENSIS, WYETHIA RETICULATA, W. BOLANDERI, STYRAX OFFICINALIS, POLYGALA CORNUTA, CEONOTHUS LEMMONII, SWERTIA ALBICAULIS, AND NAVARRERIA FILICAULIS.  
 Threat: MINING IS A POTENTIAL THREAT FOR SITES ON PUBLIC LAND; SOME ROADS AND MINING SCARS, BUT MUCH OF THE AREA IS NOT IMPACTED.  
 General: SEVERAL OTHER SENSITIVE PLANT SPECIES ARE ALSO FOUND IN THIS AREA INCLUDING WYETHIA RETICULATA, CHLOROGALUM GRANDIFLORUM, AND GALIUM CALIFORNICUM SSP. SIERRAE.  
 Owner/Manager: BLM, PVT

Occurrence No. 52	Map Index: 69621	EO Index: 70393	_____ Dates Last Seen _____
Occ Rank: Excellent			Element: 1994-06-16
Origin: Natural/Native occurrence			Site: 1994-06-16
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2007-07-10

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.74622° / -121.03790°	Township: 10N
UTM: Zone-10 N4290442 E670514	Range: 08E
Area: 2.0 acres	Section: 08
Elevation: 1,150 ft	Meridian: M
	Qtr: SW

Location: ALONG THE TOP THIRD OF A GENTLY SLOPING NORTH-TO-SOUTH DRAINAGE FLOWING INTO CROCKER CREEK, SWEETWATER CREEK DRAINAGE.  
 Location Detail: MAPPED WITHIN THE SW 1/4 OF THE SW 1/4 OF SECTION 6.  
 Ecological: ON RESCUE STONY LOAM SOILS, GROWING AN A VERY GENTLY SLOPING SEASONAL DRAINAGE PASSING THROUGH A DENSE AREA OF GABRROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES: ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA.  
 Threat: PROPOSED HOUSING DEVELOPMENT.  
 General: 200 PLANTS OBSERVED IN 1994.  
 Owner/Manager: PVT

***Packera laynese***

Layne's ragwort

Element Code: PDAST6H1V0

_____ Status _____	NODD Element Ranks _____	_____ Other Lists _____
Federal: Threatened	Global: G2	CNPS List: 1B.2
State: Rare	State: S2.1	

\_\_\_\_\_ Habitat Associations \_\_\_\_\_

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: ULTRAMAFIC SOIL; OCCASIONALLY ALONG STREAMS. 200-1000M.

Occurrence No. 53	Map Index: 69622	EO Index: 70394	_____ Date Last Seen _____
Occ Rank: Fair			Element: 1994-05-10
Origin: Natural/Naive occurrence			Site: 1994-05-10
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2007-07-23

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.74257° / -121.02156°	Township: 10N
UTM: Zone-10 N4290058 E871942	Range: 09E
Area: 1.0 acres	Section: 07
Elevation: 1,050 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NE
Symbol Type: POLYGON	

Location: SOUTH OF CROCKER CREEK AND ADJACENT TO THE SOUTHERN END OF KANAKA VALLEY, SOUTHEAST OF MORMON HILL.

Location Detail: AT THE WESTERN BASE OF A WEST FACING SLOPE. MAPPED WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 7.

Ecological: ON SPARSELY VEGETATED RESCUE STONY LOAM SOILS, GROWING AT THE BASE OF A STEEP WEST-FACING SLOPE AT THE INTERFACE BETWEEN A MODERATELY DENSE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY.

Threat: PROPOSED HOUSING DEVELOPMENT.

General: 3 PLANTS OBSERVED BY CRAIG AND FRASER IN 1994.

Owner/Manager: PVT

***Pseudobahia bahiifolia***

Hartweg's golden sunburst

Element Code: PDAST7P010

\_\_\_\_\_ Status \_\_\_\_\_ NDDB Element Ranks \_\_\_\_\_ Other Lists \_\_\_\_\_  
Federal: Endangered Global: G2  
State: Endangered State: S2.1 CNPS List: 1B.1

Habitat Associations

General: VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro: CLAY SOILS, PREDOMINANTLY ON THE NORTHERN SLOPES OF KNOLLS, BUT ALSO ALONG SHADY CREEKS OR NEAR VERNAL POOLS. 15-150M.

Occurrence No. 36 Map Index: 66937 EO Index: 67087 Dates Last Seen \_\_\_\_\_  
Occ Rank: Unknown Element: 1839-05-07  
Origin: Natural/Native occurrence Site: 1839-05-07  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 2006-11-03

Quad Summary: Clarkeville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.73835° / -121.03962° Township: 10N  
UTM: Zone-10 N4289344 E570387 Range: 09E  
Radius: 2/5 mile Mapping Precision: NON-SPECIFIC Section: 07 Qtr: XX  
Elevation: Symbol Type: POINT Meridian: M

Location: FORKS OF SWEETWATER CREEK, 2 MILES ABOVE MOUTH.

Location Detail: MAPPED AS BEST GUESS BY CNDD 2 MILES SE OF WHERE THE MOUTH OF THE CREEK PROBABLY EXISTED IN 1939.

General: 1939 COLLECTION BY CONSTANCE IS THE ONLY SOURCE FOR THIS OCCURRENCE. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

**Sagittaria sanfordii**

Sanford's arrowhead

Element Code: PMAL040Q0

Status \_\_\_\_\_ NDDB Element Ranks \_\_\_\_\_ Other Lists \_\_\_\_\_  
 Federal: None Global: G3  
 State: None State: S3.2 CNPS List: 1B.2

Habitat Associations \_\_\_\_\_  
 General: MARSHES AND SWAMPS.  
 Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No. 64 Map Index: 70039 EO Index: 70894 Dates Last Seen \_\_\_\_\_  
 Occ Rank: Good Element: 2005-05-19  
 Origin: Natural/Naive occurrence Site: 2005-05-18  
 Presence: Presumed Extent Record Last Updated: 2007-09-28  
 Trend: Unknown

Quad Summary: Folsom SE (3812151/511D), Clarksville (3812161/511A)  
 County Summary: El Dorado, Sacramento

Lat/Long: 38.61254° / -121.08590° Township: 09N  
 UTM: Zone-10 N4275518 E666652 Range: 08E  
 Area: Mapping Precision: NON-SPECIFIC Section: 22 Qtr: XX  
 Elevation: 427 ft Symbol Type: POLYGON Meridian: M

Location: TRIBUTARIES TO CARSON CREEK, S OF WHITE ROCK AND E OF MALBY CROSSING, 2 TO 4 AIR MILES SW OF CLARKSVILLE.  
 Location Detail: 3 SEPARATE POPULATIONS EXIST IN SECTIONS 22 AND 27.  
 Ecological: WETLAND SWALE OR EPHEMERAL STREAM CHANNEL HABITATS ON LARGE DEGRADED GRASSLANDS WITH VERNAL POOL COMPLEXES  
 CONVEYING WATERS INTO CARSON CREEK. SOIL SERIES INCLUDE WHITEROCK LOAM AND HICKSVILLE SANDY CLAY LOAM.  
 Threat: ONE POPULATION THREATENED BY RESERVOIR DEVELOPMENT.  
 General: LESS THAN 100 PLANTS OBSERVED IN 2005. NEED MAP DETAIL.  
 Owner/Manager: PVT

**Wyethia reticulata**

El Dorado County mule ears

Element Code: PDAST9X000

Status: \_\_\_\_\_ NDDB Element Ranks: \_\_\_\_\_ Other Lists: \_\_\_\_\_  
 Federal: None Global: G2  
 State: None State: S2.2 CNPS List: 18.2

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.  
 Micro: STONY RED CLAY AND GABBROIC SOILS; OFTEN IN OPENINGS IN GABBRO CHAPARRAL. 180-630M.

Occurrence No. 13 Map Index: 12153 EO Index: 18710 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Unknown Element: 2008-06-24  
 Origin: Natural/Native occurrence Site: 2008-06-24  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2007-07-26

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.71816° / -121.02400° Township: 10N  
 UTM: Zone-10 N4287353 E671789 Range: 09E  
 Area: 12.0 acres Mapping Precision: SPECIFIC Section: 18 Qtr: SE  
 Elevation: 1,100 ft Symbol Type: POLYGON Meridian: M

Location: 1.9 AIR MILES WEST OF PINE HILL, BETWEEN MARTEL AND SWEETWATER CREEKS.  
 Location Detail: FOUR COLONIES IN THE EASTERN HALF OF SECTION 18 AND THE NE 1/4 OF THE NE 1/4 OF SECTION 19.  
 Ecological: ON RESCUE STONY SANDY LOAM IN CHAPARRAL, MOIST AREAS NEAR CREEK. COMMON IN CLEARINGS WHERE THE CHAPARRAL HAD BEEN BULLDOZED.  
 Threat: AREA BEING SUBDIVIDED.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED. THE THREE NORTHERN COLONIES WERE OBSERVED IN 1986. THE SOUTHERNMOST COLONY WAS OBSERVED IN 2006.  
 Owner/Manager: PVT

Occurrence No. 14 Map Index: 51653 EO Index: 51653 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Unknown Element: 1986-XX-XX  
 Origin: Natural/Native occurrence Site: 1986-XX-XX  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2003-06-27

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.71224° / -121.01572° Township: 10N  
 UTM: Zone-10 N4286713 E672523 Range: 09E  
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 20 Qtr: NW  
 Elevation: 1,100 ft Symbol Type: POINT Meridian: M

Location: SWEETWATER CREEK.  
 Location Detail: MAPPED ACCORDING TO MAP DETAIL PROVIDED BY WILSON IN 1986. MAPPED WITHIN THE NE 1/4 OF THE NW 1/4 OF SECTION 20.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED IN 1986. 1893 AND 1894 COLLECTIONS BY CURRAN FROM SWEETWATER CREEK AND 1907 COLLECTION BY SIMPSON FROM SIMPSON'S RANCH ALONG SWEETWATER CREEK ATTRIBUTED TO THIS LOCATION. SWEETWATER CREEK IS TYPE LOCATION.  
 Owner/Manager: UNKNOWN

Occurrence No. 34 Map Index: 51651 EO Index: 51651 Dates Last Seen: \_\_\_\_\_  
 Occ Rank: Fair Element: 1998-06-18  
 Origin: Natural/Native occurrence Site: 1998-06-18  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 2003-06-27

Quad Summary: Clarksville (3812161/511A)  
 County Summary: El Dorado

Lat/Long: 38.70540° / -121.00257° Township: 10N  
 UTM: Zone-10 N4285879 E673883 Range: 09E  
 Area: \_\_\_\_\_ Mapping Precision: NON-SPECIFIC Section: 21 Qtr: SW  
 Elevation: 1,400 ft Symbol Type: POLYGON Meridian: M

Location: NORTHEAST CORNER OF INTERSECTION OF WINCHESTER DRIVE & STARBUCK ROAD, SOUTHWEST OF PINE HILL RESERVE, NE OF CLARKSVILLE.  
 Location Detail: MAPPED ON THE EAST SIDE OF STARBUCK ROAD IN THE GENERAL VICINITY OF WINCHESTER DRIVE (NOT ON TOPO MAP). MAPPED WITHIN THE NW 1/4 OF THE SW 1/4 SECTION 21.  
 Ecological: FOOTHILL WOODLAND DOMINATED BY MIXED OAKS. GRASS UNDERSTORY. RESCUE VERY STONY SANDY LOAM SOIL. WESTERLY EXPOSURE, 5% SLOPE.  
 Threat: DEVELOPMENT. SURROUNDING AREA IS SINGLE FAMILY RESIDENTIAL WITH A GOLF COURSE ACROSS THE ROAD. ANNUAL GRASSES PRESENT.  
 General: 16 INDIVIDUAL PLANTS PLUS A 20 BY 30 FOOT PATCH OF PLANTS OBSERVED BY WILLSON IN 1999. ABUNDANT ANNUAL GRASSES MAKE THIS A LESS THAN IDEAL HABITAT FOR RARE PLANT PROLIFERATION.

***Wyethia reticulata***

El Dorado County mule ears

Element Code: PDASTBX000

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G2	CNPS List: 18.2
State: None	State: S2.2	

\_\_\_\_\_ Habitat Associations \_\_\_\_\_

General: CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro: STONY RED CLAY AND GABBROIC SOILS; OFTEN IN OPENINGS IN GABBRO CHAPARRAL. 180-530M.

Owner/Manager: PVT

**ATTACHMENT D**

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**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008)**

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008)**

An asterisk (\*) indicates a non-native species.

<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<b>AGAVACEAE</b> <i>Agave americana</i>	<b>AGAVE FAMILY</b> American century plant
<b>ALISMATACEAE</b> <i>Alisma plantago-aquatica</i>	<b>WATER-PLANTAIN FAMILY</b> Broad-leaf water plantain
<b>ANACARDIACEAE</b> <i>Pistacia chinensis</i> <i>Toxicodendron diversilobum</i>	<b>SUMAC FAMILY</b> Chinese pistache tree Poison oak
<b>APIACEAE</b> <i>Daucus pusillus</i> <i>Sanicula bipinnatifida</i> <i>Sanicula crassicaulis</i> <i>Scandix pecten-veneris*</i> <i>Torilis arvensis*</i>	<b>CARROT FAMILY</b> American wild carrot Purple sanicle Sanicle Venus' needle Torilis (hedge parsley)
<b>APOCYNACEAE</b> <i>Nerium oleander*</i>	<b>DOGBANE FAMILY</b> Oleander
<b>ARISTOLOCHIACEAE</b> <i>Aristolochia californica</i>	<b>PIPEVINE FAMILY</b> Pipevine
<b>ASCLEPIADACEAE</b> <i>Asclepias cordifolia</i>	<b>MILKWEED FAMILY</b> Purple milkweed
<b>ASTERACEAE</b> <i>Carduus pycnocephalus*</i> <i>Centaurea solstitialis*</i> <i>Chamomilla suaveolens*</i> <i>Filago gallica*</i> <i>Gnaphalium luteo-album*</i> <i>Heterotheca grandiflora</i> <i>Holocarpha virgata</i> <i>Hypochaeris glabra*</i> <i>Lactuca serriola*</i> <i>Leontodon taraxacoides*</i> <i>Madia gracilis</i> <i>Micropus californicus</i> <i>Psilocarphus tenellus</i> <i>Senecio vulgaris*</i>	<b>SUNFLOWER FAMILY</b> Italian thistle Yellow star-thistle Pineapple weed Herba impia Weedy cudweed Telegraph weed Sticky tarweed Smooth cat's-ear Prickly lettuce Hairy hawkbit Slender tarweed Q tips Slender woolly-heads Common groundsel

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008) (Continued)**

An asterisk (\*) indicates a non-native species.

<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<i>Silybum marianum*</i>	Milk thistle
<i>Sonchus asper*</i>	Prickly sowthistle
<i>Tragopogon porrifolius*</i>	Goat's beard
<i>Wyethia angustifolia</i>	Mule ears
<b>BORAGINACEAE</b>	<b>BORAGE FAMILY</b>
<i>Amsinckia menziesii</i>	Rancher's fireweed
<i>Plagiobothrys nothofulvus</i>	Rusty popcorn-flower
<b>BRASSICACEAE</b>	<b>MUSTARD FAMILY</b>
<i>Brassica nigra*</i>	Black mustard
<i>Capsella bursa-pastoris*</i>	Shepherd common purse
<i>Raphanus sativus*</i>	Purple wild radish
<i>Rorippa curvisiliqua</i>	Yellow cress
<i>Rorippa nasturtium-aquaticum</i>	Water cress
<i>Thysanocarpus curvipes</i>	Fringepod
<i>Thysanocarpus radians</i>	Lacepod
<b>CACTACEAE</b>	<b>CACTUS FAMILY</b>
<i>Cylindropuntia species</i>	Cholla
<b>CAPRIFOLIACEAE</b>	<b>HONEYSUCKEL FAMILY</b>
<i>Lonicera interrupta</i>	Chaparral honeysuckle
<i>Sambucus mexicana</i>	Blue elderberry
<b>CARYOPHYLLACEAE</b>	<b>PINK FAMILY</b>
<i>Cerastium glomeratum*</i>	Mouse-ear chickweed
<i>Silene gallica*</i>	Catchfly
<i>Spergularia rubra*</i>	Purple sandspurry
<i>Stellaria media*</i>	Common chickweed
<b>CONVOLVULACEAE</b>	<b>MORNING-GLORY FAMILY</b>
<i>Calystegia species</i>	Morning-glory
<i>Convolvulus arvensis*</i>	Morning glory
<b>CUPRESSACEAE</b>	<b>CYPRESS FAMILY</b>
<i>Calocedrus decurrens</i>	Incense cedar
<b>CYPERACEAE</b>	<b>SEDGE FAMILY</b>
<i>Carex dudleyi</i>	Dudley's sedge
<i>Cyperus eragrostis</i>	Tall flatsedge

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008) (Continued)**

An asterisk (\*) Indicates a non-native species.

<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<i>Eleocharis acicularis</i>	Least spikerush
<i>Eleocharis macrostachya</i>	Creeping spikerush
<b>EUPHORBIACEAE</b>	<b>SPURGE FAMILY</b>
<i>Eremocarpus setigerus</i>	Turkey mullein
<b>FABACEAE</b>	<b>LEGUME FAMILY</b>
<i>Lotus micranthus</i>	Small flowered lotus
<i>Lotus purshianus</i>	Spanish clover
<i>Lupinus nanus</i>	Sky lupine
<i>Medicago polymorpha*</i>	Bur clover
<i>Trifolium dubium*</i>	Shamrock clover
<i>Trifolium glomeratum*</i>	Clover
<i>Trifolium hirtum*</i>	Rose clover
<i>Trifolium microcephalum</i>	Small-head clover
<i>Trifolium subterraneum*</i>	Subterranean clover
<i>Vicia sativa*</i>	Common vetch
<i>Vicia villosa*</i>	Winter vetch
<b>FAGACEAE</b>	<b>OAK FAMILY</b>
<i>Quercus chrysolepis</i>	Canyon live oak
<i>Quercus douglasii</i>	Blue oak
<i>Quercus wislizenii</i>	Interior live oak
<i>Quercus x moreha</i>	Oracle oak
<b>GERANIACEAE</b>	<b>GERANIUM FAMILY</b>
<i>Erodium botrys*</i>	Filaree
<i>Erodium cicutarium*</i>	Filaree
<i>Geranium dissectum*</i>	Cut-leaved geranium
<i>Geranium molle*</i>	Hairy geranium
<i>Geranium retrorsum</i>	New Zealand geranium
<b>HIPPOCASTANACEAE</b>	<b>BUCKEYE FAMILY</b>
<i>Aesculus californica</i>	California buckeye
<b>HYDROPHYLLACEAE</b>	<b>WATERLEAF FAMILY</b>
<i>Nemophila pedunculata</i>	Meadow nemophila
<b>HYPERICACEAE</b>	<b>ST. JOHN'S WORT FAMILY</b>
<i>Hypericum perforatum*</i>	Klamath weed

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008) (Continued)**

An asterisk (\*) indicates a non-native species.

<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<b>JUGLANDACEAE</b>	<b>WALNUT FAMILY</b>
<i>Juglans californica</i>	California black walnut
<i>Juglans regia*</i>	English walnut
<b>JUNCACEAE</b>	<b>RUSH FAMILY</b>
<i>Juncus bufonius</i>	Toad rush
<i>Juncus effusus</i>	Soft rush
<i>Juncus mexicanus</i>	Mexican rush
<i>Juncus xiphioides</i>	Iris-leaf rush
<i>Luzula comosa</i>	Luzula
<b>LAMIACEAE</b>	<b>MINT FAMILY</b>
<i>Mentha spicata*</i>	Spearmint
<i>Scutellaria californica</i>	California skullcap
<i>Stachys albens</i>	White-stem hedgenettle
<b>LILIACEAE</b>	<b>LILY FAMILY</b>
<i>Brodiaea elegans</i>	Harvest brodiaea
<i>Calochortus albus</i>	White globe lily
<i>Chlorogalum pomeridianum</i>	Soap plant
<i>Dichelostemma capitatum</i>	Blue dicks
<i>Dichelostemma multiflorum</i>	Wild hyacinth
<i>Dichelostemma volubile</i>	Twining brodiaea
<i>Triteleia hyacinthina</i>	Hyacinth brodiaea
<i>Triteleia ixioides ssp. scabra</i>	Foothill prettyface
<i>Triteleia laxa</i>	Ithuriel's spear
<b>LYTHRACEAE</b>	<b>LOOSESTRIFE FAMILY</b>
<i>Lythrum hyssopifolia*</i>	Hyssop loosestrife
<b>ONAGRACEAE</b>	<b>EVENING PRIMROSE FAMILY</b>
<i>Clarkia purpurea ssp. quadrivulnera</i>	Winecup clarkia
<i>Clarkia unguiculata</i>	Elegant clarkia
<b>PAPAVERACEAE</b>	<b>POPPY FAMILY</b>
<i>Eschscholzia californica</i>	California poppy
<b>PINACEAE</b>	<b>PINE FAMILY</b>
<i>Pinus sabiniana</i>	Gray pine

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008) (Continued)**

An asterisk (\*) indicates a non-native species.

<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<b>PLANTAGINACEAE</b>	<b>PLANTAIN FAMILY</b>
<i>Plantago lanceolata*</i>	English plantain
<b>POACEAE</b>	<b>GRASS FAMILY</b>
<i>Aegilops triuncialis*</i>	Barbed goatgrass
<i>Aira caryophyllea*</i>	Hairgrass
<i>Avena fatua*</i>	Wild oat
<i>Briza minor*</i>	Little quaking grass
<i>Bromus diandrus*</i>	Ripgut brome
<i>Bromus hordeaceus*</i>	Soft brome
<i>Cortaderia species</i>	Pampas grass
<i>Cynosurus echinatus*</i>	Hedgehog dog-tail grass
<i>Dactylis glomerata*</i>	Orchard grass
<i>Glyceria declinata*</i>	Mannagrass
<i>Hordeum marinum*</i>	Mediterranean barley
<i>Hordeum murinum*</i>	Barley
<i>Lolium multiflorum*</i>	Ryegrass
<i>Melica californica</i>	California melic
<i>Melica torreyana</i>	Torrey's melic
<i>Phleum pratense*</i>	Common Timothy
<i>Poa bulbosa*</i>	Bluegrass
<i>Poa secunda ssp. secunda</i>	Perennial bluegrass
<i>Poa trivialis</i>	Rough bluegrass
<i>Polypogon australis</i>	Chilean rabbitsfoot grass
<i>Sorghum halepense*</i>	Johnson grass
<i>Taeniatherum caput-medusae*</i>	Medusahead grass
<i>Vulpia bromoides*</i>	Brome fescue
<i>Vulpia myuros*</i>	Rat-tail vulpia
<b>POLEMONIACEAE</b>	<b>PHLOX FAMILY</b>
<i>Linanthus bicolor</i>	Linanthus
<i>Navarretia pubescens</i>	Purple navarretia
<b>POLYGONACEAE</b>	<b>BUCKWHEAT FAMILY</b>
<i>Polygonum arenastrum*</i>	Prostrate knotweed
<i>Polygonum hydropiperoides</i>	Swamp smartweed
<i>Rumex crispus*</i>	Curly dock
<i>Rumex pulcher*</i>	Fiddle dock
<b>PORTULACAEAE</b>	<b>PURSLANE FAMILY</b>
<i>Calandrinia ciliata</i>	Red maids

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008) (Continued)**

An asterisk (\*) indicates a non-native species.

<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<i>Claytonia perfoliata</i>	Miner's lettuce
<b>PRIMULACEAE</b>	<b>PRIMROSE FAMILY</b>
<i>Anagallis arvensis*</i>	Scarlet pimpernel
<i>Dodecatheon clevelandii</i>	Shooting star
<i>Trientalis latifolia</i>	Western star flower
<b>PTERIDACEAE</b>	<b>BRAKE FAMILY</b>
<i>Adiantum jordanii</i>	Maidenhair fern
<i>Pentagramma triangularis</i>	Goldenback fern
<b>RANUNCULACEAE</b>	<b>BUTTERCUP FAMILY</b>
<i>Ranunculus aquatilis</i>	White water buttercup
<i>Ranunculus occidentalis</i>	Buttercup
<b>RHAMNACEAE</b>	<b>BUCKTHORN FAMILY</b>
<i>Rhamnus tomentella</i> ssp. <i>tomentella</i>	Hoary coffeeberry
<b>ROSACEAE</b>	<b>ROSE FAMILY</b>
<i>Heteromeles arbutifolia</i>	Toyon
<i>Prunus domestica*</i>	Plum (cultivated)
<i>Prunus dulcis*</i>	Almond (cultivated)
<i>Prunus persica*</i>	Peach (cultivated)
<i>Rosa californica</i>	California rose
<i>Rubus armeniacus*</i>	Himalayan blackberry
<b>RUBIACEAE</b>	<b>MADDER FAMILY</b>
<i>Galium aparine</i>	Goose grass
<i>Galium parisiense*</i>	Wall bedstraw
<b>SALICACEAE</b>	<b>WILLOW FAMILY</b>
<i>Populus fremontii</i>	Fremont's cottonwood
<i>Salix babylonica*</i>	Weeping willow
<i>Salix exigua</i>	Sandbar willow
<i>Salix gooddingii</i>	Goodding's black willow
<i>Salix lasiolepis</i>	Arroyo willow
<b>SAXIFRAGACEAE</b>	<b>SAXIFRAGE FAMILY</b>
<i>Lithophragma affine</i>	Woodland star

**Plant Species Observed On-Site (17 April and 5 and 30 May, 2008) (Continued)**

An asterisk (\*) indicates a non-native species.

**SCROPHULARIACEAE**

**SCROPHULARIACEAE**

*Castilleja attenuata*  
*Kickxia elatine\**  
*Veronica americana*  
*Veronica anagallis-aquatica\**

**COMMON NAME**

**FIGWORT FAMILY**

Valley tassels  
Sharp-leaved fluellin  
American brooklime  
Water speedwell

**TYPHACEAE**

*Typha* species

**CATTAIL FAMILY**

Cattail

**VALERIANACEAE**

*Plectritis ciliosa ssp. ciliosa*

**VALERIAN FAMILY**

Long spurred plectritis

**VITACEAE**

*Vitis californica*

**GRAPE FAMILY**

California wild grape

## **APPENDIX C.2**

### **Initial Arborist Report and Inventory Summary**

**DIAMONTE DEVELOPMENT, LLC**

**MALCOLM-DIXON 113 PROJECT SITE**  
**[Assessor's Parcel No. 067-051-014]**  
**County of El Dorado, California**

***INITIAL ARBORIST REPORT***  
**AND INVENTORY SUMMARY**

Prepared by:

Edwin E. Stirtz, Consulting Arborist  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists  
SIERRA NEVADA ARBORISTS

Wayne R. McKee, Consulting Arborist  
ISA Certified Arborist WE-0959A

May 23, 2006

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**COPYRIGHT STATEMENT**

This consultant's report, dated May 23, 2006, is for the exclusive and confidential use of Diamonte Development, LLC concerning development of the Malcolm-Dixon 113 property [Assessor's Parcel No. 067-051-014] located in the County of El Dorado, California exclusively. Any use of this report, the accompanying Inventory Summary, or portions thereof other than for project review and approval by appropriate governmental authorities shall be subject to and require the written permission of Sierra Nevada Arborists. Unauthorized modification, distribution and/or use of this report, including the accompanying Inventory Summary or portions thereof, is strictly prohibited.

## QUALIFICATION STATEMENT

Sierra Nevada Arborists is a fully insured, Loomis-based arboriculture consulting firm founded in January of 1998 by its Principal, Edwin E. Stirtz. Mr. Stirtz is an ISA Certified Arborist, and a member of the American Society of Consulting Arborists and International Society of Arboriculture. Mr. Stirtz possess in excess of 25 years experience in horticulture and arboriculture, both maintenance and construction, and has spent the last 14 years as a consulting and preservation specialist in the Sacramento region.

Wayne R. McKee is a consulting arborist with 15 years experience in forestry, surveying and arboriculture. Mr. McKee received a B.S. degree in Forestry from Humbolt State University and worked as a Forestry and Surveying Technician for Hunt Surveying and Forestry prior to becoming an ISA Certified Arborist in 1992. Since that time Mr. McKee has been providing consulting arboriculture services in the Sacramento region.

May 23, 2006

Mr. Daniel Chartraw/Mr. Chris LaBarbera  
DIAMONTE DEVELOPMENT, LLC  
18700 Cox Avenue  
Saratoga, California 95070

Re: ***Initial Arborist Report and Inventory Summary:  
Malcolm-Dixon 113 Project Site – County of El Dorado, California***

Dear Mr. Chartraw and Mr. LaBarbera:

During the period May 15-19, 2006, Sierra Nevada Arborists visited the Malcolm-Dixon 113 project site [Assessor's Parcel No. 067-051-014] located in the County of El Dorado, California. The purpose of these site visits was to conduct field inspections to identify, inventory and evaluate the trees located within and overhanging the project boundaries (*excluding the westerly 2/3 of Lot 13, the westerly 1/3 of Lot 16 and the westerly 1/3 of Lot 17*) which met the criteria of the Conservation and Open Space Element of the newly adopted El Dorado County General Plan dated July 19, 2004, a copy of which is enclosed for reference. As you may know, General Plan Policy Objective 7.4.5: Native Vegetation and Landmark Trees includes Policy Subsections 7.4.5.2(A)&(B) which requires an inventory and field identification of any "native oak tree with a single main trunk of at least 6 inches diameter at breast height ("DBH"), or a multiple trunk with an aggregate of at least 10 inches DBH." In conjunction with this task, Sierra Nevada Arborists was asked to prepare an Initial Arborist Report and Inventory Summary suitable for submission to the County of El Dorado as a part of Diamonte Development's development application for the proposed project site.

### **METHODOLOGY**

#### **Visual Inspection Method**

During the period May 15-19, 2006, Sierra Nevada Arborists conducted a visual review from ground level of the trees within and/or overhanging the depicted project boundaries (*excluding the westerly 2/3 of Lot 13, the westerly 1/3 of Lot 16 and the westerly 1/3 of Lot 17*) as referenced on the enclosed Tentative Subdivision Map dated November 30, 2005, which was provided to our office by G.C. Wallace of California for field reference. The trees which met the defined criteria were identified in the field with a round, pre-stamped metal numbering tag backed by blue flagging bearing tag numbers 1-362 which was affixed to the tree's trunk. The numbers utilized in this report and accompanying Inventory Summary correspond to the tree tag which has been affixed to the tree in the field, and those numbers have been rough-plotted on the enclosed copy of the Tentative Subdivision Map for field reference so that the precise location of the trees may be surveyed in the field by a licensed land surveyor for proper depiction on future development plans.

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During our field identification and inventory effort specific data was gathered for each tagged tree including the tree's species, diameter measured at breast height ("DBH"), the tree's dripline radius ("DLR"), and an assessment was made of the tree's root crown, trunk, limbs and foliage. Utilizing this data, the tree's overall structural condition and vigor were assessed ranging from "poor" to "good".<sup>1</sup> In addition, notable characteristics were documented and pre-construction recommendations on a tree-by-tree basis were made which logically followed the observed characteristics noted within the trees at the time of our site visits.

**INVENTORY SUMMARY**

As you will see from the accompanying Inventory Summary, 362 trees totaling 8,029 aggregate diameter inches have been documented within this Initial Report and accompanying Inventory Summary. Composition of the 362 inventoried trees include the following species and accompanying aggregate diameter inches:

SPECIES DIVERSIFICATION		
Interior Live Oak	=	19 trees (492 aggregate diameter inches)
Blue Oak	=	343 trees (7,537 aggregate diameter inches)

**Recommended Removals**

At this time 20 trees have been recommended for removal from the project area due to defects, compromised health and/or structural instability noted at the time of our initial site visits. For reference, the trees which have been recommended for removal due to noted defects, compromised health and/or structural instability are highlighted in green within the accompanying Inventory Summary and are identified in the field as follows:

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)
37	Blue Oak	<i>(Quercus douglasii)</i>		6	7
46	Blue Oak	<i>(Quercus douglasii)</i>		28	30
49	Blue Oak	<i>(Quercus douglasii)</i>		23	24
80	Blue Oak	<i>(Quercus douglasii)</i>		29	30
92	Blue Oak	<i>(Quercus douglasii)</i>		24	28
106	Blue Oak	<i>(Quercus douglasii)</i>	9, 10	19	15
112	Blue Oak	<i>(Quercus douglasii)</i>		9	18
118	Interior Live Oak	<i>(Quercus wislizenii)</i>		27	30
119	Interior Live Oak	<i>(Quercus wislizenii)</i>		34	33
121	Interior Live Oak	<i>(Quercus wislizenii)</i>		23	31

<sup>1</sup> It should be noted that there were no trees observed within the project boundaries which fell within the criteria of a "good" rating. A complete description of the terms and ratings utilized in this Report and accompanying Inventory Summary are found on pages 20-21. 19-1524 G 56 of 314

123	Blue Oak	<i>(Quercus douglasii)</i>	17	20
138	Blue Oak	<i>(Quercus douglasii)</i>	26	31
163	Blue Oak	<i>(Quercus douglasii)</i>	16	24
185	Blue Oak	<i>(Quercus douglasii)</i>	18	23
198	Blue Oak	<i>(Quercus douglasii)</i>	15	16
231	Blue Oak	<i>(Quercus douglasii)</i>	41	29
252	Blue Oak	<i>(Quercus douglasii)</i>	29	29
253	Blue Oak	<i>(Quercus douglasii)</i>	25	27
264	Blue Oak	<i>(Quercus douglasii)</i>	35	48
300	Interior Live Oak	<i>(Quercus wislizenii)</i>	8	9

In addition, many trees within the proposed project boundaries currently exhibit characteristics which either warrant further evaluation (i.e. root collar excavation and analysis, trunk cavity inspection and analysis, aerial inspection and/or evaluation for installation of cable systems and/or through bolts to help support weak primary crotches) and/or a recommendation for periodic monitoring to assess the trees' ongoing structural integrity as further identified within the accompanying Inventory Summary. In addition, several trees within the proposed project area may create a hazard depending upon their proximity to planned development. For ease of reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this time we have not recommended the removal of these trees since development plans have not yet been finalized. It is strongly recommended, however, that further analysis and/or evaluation of these trees be performed by an ISA Certified Arborist prior to making final development decisions, especially if these trees are planned for retention and development, residential and/or pedestrian activities will occur within their fall zone. At this time we recommend that these trees be periodically monitored and thoroughly inspected by an ISA Certified Arborist to keep abreast of the trees' changing conditions and to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

**Construction Impact Assessment**

Please note that while this is a detailed, pre-construction review of the trees within the proposed project boundaries specific canopy and root system impacts cannot be definitively determined until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time; therefore, a complete assessment of construction impacts and specific recommendations to help mitigate for the adverse impacts which may be sustained by contemplated construction activities cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated site development activities. This will be particularly important if homes, residential and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "Fair". The review should also include an assessment of impacts which will be sustained by

Mr. Daniel Chartraw/Mr. Chris LaBarbera  
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those trees which will be retained within the project boundaries, along with recommendations to help reduce adverse impacts of construction on the retained trees, where possible, to a less than significant level. In the meantime, this report provides pre-construction recommendations which logically follow the observed characteristics noted in the trees at the time of our initial field inventory effort, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be retained within the development area.

### **GENERAL COMMENTS AND ARBORIST'S DISCLAIMER**

As you know, a tree permit and/or authorization to develop should be obtained from the County of El Dorado approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the retained trees on the site. Sierra Nevada Arborists will not provide written Certification of Compliance unless we have been provided with a copy of the *approved* site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada Arborists well in advance (at least 72-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, we believe implementation of the general preservation recommendations provided within this report will attempt to reduce adverse impacts of construction on the retained trees, where possible, to a less than significant level. However, implementation of these recommendations should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and *attempt to reduce the risk of living near trees*. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms conditions are often hidden within the tree and below ground and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. *An entity who develops land and/or builds homes and homeowner(s) who purchase a home with a tree in the vicinity should be aware and advised of this Arborists' Disclaimer and be further advised that the developer and the future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or*

Mr. Daniel Chartraw/Mr. Chris LaBarbera  
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*property damage.* Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a seemingly healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,



Edwin E. Stirtz  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists

EES:ks

Enclosures

cc: Ms. Andrea Mayer, G.C. Wallace of California (w/enclosure)

DIAMONTE DEVELOPMENT, LLC  
Malcom-Dixon 113 Project Site  
County of El Dorado, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						AGRONOMY-RECOMMENDED RENEWALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1	Interior Live Oak	<i>(Quercus wislizenii)</i>		23	29	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations, with minor decay; slightly above average amount of deadwood, additional callusing wounds in upper canopy; no obvious decay at this time	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
2	Blue Oak	<i>(Quercus douglasii)</i>		26	41	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
3	Blue Oak	<i>(Quercus douglasii)</i>		35	38	Poor to fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Suspicious deformities around root collar in various locations, leans west, above average amount of deadwood, girdling chain on 9-inch scaffold, west side	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
4	Blue Oak	<i>(Quercus douglasii)</i>		25	30	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Root crown partially buried on east side from fill for adjacent dam; exfoliating bark on lower trunk, various locations, possible vascular disease; leans west; above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
5	Blue Oak	<i>(Quercus douglasii)</i>		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
6	Blue Oak	<i>(Quercus douglasii)</i>		31	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
7	Blue Oak	<i>(Quercus douglasii)</i>		32	40	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
8	Blue Oak	<i>(Quercus douglasii)</i>		27	34	Poor	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wound, east side, to 1' above grade; minor decay; one-sided west; above average amount of deadwood	<i>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation</i>
9	Blue Oak	<i>(Quercus douglasii)</i>		24	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
10	Blue Oak	<i>(Quercus douglasii)</i>		22	28	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
11	Blue Oak	<i>(Quercus douglasii)</i>		20	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
12	Blue Oak	<i>(Quercus douglasii)</i>		27	31	Fair	Fair	Fair	Fair	Fair	Fair		One-sided southeast; slightly above average amount of deadwood	Clean out crown
13	Blue Oak	<i>(Quercus douglasii)</i>		29	30	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Several failures and excessive amount of deadwood throughout upper canopy; one-sided west	<i>Perform aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following aerial inspection</i>
14	Blue Oak	<i>(Quercus douglasii)</i>		27	31	Fair	Fair	Fair	Fair	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
15	Blue Oak	<i>(Quercus douglasii)</i>		23	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
16	Blue Oak	<i>(Quercus douglasii)</i>		20	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
17	Blue Oak	<i>(Quercus douglasii)</i>		19	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
18	Blue Oak	<i>(Quercus douglasii)</i>		18	27	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		At least two failures with remaining stubs and some nesting cavities in larger limbs; above average amount of deadwood	Clean out crown
19	Blue Oak	<i>(Quercus douglasii)</i>		21	29	Fair	Fair	Fair	Fair	Fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
20	Blue Oak	<i>(Quercus douglasii)</i>		23	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
21	Blue Oak	<i>(Quercus douglasii)</i>		26	31	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
22	Blue Oak	<i>(Quercus douglasii)</i>		26	37	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
23	Blue Oak	<i>(Quercus douglasii)</i>		18	24	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
24	Blue Oak	<i>(Quercus douglasii)</i>		18	18	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
25	Blue Oak	<i>(Quercus douglasii)</i>		12	13	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
26	Blue Oak	<i>(Quercus douglasii)</i>		35	36	Fair	Fair	Poor to fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
27	Interior Live Oak	<i>(Quercus wislizenii)</i>		27	39	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
28	Interior Live Oak	<i>(Quercus wislizenii)</i>	12, 16	28	27	Fair	Fair	Fair	Fair	Fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
29	Interior Live Oak	<i>(Quercus wislizenii)</i>		16	40	Poor	Poor	Poor to fair	Fair	Poor	Fair		Callusing basal/lower trunk wound/cavity, south side, where secondary main stem failed toward south, remaining stem is one-sided north, above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>

DIAMONTE DEVELOPMENT, LLC  
Malcom-Dixon 113 Project Site  
County of El Dorado, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED REMOVALS (feet)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
30	Interior Live Oak	( <i>Quercus wislizenii</i> )		14	26	Fair	Fair	Fair	Fair	Fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
31	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
32	Blue Oak	( <i>Quercus douglasii</i> )		14	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
33	Interior Live Oak	( <i>Quercus wislizenii</i> )	21, 23	44	32	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds with minor defects, various locations; fungal fruiting body present just below primary crotch, northeast side; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
34	Blue Oak	( <i>Quercus douglasii</i> )		12	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
35	Blue Oak	( <i>Quercus douglasii</i> )		19	36	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
36	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
37	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Poor	Poor	Poor	Poor	Poor	6	Tree is 90% dead	<b>Recommend removal due to noted defects</b>
38	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Fair	Fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
39	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
40	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
41	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
42	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Fair	Fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
43	Blue Oak	( <i>Quercus douglasii</i> )		27	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
44	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
45	Blue Oak	( <i>Quercus douglasii</i> )		31	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
46	Blue Oak	( <i>Quercus douglasii</i> )		28	30	Poor	Poor	Poor	Fair	Poor	Fair	28	Callusing basal/lower trunk wound, west side, to 2' above grade; minor to moderate interior decay suspected; approximately one-half of tree failed at old primary crotch, 9' above grade with remaining portion of stem being compromised; one-sided east	<b>Recommend removal due to noted defects</b>
47	Blue Oak	( <i>Quercus douglasii</i> )		25	28	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
48	Blue Oak	( <i>Quercus douglasii</i> )		30	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
49	Blue Oak	( <i>Quercus douglasii</i> )		23	24	Fair	Poor	Poor to fair	Fair	Poor	Fair	23	Callusing lower trunk cavity, west side, 1' to 3' above grade; moderate interior decay; additional callusing cavity through primary crotch with moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
50	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, south side; minor interior decay suspected; slightly above average amount of deadwood	Clean out crown
51	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Failure of large lateral, northwest side, 13' above grade; no obvious decay at this time	<b>Perform aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following aerial inspection</b>
52	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
53	Blue Oak	( <i>Quercus douglasii</i> )		27	39	Fair	Fair	Fair	Fair	Fair	Fair		Two or three nesting cavities in upper scaffolds; slightly above average amount of deadwood	Clean out crown
54	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
55	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
56	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
57	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
58	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing/callused lower trunk wounds, east side; possible interior decay; leans west, above average amount of deadwood	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>
59	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
60	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Excessive amount of deadwood; slightly sparse foliage	Clean out crown
61	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
62	Blue Oak	( <i>Quercus douglasii</i> )		26	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
63	Blue Oak	( <i>Quercus douglasii</i> )		25	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

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INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
64	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
65	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; slightly above average amount of deadwood	Clean out crown
66	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
67	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
68	Blue Oak	( <i>Quercus douglasii</i> )		28	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
69	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
70	Blue Oak	( <i>Quercus douglasii</i> )		21	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
71	Blue Oak	( <i>Quercus douglasii</i> )		20	30	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
72	Blue Oak	( <i>Quercus douglasii</i> )		24	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; slightly above average amount of deadwood	Clean out crown
73	Blue Oak	( <i>Quercus douglasii</i> )		24	34	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
74	Blue Oak	( <i>Quercus douglasii</i> )		26	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
75	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
76	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Fair	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
77	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
78	Blue Oak	( <i>Quercus douglasii</i> )		27	31	Fair	Poor	Poor to fair	Fair	Poor	Fair		Callusing split through primary crotch beginning 8' above grade with obvious callus roll down to 3' above grade; above average amount of deadwood	Clean out crown; install through bolts and cable system to help support primary crotch
79	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
80	Blue Oak	( <i>Quercus douglasii</i> )		29	30	Poor	Poor	Poor	Fair	Poor	Fair	29	Callusing basal/lower trunk wounds/cavities to 12' above grade with significant decay, south side; above average amount of deadwood; one-sided north	Recommend removal due to noted defects
81	Blue Oak	( <i>Quercus douglasii</i> )		22	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
82	Blue Oak	( <i>Quercus douglasii</i> )		22	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
83	Blue Oak	( <i>Quercus douglasii</i> )		28	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
84	Blue Oak	( <i>Quercus douglasii</i> )		28	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
85	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
86	Blue Oak	( <i>Quercus douglasii</i> )		29	40	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
87	Blue Oak	( <i>Quercus douglasii</i> )		27	32	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Several failures in upper canopy; slightly above average amount of deadwood; slightly sparse foliage	Clean out crown
88	Blue Oak	( <i>Quercus douglasii</i> )		29	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
89	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Fair	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
90	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Fair	Fair	Fair		Embedded wire in lower trunk; slightly above average amount of deadwood	Cut wire at trunk; clean out crown
91	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
92	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Poor	Poor	Poor	Fair	Poor	Fair	24	Callusing basal/lower trunk wound/cavity to 4' above grade with significant decay; severe sap sucker damage and exfoliating bark on lower trunk; above average amount of deadwood; profuse sprout growth on large wood	Recommend removal due to noted defects
93	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
94	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
95	Blue Oak	( <i>Quercus douglasii</i> )		33	40	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suspicious bark deformation and exfoliation in various areas on lower trunk, sounding indicates potential hollowing, several defects in upper scaffolds	Perform trunk cavity and aerial inspections to further assess structural stability and potential for hazard; provide further recommendations following trunk cavity and aerial inspections
96	Blue Oak	( <i>Quercus douglasii</i> )		20	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
97	Blue Oak	( <i>Quercus douglasii</i> )		20	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
98	Blue Oak	( <i>Quercus douglasii</i> )		19	32	Fair	Fair	Fair	Fair	Fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
99	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
100	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
101	Blue Oak	( <i>Quercus douglasii</i> )		20	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
102	Blue Oak	( <i>Quercus douglasii</i> )		23	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
103	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Fair	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown

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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ADDITIONAL RECOMMENDED REMOVALS (feet)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
104	Blue Oak	( <i>Quercus douglasii</i> )		21	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
105	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
106	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	15	Poor	Poor	Poor to fair	Fair	Poor	Fair	19	Callusing basal/lower trunk cavities, south side; moderate decay; above average amount of deadwood	Recommend removal due to noted defects
107	Blue Oak	( <i>Quercus douglasii</i> )		26	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
108	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
109	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
110	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
111	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Fair	Fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
112	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair	9	Callusing basal/lower trunk cavity to 1' above grade, south side; moderate decay; leans south; above average amount of deadwood	Recommend removal due to noted defects
113	Blue Oak	( <i>Quercus douglasii</i> )		23	35	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
114	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing/callused basal/lower trunk wounds, primary on the north side; possible interior decay suspected; slightly above average amount of deadwood	Perform trunk cavity inspection to further assess structural stability and potential for hazard; provide further recommendations following trunk cavity inspection
115	Blue Oak	( <i>Quercus douglasii</i> )		28	38	Fair	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Two to three failures of large scaffolds in upper canopy; excessive amount of small deadwood throughout upper canopy; slightly sparse foliage; some minor sprout growth on larger wood; minor mistletoe infestation	Clean out crown, recommend annual inspection by an ISA Certified Arborist
116	Blue Oak	( <i>Quercus douglasii</i> )		39	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
117	Interior Live Oak	( <i>Quercus wislizenii</i> )	4, 6	10	8	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
118	Interior Live Oak	( <i>Quercus wislizenii</i> )		27	30	Poor	Poor	Poor to fair	Fair	Poor	Fair	27	Callusing basal/lower trunk cavity to 8' above grade with significant decay; in excessive of 35% of trunk is absent on north side	Recommend removal due to noted defects
119	Interior Live Oak	( <i>Quercus wislizenii</i> )		34	33	Poor	Poor	Poor	Poor	Poor	Poor	34	Basal/lower trunk cavity to 6' above grade, southeast side, with significant decay; leans north; excessive amount of large deadwood; significant twig dieback, sparse foliage	Recommend removal due to noted defects
120	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; minor interior decay suspected; leans southwest, above average amount of deadwood	Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation
121	Interior Live Oak	( <i>Quercus wislizenii</i> )		23	31	Poor	Poor	Poor	Fair	Poor	Fair	23	Callusing basal/lower trunk wounds with moderate decay, various locations; several large failures of scaffolds throughout upper canopy; above average amount of deadwood; slightly sparse foliage	Recommend removal due to noted defects
122	Blue Oak	( <i>Quercus douglasii</i> )		27	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
123	Blue Oak	( <i>Quercus douglasii</i> )		17	20	Poor	Poor	Poor to fair	Fair	Poor	Fair	17	Callusing basal/lower trunk wound, southwest side, to 10' above grade with significant decay; one-sided northeast	Recommend removal due to noted defects
124	Blue Oak	( <i>Quercus douglasii</i> )		20	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
125	Blue Oak	( <i>Quercus douglasii</i> )		24	35	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
126	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
127	Interior Live Oak	( <i>Quercus wislizenii</i> )	19, 23	42	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
128	Interior Live Oak	( <i>Quercus wislizenii</i> )	8, 11, 12	31	32	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
129	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
130	Interior Live Oak	( <i>Quercus wislizenii</i> )	12, 13	25	24	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
131	Interior Live Oak	( <i>Quercus wislizenii</i> )	10, 12, 21	43	32	Fair	Fair	Fair	Fair	Fair	Fair		Forks slightly above grade; above average amount of deadwood	Clean out crown

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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (Inches)	TOTAL DBH (Inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED REMOVALS (Inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
132	Blue Oak	( <i>Quercus douglasii</i> )		27	35	Fair	Fair	Fair	Fair	Fair	Fair		TREE IS LOCATED APPROXIMATELY 1' OF THE NORTH PROPERTY LINE; slightly above average amount of deadwood	Clean out crown
133	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
134	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
135	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Poor to fair	Fair	Fair	Fair		Moderate mistletoe infestation; above average amount of deadwood	Clean out crown
136	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
137	Blue Oak	( <i>Quercus douglasii</i> )		24	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
138	Blue Oak	( <i>Quercus douglasii</i> )		26	31	Poor	Poor	Poor to fair	Fair	Poor	Fair	26	Callusing basal cavity, north side; moderate interior decay; callusing trunk wound/cavity, northeast side, through center of primary crotch from 6' to 12' above grade with significant interior decay; large laterals on either side of split	Recommend removal due to noted defects
139	Blue Oak	( <i>Quercus douglasii</i> )		26	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
140	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callused bulge, south side, 3' above grade where it appears that a secondary stem died/failed some time in the past; leans north, above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
141	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
142	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
143	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
144	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
145	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
146	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Poor to fair	Fair	Poor to fair	Poor to fair		Sparse foliage; above average amount of deadwood	Clean out crown
147	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
148	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Leans northwest; above average amount of deadwood; slightly sparse foliage	Clean out crown
149	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
150	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
151	Blue Oak	( <i>Quercus douglasii</i> )		24	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
152	Blue Oak	( <i>Quercus douglasii</i> )		15	19	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
153	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
154	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Fair	Fair	Fair		Callused bulge, north side, to 18-inches above grade at point of previous limb failure/die back; slightly above average amount of deadwood	Clean out crown
155	Blue Oak	( <i>Quercus douglasii</i> )		32	43	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk gun shot wounds, various locations, some minor decay; several large dead/failed limbs in upper canopy; some smaller deadwood	Clean out crown, recommend annual inspection by an ISA Certified Arborist
156	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
157	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
158	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Fair	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
159	Blue Oak	( <i>Quercus douglasii</i> )		32	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
160	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
161	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
162	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
163	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	16	Leans north; moderate to significant callusing wounds on upper trunk and scaffold limbs with nesting cavities	Recommend removal due to noted defects
164	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Fair	Fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
165	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
166	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
167	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
168	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Fair	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
169	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown

DIAMONTE DEVELOPMENT, LLC  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED RENEWALS (check)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
170	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided north; above average amount of deadwood	Clean out crown
171	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided northwest; above average amount of deadwood	Clean out crown
172	Blue Oak	( <i>Quercus douglasii</i> )		28	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
173	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided southwest; above average amount of deadwood	Clean out crown
174	Blue Oak	( <i>Quercus douglasii</i> )		16	29	Fair	Fair	Fair	Fair	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
175	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
176	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
177	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
178	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
179	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Fair	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
180	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
181	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Fair	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
182	Blue Oak	( <i>Quercus douglasii</i> )		17	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
183	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
184	Blue Oak	( <i>Quercus douglasii</i> )		22	41	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans east; callusing bullet wounds to lower trunk, north side; minor decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
185	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Poor	Poor	Fair	Poor	Fair	18	Callusing trunk wound, north side, where approximately 1/3 of upper canopy failed compromising 1/3 of lower trunk; leans south	<i>Recommend removal due to noted defects</i>
186	Blue Oak	( <i>Quercus douglasii</i> )		22	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
187	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
188	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
189	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Fair	Fair	Fair		Minor to moderate mistletoe infestation; above average amount of deadwood	Clean out crown
190	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
191	Blue Oak	( <i>Quercus douglasii</i> )		9	8	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
192	Blue Oak	( <i>Quercus douglasii</i> )		12	10	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
193	Blue Oak	( <i>Quercus douglasii</i> )		14	13	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
194	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
195	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
196	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Fair	Fair	Fair	Fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
197	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
198	Blue Oak	( <i>Quercus douglasii</i> )		15	16	Fair	Poor	Poor to fair	Fair	Poor	Fair	15	Callusing trunk wound/cavity 5' to 8' above grade with significant interior decay; one-sided northwest; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
199	Blue Oak	( <i>Quercus douglasii</i> )		22	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
200	Blue Oak	( <i>Quercus douglasii</i> )		26	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
201	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
202	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
203	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
204	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
205	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Fair	Fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
206	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
207	Blue Oak	( <i>Quercus douglasii</i> )		20	23	Fair	Fair	Poor to fair	Poor to fair	Fair	Poor to fair		Moderate sprout growth on large wood; moderate to significant mistletoe infestation; above average amount of deadwood	Clean out crown
208	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown

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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ABSCISS-RECOMMENDED REMOVALS (feet)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
209	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
210	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
211	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
212	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
213	Blue Oak	( <i>Quercus douglasii</i> )		15	18	Fair	Fair	Poor	Poor to fair	Fair	Poor to fair		Sparse foliage; above average amount of deadwood	Clean out crown
214	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
215	Blue Oak	( <i>Quercus douglasii</i> )		12	14	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
216	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
217	Blue Oak	( <i>Quercus douglasii</i> )		17	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
218	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
219	Blue Oak	( <i>Quercus douglasii</i> )		23	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
220	Blue Oak	( <i>Quercus douglasii</i> )		19	33	Fair	Fair	Fair	Fair	Fair	Fair		Minor mistletoe infestation; slightly above average amount of deadwood	Clean out crown
221	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
222	Blue Oak	( <i>Quercus douglasii</i> )		19	19	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
223	Blue Oak	( <i>Quercus douglasii</i> )		20	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
224	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
225	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Poor to fair	Fair	Fair	Fair		Minor mistletoe infestation	Clean out crown
226	Blue Oak	( <i>Quercus douglasii</i> )		29	33	Fair	Fair	Fair	Fair	Fair	Fair		Some sprout growth on large wood; slightly above average amount of deadwood	Clean out crown
227	Blue Oak	( <i>Quercus douglasii</i> )		29	45	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
228	Blue Oak	( <i>Quercus douglasii</i> )		27	40	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
229	Blue Oak	( <i>Quercus douglasii</i> )		32	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
230	Blue Oak	( <i>Quercus douglasii</i> )		33	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
231	Blue Oak	( <i>Quercus douglasii</i> )		41	29	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair	41	Approximately one-half of the tree failed at 8' above grade in the past; entire center of trunk is hollow to 7' above grade; remaining portion of tree leans toward south	Recommend removal due to noted defects
232	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
233	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
234	Blue Oak	( <i>Quercus douglasii</i> )		25	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
235	Blue Oak	( <i>Quercus douglasii</i> )		28	34	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
236	Blue Oak	( <i>Quercus douglasii</i> )		23	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
237	Blue Oak	( <i>Quercus douglasii</i> )		27	39	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
238	Blue Oak	( <i>Quercus douglasii</i> )		31	46	Fair	Fair	Poor to fair	Fair	Fair	Fair		Two limb failures, north side – one leaving 4' stub and the other leaving a small callusing wound on northerly primary, no obvious decay at this time	Clean out crown; recommend annual inspection by an ISA Certified Arborist
239	Blue Oak	( <i>Quercus douglasii</i> )		30	32	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Inherently weak primary crotch with minor embedded bark; above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
240	Blue Oak	( <i>Quercus douglasii</i> )		38	40	Fair	Fair	Poor to fair	Fair	Fair	Fair		Excessive amount of deadwood	Clean out crown
241	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Large callusing cavity, northwest primary, 7' to 10' above grade with interior hollowing likely extending into lower trunk; above average amount of deadwood	None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT
242	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
243	Blue Oak	( <i>Quercus douglasii</i> )		25	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Secondary stem and large scaffold failures, west side; leans north and east; above average amount of deadwood	None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT
244	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
245	Blue Oak	( <i>Quercus douglasii</i> )		31	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
246	Blue Oak	( <i>Quercus douglasii</i> )		23	40	Fair	Fair	Fair	Fair	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
247	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
248	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
249	Blue Oak	( <i>Quercus douglasii</i> )		26	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

DIAMONTE DEVELOPMENT, LLC  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
360	Blue Oak	<i>(Quercus douglasii)</i>		39	45	Fair	Fair	Fair	Fair	Fair	Fair		DIAMETER AND DRIPLINE MEASUREMENTS ARE ESTIMATED. TREE INACCESSIBLE DUE TO YARD FENCE WITH DOGS. ASSESSMENTS ARE FOR PORTIONS OF TREE WHICH WERE VISIBLE FROM THE EAST SIDE INCLUDING 2/3 OF LOWER TRUNK AND UPPER CANOPY; large tree fort in canopy which may be obscuring potential cavities and/or other defects	If planned for retention, perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard, provide further recommendations following root collar excavation and aerial inspection
361	Blue Oak	<i>(Quercus douglasii)</i>		34	40	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans southwest; minor mistletoe infestation; slightly above average amount of deadwood	Clean out crown
362	Blue Oak	<i>(Quercus douglasii)</i>		22	25	Fair	Poor	Fair	Fair	Poor	Fair		Callusing lower trunk wound, southeast side, 1' to 2' above grade; no obvious decay at this time; callused trunk wound, northeast side, 3' above grade; some fluxing noted at point of old limb shed/removal; interior decay suspected; slightly above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>

<b>TOTAL INVENTORIED TREES = 362 Trees (8,029 aggregate diameter inches)</b>
<b>TOTAL DEFECT REMOVALS = 20 Trees (452 diameter inches)</b>
<b>PRECAUTIONARY TREES HIGHLIGHTED FOR REFERENCE</b>

## **GENERAL PRESERVATION RECOMMENDATIONS**

The following information is provided in an effort to protect those trees which may be impacted by construction within the project site. It should be noted that these recommendations are generic in nature. As plans are developed and refined, a more detailed evaluation of tree impacts and/or removals should be made by an ISA Certified Arborist. At that time specific preservation recommendations may be made for individual trees within the project site.

### **MITIGATIVE OVERVIEW**

In order to afford the greatest potential for tree preservation during construction, there are general guidelines to provide this protection. The critical root zone area for a tree should include the dripline radius measurement taken from the tree trunk to the tip of the farthest reaching branch plus one foot. In some circumstances, such as with a one-sided tree, this measurement could be somewhat skewed. In these situations, the Project Arborist should determine the critical root zone area. Generally, encroachments should be held to no more than 20% of the critical root zone area where potential root damage could be moderate or significant. In limited situations, encroachment exceeding 20% of the critical root zone area may be possible provided that potential root damage is not severe. The critical root zone area should be fenced prior to any activities on the site and should remain in place throughout construction.

Canopy impacts can also pose a detriment to preserved trees. Frequently overlooked are conflicts between low-hanging tree branches and necessary clearance beneath a tree for construction equipment or home building purposes. Canopy impacts should also be maintained at 20% or less.

### **PAD GRADING MITIGATIVE MEASURES**

#### **Grade Cuts.**

Cuts within a dripline of a tree should be maintained at less than 20% of the critical root zone area. Grade cuts should be supervised by the Project Arborist and any damaged roots encountered should be root pruned and properly treated as soon as possible after excavation. Cut faces which will be exposed for more than 2-3 days during cool temperatures or 1 day during warm weather should be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months) or as directed by the Project Arborist.

#### **Grade Fills.**

Fill materials less than 1 foot in depth and encroaching less than 20% into the critical root zone area should not require special mitigative measures. Should fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems installed as directed by the Project Arborist may serve to mitigate the presence of the fill materials.

Should it be necessary to build fill materials on two or three sides of a tree the use of retaining walls may reduce encroachment and the degree of fill beneath the tree. It is critical to provide for drainage away from the critical root zone area of the tree -- particularly when considering heavy winter rainfalls. Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two possible options.

### **Structure Encroachment.**

In some cases it may be necessary for a proposed structure to encroach into the critical root zone area. Again, this encroachment should be maintained at less than 20%. In this situation, a slab foundation with an aeration system installed beneath the slab and footings excavated by hand may provide adequate root protection. Where tree roots tend to be shallow, even a hand-excavated footing can be detrimental. In this situation, a "post-tension" type slab may minimize root damage. If it is necessary for encroachment to exceed 20%, raised floor construction with a grade-beam type foundation footing may be a viable option.

When evaluating encroachment from a proposed structure the structure height and tree branch conflicts are critical to evaluate in order to ensure that no more than 20% of the tree's canopy requires removal.

## **STREET AND UTILITY MITIGATIVE MEASURES**

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

### **Dry Utilities.**

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

### Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require that trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

### Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

### CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives prior to construction and following staking may result in preservation of trees which may have previously appeared to require removal on the plans.

## DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

- Tree Number: Corresponds to aluminum tag attached to the tree.
- Species Identification: Scientific and common species name.
- Diameter ("DBH"): This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
- Dripline radius ("DLR") Measurement of the tree's dripline from the trunk to the farthest most branch tip.
- Protected Zone ("PZR") An irregular circle around a protected tree equal to the protected tree's dripline plus 1 foot.
- Root Crown: Assessment of the root crown area located at the base of the trunk of the tree at soil level.
- Trunk: Assessment of the tree's main trunk from ground level generally to the point of the primary crotch structure.
- Limbs: Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.
- Foliage: Tree's leaves.
- Overall Condition: Describes overall condition of the tree in terms of structure and vigor.
- Recommendation: Specific maintenance requirements.
- (?): Occasionally some portion of the tree may be obscured from visual inspection due to the presence of dense climbing vines such as ivy, etc. which, during the course of inspection for the preliminary arborist report, prevented an evaluation with certainty. In these cases, should a tree with an (?) be significant and in a location where it may be preserved on site, it would be prudent to remove any obstructions and perform further evaluation.

**GOOD** - A tree in this category has no trunk or root crown cavities or injuries; there is no indication of hollowness; no foreign objects are embedded in its structure; the root crown is above grade; there is no decay present except for small stubs; the structure is strong; the trunk is tapers; the bark thickness is normal; there is no fluxing; no fungus is evident; there is a below average amount of dead limbs and twigs present which is normal for the size and age of the species; there is no co-dominant branching present; there are no large callused areas and any small callusing present is vigorous and intact; there are no abnormally heavy insect infestations; the growth rate is and has been average or above; limb weight is not excessive; buds are normal size and viable; the leaf size, color, and density is normal or better; and barring any unforeseen negative effects, the life expectancy should exceed thirty years.

**FAIR** - There is no decay or indications of large hollow areas in the large limbs, root crown, or trunk; a few small callused-over foreign objects, e.g., nails, may be present, the structure is strong; no fungus is evident other than small saprophytes on exposed wood; some small, callusing injuries may be present, some small limbs may be dead and decaying but callus is forming at their base; some excessive limb weight may exist; there may be some minor fluxing; the amount of dead limbs and twigs present is within the normal range; some large callused areas may be present; some small cavities and areas of decay may be present; the growth rate is average or slightly below average; and some leaf size, color, and density may vary.

**POOR** - Significant cavities, dead areas, and decay may be present; the tree is actually defective; fungus fruiting bodies may be present; the amount of dead limbs and twigs is far above normal; major co-dominant branching with embedded bark may be present; buds are small and some may not be viable; leaves may be below average size and may be abnormal in color; significant pest damage may be present; and the predicted structural life and/or viability is less than ten years.

The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both.

**CROWN CLEAN OUT:** This shall consist of the removal of all dead, dying, diseased, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance.

**SUBSURFACE LIQUID SOIL INJECTION/DEEP ROOT FERTILIZATION (D.R.F.):** A method employed to induce vigor and stimulate new root growth. This is used as a means of feeding a large tree, as well as deep watering at the same time. Water soluble fertilizers are mixed in water and hydraulically pumped with a probe into the ground, delivering water and nutrients directly to the root zone, allowing for uptake from the tree. In this way, vigor can be improved and new root growth stimulated.

## **APPENDIX C.3**

### **Jurisdictional Wetland Delineation & Biological Resources Assessment (2015)**

# **Jurisdictional Wetland Delineation & Biological Resources Assessment**

For the

**The Vineyards at El Dorado Hills**

**(APN 126-10-024)**

**Malcom Dixon Road, El Dorado Hills  
El Dorado County, California**

*Prepared For:*

**Omni/Orbis Financial  
1260 41st Ave., Suite O  
Capitola CA 95010**

October 9, 2015

*Prepared By*

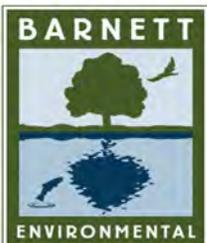
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## APPENDICES

Appendix A.	Plant Species Observed (2015)
Appendix B.	Wetland Delineation Data Sheets
Appendix C.	CNDDDB Map and Table

## 1.0 Introduction

Barnett Environmental has updated ECORP Consulting's 2008 *Wetland Delineation for Diamante Estates'* property (APN: 126-10-024), as well as performing a general *Biological Resources Assessment* on behalf of the current owners (Omni/Orbis Financial).

The approximately 100-acre (now called Vineyard Estates) property is located north of Malcom Dixon Road in El Dorado Hills, California, in Section 14 of Township 10 North, Range 8 East, of the Clarksville, California 7.5-minute USGS quadrangle (Figure 1). The Study Area is geographically situated at approximately 38°43'10" North latitude and 121°4'00" West longitude, within the South Fork American River Watershed (Hydrologic Unit Code 18020129).

Our additional (to a wetland delineation) assessment of the Study Area's biological resources:

- Identifies and describes the biological communities present on the project site;
- Records plant and animal species observed on the project site;
- Evaluates and identifies sensitive resources and special-status plant and animal species that may occur on the site and could be affected by project activities; and
- Provide conclusions and recommendations;

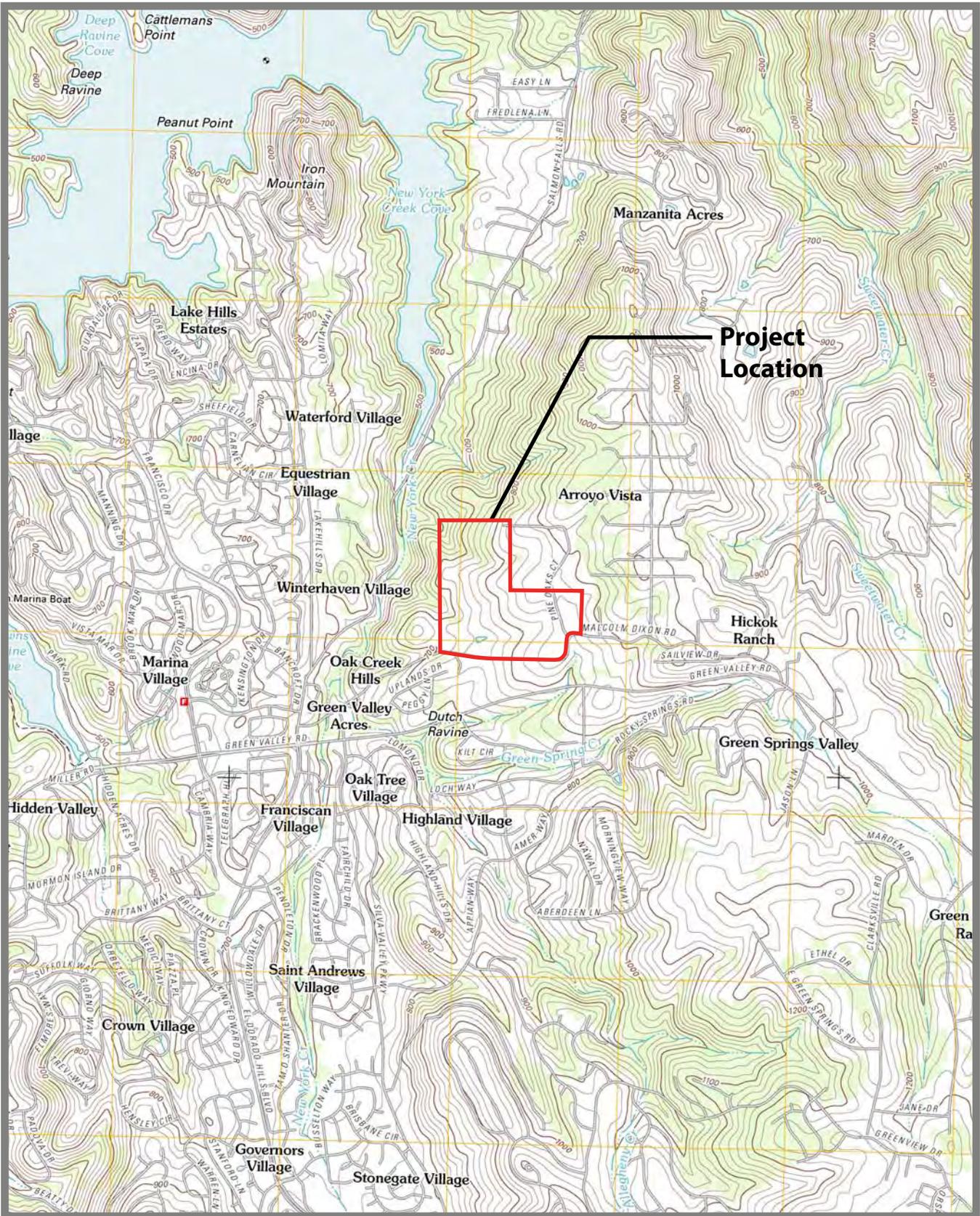
## 2.0 Methodology

We updated ECORP Consulting's 2008 wetland delineation of this property in accordance with the 1987 U.S. Army Corps of Engineers *Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* and prepared the current report in accordance with the November 2001 *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* notice issued by the Regulatory Branch of the Sacramento District, U.S. Army Corps of Engineers (Corps).

A Level 3, routine onsite determination, as defined in the 1987 Wetland Delineation Manual, evaluated the three parameters that identify and delineate the boundaries of jurisdictional wetlands including: (1) the dominance of wetland vegetation; (2) the presence of hydric soils; and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. We also referenced the:

1. *Jepson Manual: Higher Plants of California* - to identify vascular plant species observed during the field delineation;
2. *2012 National List of Plant Species That Occur in Wetlands: California (Region 0)* – to determine the wetland indicator status of plant species observed; and
3. On-line *NRCS Web Soil Survey* and the on-line *Field Office Official List of Hydric Soil Map Units for Placer County, California* were used to identify soil types that occur within the Study Area.

C:\Users\Chuck\Documents\Barnett Environmental\Projects\Vineyards @ EDH



Source: USGS 7.5-Minute Series Topographic Map - Clarksville Quadrangle

# FIGURE 1: VICINITY MAP

VINEYARD G 4 '98 • EL DORADO COUNTY, CALIFORNIA

Not to Specific Scale



19-1524 G 77 of 314

October 2015

The onsite field surveys for this project, conducted on July 9, 2015, involved collection of detailed data on vegetation, soils, and hydrologic site characteristics at 13 representative sample locations within the Study Area to identify the upland/wetland boundaries of each identified feature. Besides identifying vascular plants at each sampling location, we also recorded the:

1. Percent dominance by hydrophytic vegetation;
2. Presence/absence of positive hydrologic indicators (e.g., sediment deposits, biotic crust, drainage patterns); and
3. Soils (via soil test pit) to determine composition, matrix color, and the presence of redoximorphic concentrations (e.g., mottles).

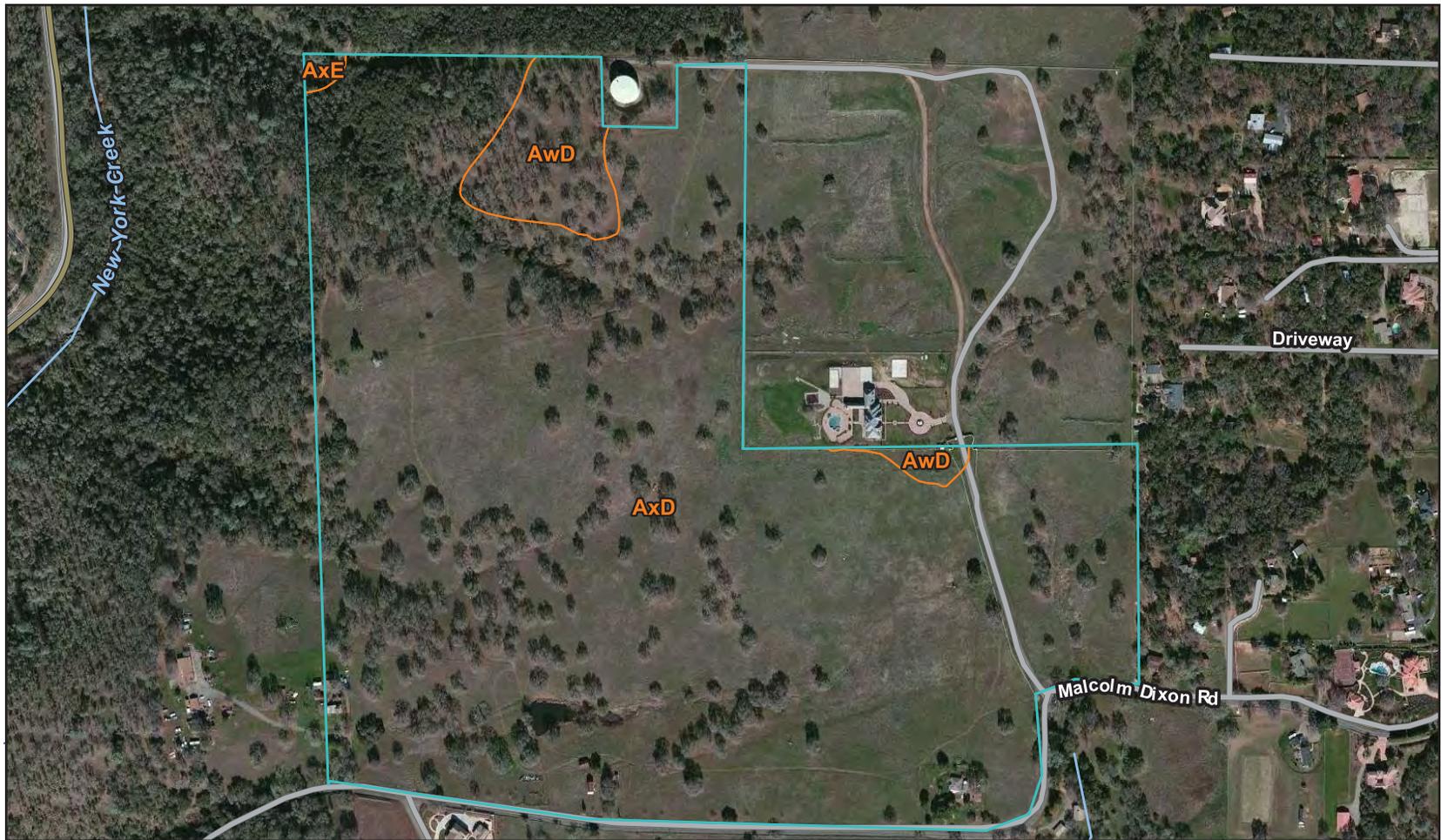
Surveys followed the *Arid West Regional Supplement* (Corps 2008) and used the *2012 Wetland Plant List* to determine the wetland indicator status of observed plant species. Data sheets for wetland sampling points and list of plants observed and their status as wetland indicator species are attached at the end of this report.

We did not dig soil test pits within any aquatic features, as they were confined to channels and conform to the definition of “*other waters of the U.S.*” by exhibiting a distinct bed and bank with an ordinary high water mark (OHWM). We recorded GPS coordinates of each sample location in the field with a Trimble™ GEO XT and provide all *Wetland Determination Data Forms – Arid West Region* in Attachment A.

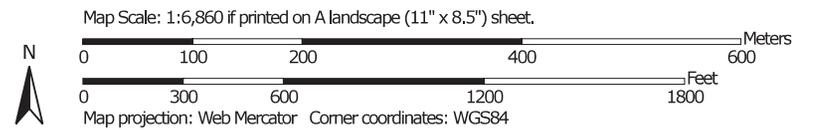
### 3.0 Existing Conditions

#### 3.1 Soils

Soils underlying most of the property are mapped as Auburn very rocky silt loam 2-30% slopes (Figure 2; Rogers 1974). The northern boundary of the property and a small section of the northeastern portion of the site are mapped as Auburn very rock silt loam (30% slopes and 50%, respectively). A small portion of the northwest corner of the project site is mapped as Auburn silt loam 2-30% slopes. The Auburn very rocky silt loam (2-30%) and Auburn silt loam (2-30%) soils are well drained soils that have developed on differing bedrock with the potential for medium runoff rates and generally low to moderate permeability. The Auburn very rocky silt loam (30-50%) slopes however have a high run off rate with moderately low permeability. This series is classified as a Lithic Haploxerepts. Outcrops of bedrock are common in the rocky phase of the soil series that is mapped on the Vineyard property. While the classification of this soil is not hydric, the occurrence of bedrock near the soil surface can cause percolated water to rise the surface and form springs or seeps. The natural fracture planes of the metamorphic rock from which this soil is derived can also channel deeper sources of water to the surface.



El Dorado Area, California (CA624)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AwD	Auburn silt loam, 2 to 30 percent slopes	5.9	4.8%
AxD	Auburn very rocky silt loam, 2 to 30 percent slopes	115.8	94.9%
AxE	Auburn very rocky silt loam, 30 to 50 percent slopes	0.3	0.3%
<b>Totals for Area of Interest</b>		<b>122.0</b>	<b>100.0%</b>



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# FIGURE 2:SOILS IN PROJECT VICINIT Y



### 3.2 Hydrology

The hydrologic regime of the Vineyard property is driven by rainfall, local runoff, and groundwater seepage. Four years of drought conditions in California's Great Central Valley and Sierra Nevada foothills have consequently diminished local water tables and runoff-driven wetland systems, including seasonal wetlands and intermittent streams. The 2011 through 2015 water years (July-1 through June-30) preceding this survey were significantly drier than the yearly average of 18.3 inches. A lack of grazing in annual grasslands also reduces runoff and ponding in seasonal wetlands, since more water is removed from the soil through transpiration (Pyke and Marty 2005).

Running water was, however, observed in a spring fed drainage in the northern half of the property and there was standing water in a ponded portion (aka reservoir) of the Study Area's southern drainage. This same standing water can also be observed on *National Wetlands Inventory* map in Figure 3. The remainder of the mapped features were dry.

### 3.3 Vegetation Communities

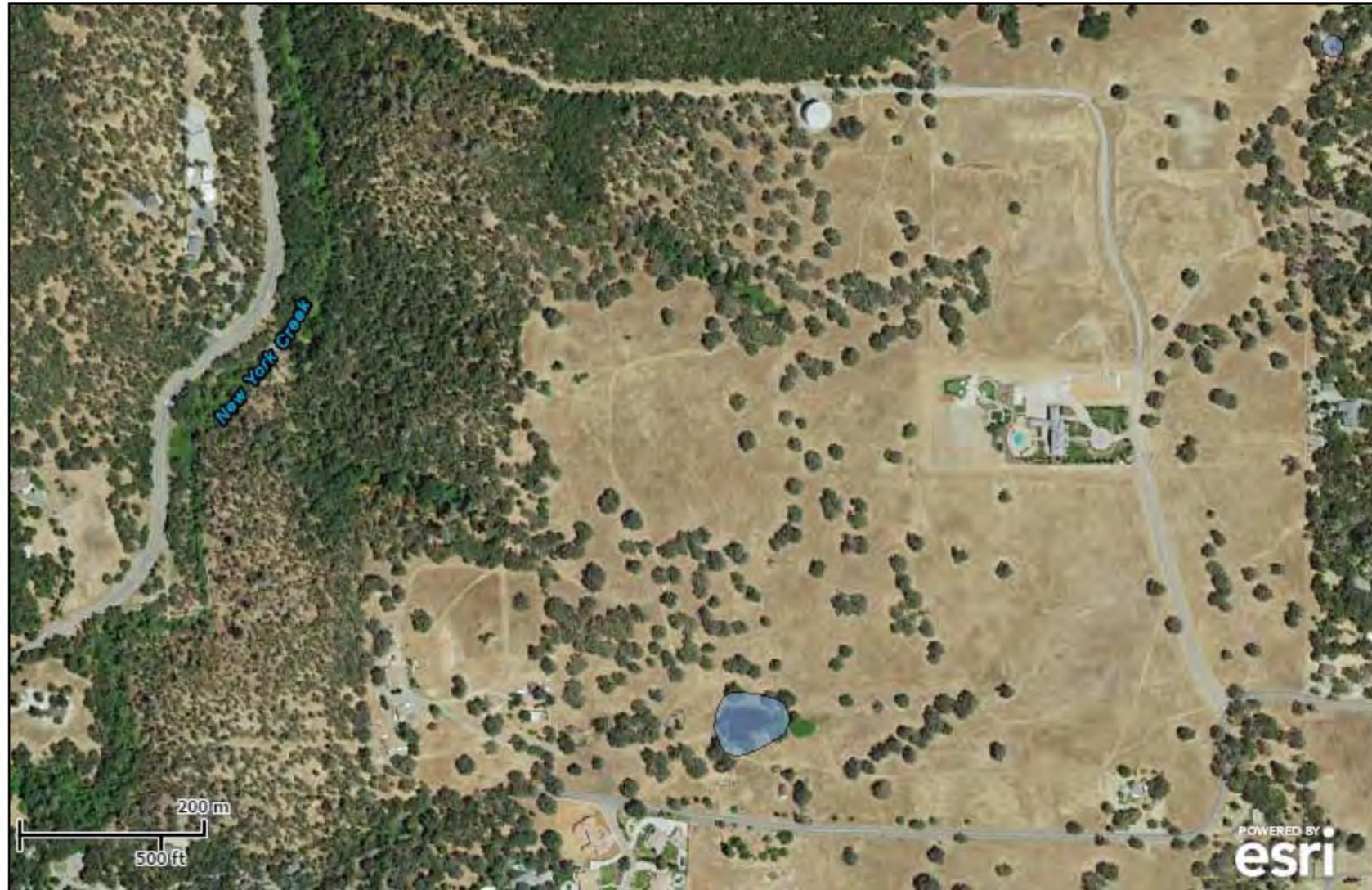
Most of the study area is dominated by open oak woodland overstory of scattered mature interior live oaks (*Quercus wislizenii*) and blue oaks (*Q. douglasii*) with an annual grassland understory, equivalent to blue and live oak savannah habitat. The herbaceous understory consists of introduced grasses such as medusa head (*Taeniathrum caput medusae*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*) and herbs such as rose clover (*Trifolium hirtum*), and filaree (*Erodium botrys* & *E. cicutarium*). Deeper ravines on the site support a closed-canopy oak woodland with an understory that includes shade tolerant annual grasses and shrubs, such as dog-tail grass (*Cynosurus echinatus*) and poison oak (*Toxicodendron diversilobum*). Thickets of Himalayan blackberry (*Rubus armeniaca*) fringe the spring-fed drainage and pond, where water persists through the summer months. These perennially wet areas also support riparian trees such as Fremont cottonwood (*Populus deltoides*), northern California black walnut (*Juglans hindsii*), and several willows including Gooddings willow (*Salix gooddingii*), gray willow (*Salix exigua*), smooth willow (*Salix laevigata*), and weeping willow (*Salix babylonica*) – a landscape species native to China. Some emergent marsh vegetation of cattail (*Typha latifolia*), false water-pepper (*Persicaria hydropiperoides*), and rice cutgrass (*Leeria oryzoides*) also occur around the pond's shoreline.

Seeps/springs within the Study Area grasslands are marked by clonal patches of iris-leaved rush (*Juncus xiphioides*), whereas other seasonal wetlands on the site are dominated by annual grasses such as ryegrass (*Lolium perenne*), and also support rabbits-foot grass (*Polypogon monspeliensis*), and facultative upland and upland species resulting from persistent drought conditions, such as soft chess (*Bromus hordeaceus*), rip-gut brome (*Bromus diandrus*), or medusa head grass (*Taeniathrum caput-medusae*). We relied on hydromorphic soils in these areas to determine the wetland boundary.



# U.S. Fish and Wildlife Service National Wetlands Inventory

Aug 27, 2015



## Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## FIGURE 3: NATIONAL WETLANDS INVENTORY MAP

VINEYARDG 4 '98 < • EL DORADO COUNTY, CALIFORNIA

Date: October 6, 2015  
Scaled to Fit



## 4.0 Wetlands and “Other Waters of the U.S.”

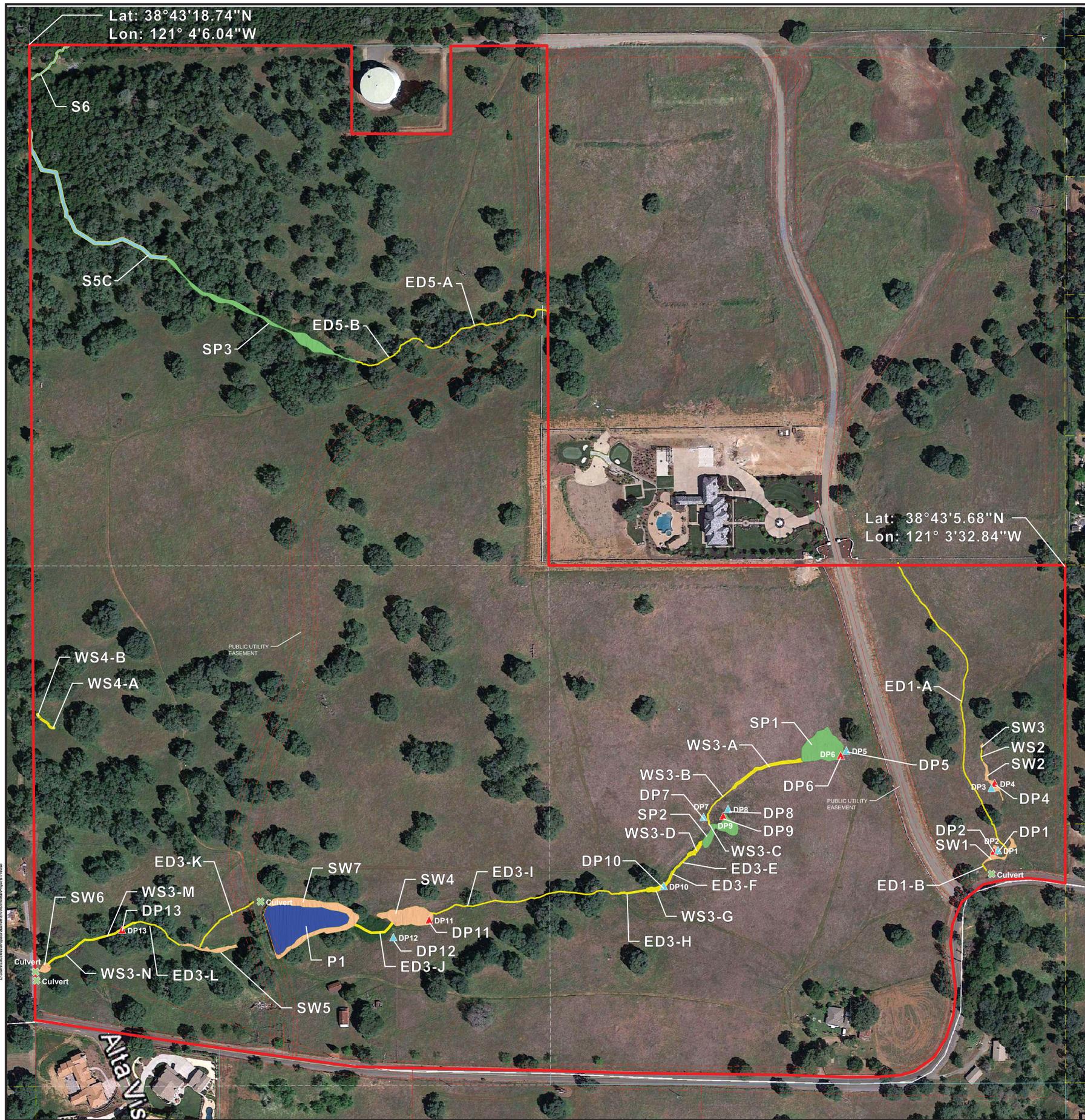
A total of 1.57 acres of “other waters of the U.S.” were mapped within the Study Area (Figure 4). These prominent features are comprised of:

1. Two perennial drainages (aka streams) of varying width (6,483 sq. ft., 0.15 acre);
2. 21 ephemeral drainages of varying width (13, 308 sq. ft., 0.31 acre);
3. Seven seasonal wetlands (15,676 sq. ft., 0.37 acre);
4. Three seeps/springs (16,442 sq. ft., 0.38 acre); and
5. One pond (15,739 sq. ft., 0.36 acre).

The pond is the only “waters” mapped in the National Wetland Inventory (USFWS, 1987). Table 1 below provides the map IDs and areas of each water feature on the Property.

**Table 1: “Other Waters of the U.S.” in the Vineyard Estates Study Area**

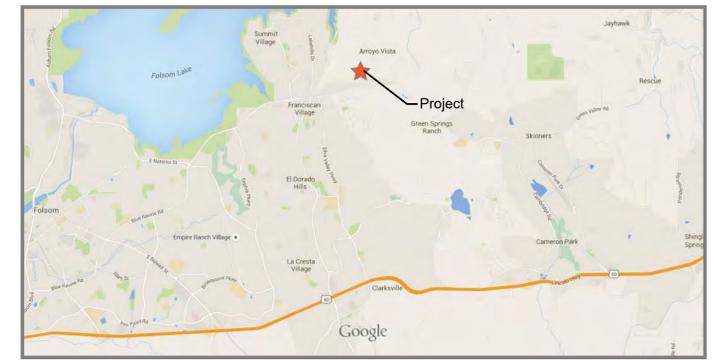
Features	Measurements			
	Length (LF)	Width (LF)	Area (SF)	Area (AC)
<b>Ephemeral Drainage</b>	<b>21</b>	<b>21</b>	<b>13,308</b>	<b>0.31</b>
ED1-A	1	1	2,504	0.06
ED1-B	1	1	57	-
ED3-E	1	1	287	0.01
ED3-F	1	1	348	0.01
ED3-H	1	1	359	0.01
ED3-I	1	1	1,516	0.03
ED3-J	1	1	670	0.02
ED3-K	1	1	569	0.01
ED3-L	1	1	423	0.01
ED5-A	1	1	1,105	0.03
ED5-B	1	1	625	0.01
WS2	1	1	88	-
WS3-A	1	1	1,616	0.04
WS3-B	1	1	313	0.01
WS3-C	1	1	107	-
WS3-D	1	1	517	0.01
WS3-G	1	1	570	0.01
WS3-M	1	1	768	0.02
WS3-N	1	1	500	0.01
WS4-A	1	1	284	0.01
WS4-B	1	1	82	-
<b>Pond</b>			<b>15,739</b>	<b>0.36</b>
P1			15,739	0.36
<b>Seasonal Wetland</b>			<b>15,676</b>	<b>0.37</b>
SW1			1,180	0.03
SW2			857	0.02
SW3			62	-
SW4			5,023	0.12
SW5			1,114	0.03
SW6			519	0.01
SW7			6,921	0.16
<b>Spring</b>			<b>16,442</b>	<b>0.38</b>
SP1			6,863	0.16
SP2			3,007	0.07
SP3			6,572	0.15
<b>Stream</b>	<b>2</b>	<b>2</b>	<b>6,483</b>	<b>0.15</b>
S5-C	1	1	5,725	0.13
S6	1	1	758	0.02
<b>Grand Total</b>	<b>23</b>	<b>23</b>	<b>67,648</b>	<b>1.57</b>



Aerial Photography taken in April, 2015

**Legend**

- Ephemeral Drainage
- Pond
- Seasonal Wetland
- Spring
- Stream
- Data Point - Wetland
- Data Point - Upland
- Culvert
- Easement Line
- Previous Delineation
- Project Boundary
- Parcel Line



Vicinity Map - Not to Scale

**Delineation Table**

Features	Length (LF)	Width (LF)	Area (SF)	Area (AC)
<b>Ephemeral Drainage</b>				
ED1-A	1	1	2,504	0.057
ED1-B	1	1	57	0.001
ED3-E	1	1	287	0.007
ED3-F	1	1	348	0.008
ED3-H	1	1	359	0.008
ED3-I	1	1	1,516	0.035
ED3-J	1	1	670	0.015
ED3-K	1	1	569	0.013
ED3-L	1	1	423	0.010
ED5-A	1	1	1,105	0.025
ED5-B	1	1	625	0.014
WS2	1	1	88	0.002
WS3-A	1	1	1,616	0.037
WS3-B	1	1	313	0.007
WS3-C	1	1	107	0.002
WS3-D	1	1	517	0.012
WS3-G	1	1	570	0.013
WS3-M	1	1	768	0.018
WS3-N	1	1	500	0.011
WS4-A	1	1	284	0.007
WS4-B	1	1	82	0.002
<b>Subtotal</b>			<b>13,308</b>	<b>0.304</b>
<b>Pond</b>				
P1			15,739	0.361
<b>Subtotal</b>			<b>15,739</b>	<b>0.361</b>
<b>Seasonal Wetland</b>				
SW1			1,180	0.027
SW2			857	0.020
SW3			62	0.001
SW4			5,023	0.115
SW5			1,114	0.026
SW6			519	0.012
SW7			6,921	0.159
<b>Subtotal</b>			<b>15,676</b>	<b>0.360</b>
<b>Spring</b>				
SP1			6,863	0.158
SP2			3,007	0.069
SP3			6,572	0.151
<b>Subtotal</b>			<b>16,442</b>	<b>0.378</b>
<b>Stream</b>				
S5-C	1	1	5,725	0.131
S6	1	1	758	0.017
<b>Subtotal</b>			<b>6,483</b>	<b>0.148</b>
<b>Grand Total</b>			<b>67,648</b>	<b>1.551</b>

**FIGURE 4: WETLANDS & OTHER WATERS OF THE U.S.**

VINEYARDS '4 '98< • EL DORADO COUNTY, CALIFORNIA

Date: October 6, 2015

Plan Scale: 1" = 100' @ 30X42 Sheet Size

Perennial (i.e. stream) and Ephemeral Drainages – the perennial drainage channels within the Study Area do not display all three wetland parameters – hydrophytic vegetation, hydric soils, and wetland hydrology – but do display bed-and-bank geomorphology and evidence of an annual, ordinary high water mark (OHWM). These drainages vary in width from three to 12 feet, on average, and the narrower drainages display bed and bank cross-sectional topographies that are discontinuously interspersed with broader floodplains that take on some wetland characteristics. Hydromorphic soils were not always present in these drainages, even though some wetland plants were present. Water flowing through and across these soils is likely to be oxygenated and does not result in reducing conditions characteristic of wetland soils. In other areas where the drainage enters a shallow basin, it is interrupted by seasonal wetlands that pond water as well as overflow into the channel. These wetlands remain ponded or saturated after flowing water is absent and are positive for all three wetland criteria as discussed below. Similarly, a spring found within one of the drainages is mapped as a seep/spring wetland rather than a water conveyance channel.

The drainage within the headwaters of Dutch Ravine, along the eastern property boundary, is shallowly channelized and appears to have been modified by historic placer diggings. The bed and bank of the larger drainages is well defined with bare gravel or cobble streambeds and little in-stream vegetation. Even with drought conditions, piles of leaves and sticks and other floating debris form wrack lines well above the incised channel giving evidence of annual high flows from the most recent rains.

Seasonal Wetlands – Seven seasonal wetlands are formed in shallow basins along the above-described drainage channels and demonstrate positive criteria for hydromorphic soils and wetland hydrology (Figure 4). With the current four-year drought, some of the mapped wetlands lack dominant hydrophytic vegetation over their entire extent and display annual facultative wetland or upland plant encroachment into the features, where the underlying soils had hydromorphic characteristics and wetland hydrology was also present. The dominant hydrophytic vegetation included common annuals such as ryegrass (*Lolium perenne*), annual fescue (*Vulpia bromoides*), and seaside barley (*Hordeum marinum*), intermixed with invasive annuals such as ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and medusa-head (*Taeniathrum caput-medusae*).

A single seasonal wetland on an alluvial terrace just above the pond within the Study Area's southern perennial drainage is dominated by arctic rush (*Juncus articus*) and clustered field sedge (*Carex praegracilis*) – both spreading perennials, which are positive indicators for wetland vegetation. The hydrology of this seasonal wetland is due to its position in the alluvial fan adjacent to the drainage and a high water table created by ponding in the adjacent feature. Given the presence of other seeps and springs on the property, it is possible that seepage from impervious bedrock may be also be involved.

Spring (Seep) – Two of the three springs/seeps mapped on the Vineyard Estates property (Figure 4) are found on open grassy hillsides and marked by patches of iris-leaved rush (*Juncus xiphioides*), a native perennial that spreads rhizomatously, i.e. by underground stems. Most of the plants in these patches were dried, though live green leaves and roots were observed within the data plots. The soils underlying this hydrophytic vegetation are low in chroma and mottled, suggesting saturation to the surface during the early part of the growing season. Surface water was not present at the

time of our July survey but oxidation mottles were observed around living roots of the dominant rush. The distal boundary of the seep wetlands was mapped at the boundary of hydric and upland soils.

The third spring/seep occurs in the larger of two northern drainages, with standing water and hydrophytic vegetation marking the boundary of this feature. Though much of the spring/seep boundary was covered in dense thickets of Himalayan berry bramble (FACU), the wetland boundary interpolated from GPS points taken at several places where the spring/seep edge was accessible. This spring showed evidence of man-made improvement, i.e. rock walls and paths adjacent to the stream, and supports a well-developed riparian community of willows and cottonwoods requiring a perennial water supply. The influence of the spring was mapped at its distal end, where the streamside vegetation was replaced with oaks, and the channel was bare. The upper end of the spring is defined by a rock waterfall that may be part of the spring's historic improvements.

Pond – This feature was previously mapped and is shown in a National Wetland Inventory map of the site (Figure 3). We observed standing water in this feature during our July survey and mapped the pond's boundary to include a fringe of herbaceous, wetland plants growing well above the level of standing water (Figure 4). A culvert at the north end of the dam leads to a created channel that connects the upper reaches of this drainage to its lower reaches, which eventually become a tributary to New York Creek.

## 5.0 Wildlife & Special Status Species

### 5.1 Wildlife

Oak woodlands and savannas within the Study Area offer diverse, abundant, and valuable wildlife habitat. Oak trees provide nesting sites for cavity-nesting birds and small mammals, including acorn woodpeckers (*Melanerpes formicivorus*), Nuttall's woodpeckers (*Picoides nuttallii*), northern flickers (*Colaptes auratus*), white-breasted nuthatches (*Sitta carolinensis*), oak titmice (*Baeolophus inornatus*), western bluebirds (*Sialia mexicana*), western gray squirrels (*Sciurus griseus*), and raccoons (*Procyon lotor*). Oak trees also provide roosting sites for some species of bats including the hoary bat (*Lasiurus cinereus*) and pallid bat (*Antrozous pallidus*). Acorns are used by a variety of wildlife, including California quail (*Callipepla californica*), wild turkeys (*Meleagris gallopavo*), northern flickers, western scrub-jays (*Aphelocoma californica*), western gray squirrels, and mule deer (*Odocoileus hemionus*). Oak foliage provides a foraging substrate for insectivorous birds such as ruby-crowned kinglets (*Regulus calendula*), bushtits (*Psaltriparus minimus*), warbling vireos (*Vireo gilvus*), Hutton's vireos (*Vireo huttoni*), and Wilson's warblers (*Wilsonia pusilla*). Blackberries and elderberries are eaten by many species of birds and mammals, including American robins (*Turdus migratorius*), Bullock's orioles (*Icterus bullockii*), house finches (*Carpodacus mexicanus*), spotted towhees (*Pipilo maculatus*), California towhees (*Pipilo crissalis*), and gray foxes (*Urocyon cinereoargenteus*). Finally, the shrub understory of these habitats provide cover for many species of songbirds as well as for gopher snakes (*Pituophis catenifer catenifer*), common kingsnakes (*Lampropeltis getula*), bobcats (*Lynx rufus*), gray foxes, and a variety of rodents.

Riparian Woodland & Willow Scrub habitats within the deeper ravines on the property have high value for wildlife and provides cover, nesting habitat, and foraging habitat for many wildlife species, including habitat particularly suitable for migratory songbirds, Belted kingfishers (*Ceryle alcyon*), Anna's hummingbirds (*Calypte anna*), American bushtits (*Psaltriparus minimus*), ruby-crowned kinglets (*Regulus calendula*), Wilson's warblers (*Cardellina pusilla*), yellow warblers (*Dendroica petechia*), and lesser goldfinches (*Carduelis psaltria*). Pacific treefrogs (*Hyla regilla*), raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), and mule deer also frequent these riparian corridors

## 5.2 Special Status Plants and Wildlife

Special status species are those that fall into one or more of the following categories:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for listing),
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing),
- Designated a Species of Concern by the Sacramento District of the U.S. Fish and Wildlife Service,
- Designated as rare, protected, or fully protected pursuant to California Fish and Game Code,
- Designated a Species of Concern by the California Department of Fish and Game,
- Defined as rare or endangered under the California Environmental Quality Act (CEQA), or
- Occurring on List 1 or 2 maintained by the California Native Plant Society.

Six special status plants — Stebbins' morning-glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodendron decumbens*), El Dorado Bedstraw (*Galium californicum*), layne's ragwort (*Packera layneae*), Tahoe yellow cress (*Rorippa subumbellata*) — could potentially occur within the Study Area or vicinity.

Ten (10) special status animals — valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), California red-legged frog (*Rana draytonii*), Lahontan cutthroat trout (*Oncorhynchus clarkia henshawi*), Sierra Nevada yellow-legged Frog (*Rana sierra*), steelhead-central valley (*Oncorhynchus mukiss irideus*), willow flycatcher (*Empidonax traillii*), bank swallow (*Riparia riparia*), great gray owl (*Strix nebulosi*), Sierra Nevada red fox (*Vulpes vulpes nector*), California wolverine (*Gulo gulo*) — could also occur within Study Area habitats. A query of the California Natural Diversity Database (Rarefind) resulted in no records of any of these species within or immediately adjacent to the DiamonteEstates Study Area. (Table 2).

**Table 2: Special Status Species with Potential to Occur in the Study Area**

Species	Federal	State	CNPS	Habitat	Potential for Occurrence
<b>Plants</b>					
<b>Stebbins' morning-glory</b> <i>Calystegia stebbinsii</i>	-	-	1B	Gabbroic or serpentine soils in Chaparral and cismontane woodland	<b>Likely Absent.</b> Requires red clay gabbroic soils. Majority of the project site consists of Auburn silt loam.
<b>Pine Hill Ceanothus</b> <i>Ceanothus roderickii</i>	-	-	1B	Gabbroic or serpentine soils in chaparral and cismontane woodlands.	<b>Likely Absent.</b> Requires red clay gabbroic soils. Majority of the project site consists of Auburn silt loam.
<b>Pine Hill Flannelbush</b> <i>Fremontodendron decumbens</i>	-	-	1B	Gabbroic or serpentine soils in Chaparral and cismontane woodland	<b>Likely Absent.</b> Requires red clay gabbroic soils with granite boulders. Majority of the project site consists of Auburn silt loam.
<b>El Dorado Bedstraw</b> <i>Galium californicum</i>	-	-	1B	Gabbroic or serpentine soils in Cismontane woodland, chaparral, and lower montane coniferous forest	<b>Likely Absent.</b> Lacks potential suitable habitat. Requires gabbroic soils within pine-oaks woodlands. No recorded occurrences within the study area.
<b>Layne's ragwort</b> <i>Packera layneae</i>	-	-	1B	Gabbroic or serpentine soils in Cismontane woodland, chaparral	<b>Likely Absent.</b> Lacks potential suitable habitat. Requires gabbroic or serpentine soils. No recorded occurrences within the study area.
<b>Tahoe yellow cress</b> <i>Rorippa subumbellata</i>	-	CE	1B	Located on sandy beaches, on lakeside margins and in riparian communities on decomposed granite sand.	<b>Likely Absent.</b> Lacks potential suitable habitat. No recorded occurrences within the study area.
<b>Insects</b>					
<b>Valley elderberry longhorn beetle</b> <i>Desmocerus californicus dimorphus</i>	FT	-		Riparian and oak woodlands. Requires the presence of blue or Mexican elderberry shrubs.	<b>Likely Absent.</b> No host plant (elderberry) observed on or near the Study Area.

Species	Federal	State	CNPS	Habitat	Potential for Occurrence
<b>Amphibians and Fish</b>					
<b>California red-legged frog</b> <i>Rana draytonii</i>	FT	-		Prefers lowlands and foothills in or near permanent sources of deep water with dense shrubby or emergent vegetation.	<b>Likely Absent:</b> Project site lacks suitable habitat (i.e deep water). Requires 11-20 weeks of permanent water for larval development.
<b>Steelhead-Central Valley DPS</b> <i>Oncorhynchus mukiss irideus</i>	FT	-		Populations in the Sacramento and San Joaquin rivers and their tributaries.	<b>Absent:</b> Project site lacks suitable habitat (i.e deep water). No stealhead-central valley species were observed during the biological assessment, as well as, no recorded occurrences within two and a half miles from study area.
Species	Federal	State	CNPS	Habitat	Potential for Occurrence
<b>Birds</b>					
<b>Willow Flycatcher</b> <i>Empidonax traillii</i>	-	CE		Inhabits extensive thickets or low, dense willows on edge of wet meadows, ponds, or backwaters.	<b>Potentially Present.</b> Potential suitable habitat (i.e. ponds, or backwaters), with willow thickets for nesting/roosting. However no recorded occurrences within two and half miles of the study area.
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>	-	CE		Ocean shore, lake margins, rivers, and lower montane coniferous forest.	<b>Likely Absent:</b> Bald eagles nest within one mile of water. No rivers or water bodies within one mile of project site. Prefers trees approximately 150 feet tall with a DBH of 72 inches within coniferous forest. Project site consists of oaks trees that are smaller in size.
<b>Bank Swallow</b> <i>Riparia riparia</i>	-	CT		Riparian scrub and woodland. Requires vertical banks/cliffs with fine textured/sandy soils near streams, rivers, lakes, ocean to dig nesting holes.	<b>Likely Absent.</b> Requires open water and vertical banks/cliffs. Lacks suitable nesting substrate (i.e sandy soils) to dig nesting holes.

Species	Federal	State	CNPS	Habitat	Potential for Occurrence
<b>Birds</b>					
<b>Great Gray Owl</b> <i>Strix nebulosa</i>	-	CE		Resident of mixed conifer or red fir forest habitat, in or on else of meadows.	<b>Likely Absent.</b> Requires large diameter snags in a forest with high canopy closure, which provides a cool sub-canopy microclimate. The project site consists of scattered oak trees, therefore no high canopy closure.
<b>Mammals</b>					
<b>Sierra Nevada Red Fox</b> <i>Vulpes vulpes nector</i>	-	CT		Inhabits in a variety of habitats such as alpine, alpine dwarf scrub, broadleaved upland forest, meadows, and seeps.	<b>Likely Absent.</b> Lacks potential suitable habitat. Prefers dense vegetation and rocky areas for cover and den sites. Additionally, they favor forest interspersed with meadows or alpine fell-fields. No species were observed during the biological assessment.
<b>California Wolverine</b> <i>Gulo gulo</i>	-	CT		Found in the north coast mountains and the Sierra Nevada. Inhabits in a wide variety of high elevation habitats such as alpine, alpine and montane dwarf scrub, meadows, and seeps.	<b>Likely Absent.</b> Lacks potential suitable habitat. Needs water source. Uses caves, logs, burrows for cover and den areas. No California wolverine species were observed during the biological assessment.

**LEGAL STATUS**

- Federal: FE = Federal Endangered FT = Federal Threatened
- State: CSC = California Species of Concern CE = California Endangered  
CFP = California Fully Protected CT = California Threatened
- CNPS: 1B = Plants that are rare throughout their range with the majority endemic to California

Six plant species, including: Stebbins' morning-glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodendron decumbens*), El Dorado Bedstraw (*Galium californicum*), layne's ragwort (*Packera layneae*), Tahoe yellow cress (*Rorippa subumbellata*) could potentially occur within the project vicinity, though the Study area lacks serpentine and/or gabbroic soils and protocol-level surveys of the Study Area during the species' 2015 flowering periods failed to reveal any of these plants.

The Study area does not contain appropriate habitat to support the:

1. Two invertebrate species, including the Valley elderberry longhorn beetle (VELB; *Desmocerus californicus dimorphus*) or vernal pool fairy shrimp (*Branchinecta lynchii*);
2. Two amphibian species, including the California red-legged frog (*Rana draytonii*) or Sierra Nevada yellow-legged frog (*Rana sierrae*);
3. Two fish species, including the lahontan cutthroat trout (*Oncorhynchus clarkia henshawi*), Sierra Nevada yellow-legged Frog (*Rana sierra*), or steelhead-central valley (*Oncorhynchus mukiss irideus*);
4. Four bird species, including the willow flycatcher (*Empidonax traillii*), bald eagle (*Haliaeetus leucocephalus*), bank swallow (*Riparia riparia*), or great gray owl (*Strix*); and
5. Two mammal species, including Sierra Nevada red fox (*Vulpes vulpes nector*) or wolverine (*Gulo gulo*).

Though these species could potentially use the Study Area vicinity for some portion(s) of their life cycle, field surveys found no indication of their use of the proposed project area itself. The historic and ongoing disturbance of the site likely precludes their presence in this area.

### 5.3 Critical Habitat for Special Status Species

The Federal Endangered Species Act (FESA) requires the federal government to designate critical habitat for any listed species. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. There is no designated critical habitat within the Study Area.

## 6.0 Conclusions

The project site contains approximately 1.57 acres of “other waters of the United States.” While some are altered or created (pond), all of the mapped wetlands are self-sustaining and persistent even in drought conditions. Activities that affect these areas would require a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act. The project would also need to obtain a Water Quality Certification from the Regional Water Quality Control Board pursuant to Section 401 of the federal Clean Water Act. Any disturbance of the perennial drainages on the property would also need to obtain a Streambed Alteration Agreement from the California Department of Fish & Wildlife under Section 1602 of the California Fish & Game Code.

## 7.0 References

- Army Corps of Engineers. 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region( Version 2.0) September 2008, U. S. Army Corps of Engineers, ERDC/EL TR-08-28.
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- Pyke, C.R. and Marty, J. 2005 Cattle Grazing Mediates Climate Change Impacts on Ephemeral Wetlands, Conservation Biology Vol. 19, No. 5 October 2005, 1619–1625.
- Rogers, John H. 1974 Soil Survey of El Dorado Area, California. USDA Soil Conservation Service, in cooperation with University of California Agricultural Experiment Station issued April 1974.
- U. S. Fish and Wildlife Service. May 1987. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.  
<http://www.fws.gov/wetlands/>
- USDA Natural Resource Conservation Service Soils. Web Soil Survey.  
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed August 25, 2015.

## ATTACHMENT A – Plants Observed with Wetland Status

Scientific Name	Common Name	Wetland Indicator Status*
<i>Aegilops triuncialis</i>	Goat grass	
<i>Aesculus californica</i>	California buckeye	
<i>Aira caryophylla</i>	Silver hair grass	FACU
<i>Aristolochia californica</i>	Pipevine	
<i>Avena barbata</i>	Wild oat	
<i>Baccharis pilularis</i>	Coyote Bush	
<i>Briza minor</i>	Little quaking grass	FAC
<i>Bromus diandrus</i>	ripgut brome	
<i>Bromus hordeaceus</i>	soft chess	FACU
<i>Carduus pycnocephalus</i>	Italian thistle	
<i>Carex praegracilis</i>	Creeping field segde	FACW
<i>Centaurea solstitialis</i>	yellow star-thistle	
<i>Chlorogalum pomeridianum</i>	soaproot	
<i>Chondrilla juncacia</i>	Skeleton weed	
<i>Croton setigera</i>	Dove weed	
<i>Cynosurus echinatus</i>	hedgehog dogtail-grass	
<i>Cyperus eragrostis</i>	Tall flatsedge	FACW
<i>Dichelostemma laxa</i>	Blue Dicks	
<i>Echinochloa crus-galli</i>	Barn grass	FACW
<i>Eleocharis palustris</i>	Spikerush	OBL
<i>Elymus glaucus</i>	Blue Wild rye	FACU
<i>Epilobium ciliatum</i>	Fringed Willowherb	FACW
<i>Erodium botrys</i>	long-beaked filaree	FACU
<i>Erodium cicutarium</i>	red-stemmed filaree	
<i>Galium aparine</i>	Sticky-willy	FACU
<i>Geranium dissectum</i>	cut-leaved geranium	
<i>Holcus lanatus</i>	common velvetgrass	FAC
<i>Hordeum marinum</i>	Seaside barley	FAC
<i>Hordeum murinum</i>	Wall barley	FACU
<i>Hypericum perforatum</i>	Klamath weed	FACU
<i>Holocarpha virgata</i>	Tarweed	
<i>Juncus xiphiodes</i>	Iris-leaf rush	OBL
<i>Juncus bufonius</i>	Toad Rush	FACW
<i>Juglans hindsii</i>	California black walnut	
<i>Lactuca serriola</i>	prickly lettuce	FACU
<i>Leersia oryzoides</i>	Rice cut grass	OBL
<i>Lolium perenne</i>	English rye-grass	FAC
<i>Mimulus guttatus</i>	Yellow Monkey flower	OBL

Scientific Name	Common Name	Wetland Indicator Status*
<i>Paspalum dilatatum</i>	Dallis grass	FAC
<i>Persicaria hydropiperoides</i>	False Water-pepper	OBL
<i>Polypogon monspeliensis</i>	Annual rabbit's-foot grass	FACW
<i>Populus deltoides</i>	Fremont (Eastern) cottonwood	FAC
<i>Quercus douglasii</i>	blue oak	
<i>Quercus wislizenii</i>	interior live oak	
<i>Rubus armeniaca</i>	Himalaya berry	FACU
<i>Rumex crispus</i>	Curly Dock	FAC
<i>Rumex pulcher</i>	fiddle dock	FAC
<i>Salix babylonica</i>	Weeping willow	FACW
<i>Salix exigua</i>	Narrow-leaf Willow	FACW
<i>Salix gooddingii</i>	Gooddings Valley Willow	FACW
<i>Salix laevigata</i>	Smooth willow	
<i>Sambucus nigra</i>	Black Elderberry	FAC
<i>Silybum marianum</i>	milk thistle	
<i>Taeniatherum caput-medusae</i>	Medusa-head	
<i>Toxicodendron diversilobum</i>	poison oak	
<i>Trifolium hirtum</i>	rose clover	
<i>Typha latifolia</i>	Broad-leaf Cat-tail	OBL
<i>Vicia sativa</i>	vetch	FACU
<i>Vitis californica</i>	California wild grape	FACU
<i>Vulpia myuros</i>	rattail fescue	FACU

\*Wetland Indicator Status Codes (Lichvar 2012)

Code	Wetland Indicator Status	Comment
(Blank)	Upland	Plants not listed in the FWS wetland plant list are assumed to be upland species.
OBL	Obligate Wetland	Occurs almost always (estimated probability 99%) under natural conditions in wetlands.
FACW	Facultative Wetland	Usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
FAC	Facultative	Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
FACU	Facultative Upland	Usually occurs in non-wetlands (estimated probability 67%-99%), but occasionally found on wetlands (estimated probability 1%-33%).
UPL	Obligate Upland	Occurs in wetlands in another region, but occurs almost always (estimated probability 99%) under natural conditions in non-wetlands in the regions specified. If a species does not occur in wetlands in any region, it is not on the National List.

**ATTACHMENT B – Wetland Delineation Data Sheets**

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp1  
 Investigator(s): Virginia Dains - Robert Hollak Section, Township, Range: Sec 14 T10N R0E  
 Landform (hill slope, terrace, etc.): Alluvial Fan Terrace Local relief (concave, convex, none): Convex Slope (%): < 5%  
 Subregion (LRR): C Lat: 38.716230 Long: -121.059749 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (if no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:  
*Four years of drought may effect seasonal wetlands and springs especially annual vegetation.*

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
= Total Cover				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum (Plot size: _____)				OBL species	x 1 = _____
1. _____	_____	_____	_____	FACW species	x 2 = _____
2. _____	_____	_____	_____	FAC species	x 3 = _____
3. _____	_____	_____	_____	FACU species	x 4 = _____
4. _____	_____	_____	_____	UPL species	x 5 = _____
5. _____	_____	_____	_____	Column Totals:	_____ (A) _____ (B)
= Total Cover				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: <u>2m</u> )				Hydrophytic Vegetation Indicators:	
1. <u>Carduus pichnocephalus</u>	<u>35</u>	<u>X</u>	<u>UPL</u>	___ Dominance Test is >50%	
2. <u>Bromus diandrus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>	___ Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____	_____	_____	_____	___	
6. _____	_____	_____	_____	___	
7. _____	_____	_____	_____	___	
8. _____	_____	_____	_____	___	
<u>75</u> = Total Cover				___	
Woody Vine Stratum (Plot size: _____)				___	
1. _____	_____	_____	_____	___	
2. _____	_____	_____	_____	___	
= Total Cover				___	
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	

Remarks:  
*Lots of thatch 50/20 = 38/15*

**SOIL**

Sampling Point: dpl

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/3	100						gravels
5-10+	10YR 2/3	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	Hydric Soil Present?    Yes _____    No <input checked="" type="checkbox"/>
--	---

Remarks:  
*Could be recent streamwash. Gravels present, disturbed placer mined area.*

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

<b>Field Observations:</b>	
Surface Water Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present?    Yes _____    No <input checked="" type="checkbox"/>
Water Table Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____ <i>(includes capillary fringe)</i>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
*Side of mound above basin.*

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: Sp 2  
 Investigator(s): Virginia Dains - Robert Hollak Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): Concave Slope (%): <5%  
 Subregion (LRR): C Lat: 38.716222 Long: -121.059788 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NMI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (if no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (if needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
--	--

Remarks:  
*Four years of drought may effect seasonal wetlands and springs especially annual vegetation.  
 Soils and topography taken into account if annual plants are dominant*

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status		
<b>Tree Stratum</b> (Plot size: _____)					
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____	_____	_____	_____		
= Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = _____ FACW species <u>0</u> x 2 = _____ FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>15</u> x 5 = <u>75</u> Column Totals: <u>50</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>4.0</u>	
<b>Sapling/Shrub Stratum</b> (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
= Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0' ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<b>Herb Stratum</b> (Plot size: <u>2m</u> )					
1. <u>Arduus pinocephalus</u>	<u>15</u>	<u>X</u>	<u>UPL</u>		
2. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>		
3. <u>Lolium perenne</u>	<u>5</u>		<u>FAC</u>		
4. <u>Hordeum marinum</u>	<u>10</u>	<u>X</u>	<u>FAC</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
= Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
<b>Woody Vine Stratum</b> (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust <u>0</u>			

Remarks: 50/20 = 25/10  
*Annual species could be impacted by the drought. Lolium tends to lay down when dry and is less evident than Bromus.*

**SOIL**

Sampling Point: dp 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6	10YR 3/2	95	10YR 4/6	5	C	PL <sub>1</sub> M	Clay loam	
6-8	10YR 4/2	90	10YR 4/6	10	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input checked="" type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Vernal Pools (F9)</p>	<p>Indicators for Problematic Hydric Soils<sup>3</sup>:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	--	--

Restrictive Layer (if present):  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
 Saturation to the surface evident. Lower soil more depleted.

**HYDROLOGY**

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input type="checkbox"/> Surface Soil Cracks (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Biotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) *</p> <p><input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input checked="" type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 This is a shallow well-defined basin. \* No living roots in annuals in July. Root pores did have oxidized lining.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: Sp 3  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): C Lat: 38.716667 Long: -121.059802 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:  
*Four years of drought may effect seasonal wetlands and springs especially annual vegetation.*

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<del>Tree Stratum</del>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
<del>1.</del>				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
<del>2.</del>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
<del>3.</del>				
<del>4.</del>				
<del>5.</del>				
<del>Sapling/Shrub Stratum</del>				<b>Prevalence Index worksheet:</b>
<del>1.</del>				Total % Cover of: _____ Multiply by: _____
<del>2.</del>				OBL species _____ x 1 = _____
<del>3.</del>				FACW species _____ x 2 = _____
<del>4.</del>				FAC species _____ x 3 = _____
<del>5.</del>				FACU species _____ x 4 = _____
<del>6.</del>				UPL species _____ x 5 = _____
<del>7.</del>				Column Totals: _____ (A) _____ (B)
<del>8.</del>				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>2m</u> )				<b>Hydrophytic Vegetation Indicators:</b>
1. <u>Carex pichnocephalus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>	___ Dominance Test is >50%
2. <u>Bromus diandrus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>	___ Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4.				___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5.				
6.				
7.				
8.				
Woody Vine Stratum (Plot size: _____)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
2.				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks:  
*Thick thatch. 50/20 = 30/12*

**SOIL**

Sampling Point: dp3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR <sup>2/3</sup>	100						Cobbles
								Very cobbly matrix, placer mine debris?

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?    Yes \_\_\_\_\_    No

Remarks:

*No evidence for saturation or ponding, disturbed soil.*

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oddized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?    Yes \_\_\_\_\_    No     Depth (inches): \_\_\_\_\_

Water Table Present?    Yes \_\_\_\_\_    No     Depth (inches): \_\_\_\_\_

Saturation Present?    Yes \_\_\_\_\_    No     Depth (inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present?    Yes \_\_\_\_\_    No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

*Side slope above basin.*



**SOIL**

Sampling Point: dp4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					clay loam	
2-8	10YR 4/2	95	10YR 4/6	5	C	M, pl	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Basin topography with hydric soils. NO Living roots in July. Pore linings O<sub>2</sub> likely around spring roots.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 5  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 8  
 Subregion (LRR): C Lat: 38.716947 Long: -121.06114 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <i>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</i>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <del>_____</del>	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. <del>_____</del>	_____	_____	_____	
3. <del>_____</del>	_____	_____	_____	
4. <del>_____</del>	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Savanna/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <del>_____</del>	_____	_____	_____	
2. <del>_____</del>	_____	_____	_____	
3. <del>_____</del>	_____	_____	_____	
4. <del>_____</del>	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>2m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0' ___ Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation' (Explain) 'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	
2. <u>Avena barbata</u>	<u>5</u>		<u>UPL</u>	
3. <u>Bromus diandrus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>45</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
1. <del>_____</del>	_____	_____	_____	
2. <del>_____</del>	_____	_____	_____	% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>
_____ = Total Cover				

Remarks: 50/20 = 23/9 Thatch < 50% FAC, FACW, OBL

**SOIL**

Sampling Point: dp 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 4/2		10YR 4/6				loam	
4-12	7.5YR 4/6	20	10YR 4/2	2			Clay loam	
	7.5YR 3/4	80						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Verfic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:  
 Soil ~~data~~ shows saturation at the surface only.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Tables (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Soaked Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (Inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (Inches): \_\_\_\_\_

Saturation Present? Yes \_\_\_\_\_ No  Depth (Inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Side slope on gentle hillside - no evidence for seepage.

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Vineyards City/County: El Dorado Hills, EL Dorado State: CA Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: dp 6

Investigator(s): Virginia Dains - Robert Hollard Section, Township, Range: Sec 14 T10N R0E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Slight Concave Slope (%): 8  
 Subregion (LRR): C Lot: 38.716912 Long: -121.061164 Datum: NAD 83

Soil Map Unit Name: Auburn very Rocky silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? Yes \_\_\_\_\_ No \_\_\_\_\_  
 (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</u>	

**VEGETATION - Use scientific names of plants.**

Type Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
= Total Cover																		
_____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
_____	_____	_____	_____															
_____	_____	_____	_____															
_____	_____	_____	_____															
= Total Cover																		
<b>Herb Stratum (Plot size: <u>2m</u>)</b> 1. <u>Juncus xiphioides</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0' _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Bromus diandrus</u>	<u>10</u>	_____	<u>UPL</u>															
3. <u>Bromus hordeaceus</u>	<u>10</u>	_____	<u>FACU</u>															
4. <u>Lolium perenne</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
= Total Cover <u>60</u>																		
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														
2. _____	_____	_____	_____															
= Total Cover																		
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u>0</u>																		
Remarks: <u>50/20 = 30/12</u>																		

**SOIL**

Sampling Point: dp6

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/2	95	10YR 4/6	5	C	M, PL		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	Hydric Soil Present?    Yes <input checked="" type="checkbox"/> No _____
--	--

Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Tables (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B8)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?    Yes _____ No _____    Depth (inches): _____ Saturation Present?    Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present?    Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Perennial Juncus with oxidized Rhizospheres



**SOIL**

Sampling Point: dp 7

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/3	100					loam	
2-4	10YR 4/2	95	10YR 4/6	5	C	M	clay loam	
4-+	(5YR 3/3) (5YR 3/4)		10YR 4/3	5	<del>W</del> D	M		mg. nodules?

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:  
Soil shows saturation near the surface - not in a basin - not saturation to the surface or ponding.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (Inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No X Depth (Inches): \_\_\_\_\_

Saturation Present? Yes \_\_\_\_\_ No X Depth (Inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This is a flat area on the hillside not a basin.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 8  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Slight concave Slope (%): 8  
 Subregion (LRR): C Lat: 38.716 535 Long: -121.062 190 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky Silt loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)														
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)														
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
= Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
= Total Cover																		
<b>Herb Stratum (Plot size: <u>2m</u>)</b>																		
1. <u>Bromus diandrus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>															
2. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>															
3. <u>Taeniathrum Caput-medusae</u>	<u>10</u>	<u>X</u>	<u>UPL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
= Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>																

Remarks: 50/20 = 25/10  
thatch

**SOIL**

Sampling Point: dp8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (Inches)	Matrix		Redox Features			Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-3	10YR 3/3	100						loam	
3-8	10YR 4/2	95	10YR 4/6	5	C	M		clay loam	
4-8	{5YR 3/3}	95	10YR 4/3	5	D	M			
	{5YR 3/4}								

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

Soil shows some reduced conditions in the soil surface but does not indicate saturation to the surface - not a basin - not ponded

**HYDROLOGY**

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

this is a hillslope, no evidence for saturation, not a basin







**SOIL**

Sampling Point: dp10

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-3	10YR 3/2						loam
3-12	10YR 4/2	95	10YR 4/6 M	5	C	M	clay loam
12+	10YR 4/6	100					

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
depleted matrix near surface

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary indicators (minimum of one required; check all that apply)</b>		<b>Secondary indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
no evidence for ponding or saturation - This is in a channel - ill defined - not a basin.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado State: CA Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: Sp 11  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): alluvial terrace Local relief (concave, convex, none): none Slope (%): ≤5  
 Subregion (LRR): C Lat: 38.715 785 Long: -121.064 903 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky silt loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks:  
*Four years of drought may effect seasonal wetlands and springs especially annual vegetation.  
 Summer annuals not indicative of Spring/Wet season*

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																																																																																											
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)																																																																																										
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)																																																																																										
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33</u> (A/B)																																																																																										
4. _____	_____	_____	_____	Prevalence Index worksheet:																																																																																											
_____ = Total Cover				Total % Cover of:	Multiply by:																																																																																										
OBL species _____				x 1 = _____																																																																																											
FACW species _____				x 2 = _____																																																																																											
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FACU species _____				x 4 = _____																																																																																											
UPL species _____				x 5 = _____																																																																																											
Column Totals:				(A) _____	(B) _____																																																																																										
Prevalence Index = B/A = _____																																																																																															
<b>Hydrophytic Vegetation Indicators:</b>																																																																																															
___ Dominance Test is >50%																																																																																															
___ Prevalence Index is ≤3.0 <sup>1</sup>																																																																																															
___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)																																																																																															
___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																																																																																															
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																																																																															
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																																																																																															
<table border="0"> <tr> <td>Herb Stratum (Plot size: <u>2 M</u>)</td> <td>Absolute % Cover</td> <td>Dominant Species?</td> <td>Indicator Status</td> <td colspan="2"></td> </tr> <tr> <td>1. <u>Lolium perenne</u></td> <td><u>5</u></td> <td></td> <td><u>FAC</u></td> <td colspan="2"></td> </tr> <tr> <td>2. <u>Juncus arcticus</u></td> <td><u>15</u></td> <td><input checked="" type="checkbox"/></td> <td><u>FACW</u></td> <td colspan="2"></td> </tr> <tr> <td>3. <u>Croton setigerus*</u></td> <td><u>10</u></td> <td><input checked="" type="checkbox"/></td> <td><u>UPL</u></td> <td colspan="2"></td> </tr> <tr> <td>4. <u>Bromus diandrus</u></td> <td><u>20</u></td> <td><input checked="" type="checkbox"/></td> <td><u>UPL</u></td> <td colspan="2"></td> </tr> <tr> <td>5. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td colspan="2"></td> </tr> <tr> <td>6. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td colspan="2"></td> </tr> <tr> <td>7. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td colspan="2"></td> </tr> <tr> <td>8. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td colspan="2"></td> </tr> <tr> <td colspan="4">_____ = Total Cover</td> <td colspan="2"></td> </tr> <tr> <td>Woody Vine Stratum (Plot size: _____)</td> <td>Absolute % Cover</td> <td>Dominant Species?</td> <td>Indicator Status</td> <td colspan="2"></td> </tr> <tr> <td>1. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td colspan="2"></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td colspan="2"></td> </tr> <tr> <td colspan="4">_____ = Total Cover</td> <td colspan="2"></td> </tr> <tr> <td>% Bare Ground in Herb Stratum <u>15</u></td> <td>% Cover of Biotic Crust <u>0</u></td> <td colspan="4"></td> </tr> </table>						Herb Stratum (Plot size: <u>2 M</u> )	Absolute % Cover	Dominant Species?	Indicator Status			1. <u>Lolium perenne</u>	<u>5</u>		<u>FAC</u>			2. <u>Juncus arcticus</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>			3. <u>Croton setigerus*</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>UPL</u>			4. <u>Bromus diandrus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>UPL</u>			5. _____	_____	_____	_____			6. _____	_____	_____	_____			7. _____	_____	_____	_____			8. _____	_____	_____	_____			_____ = Total Cover						Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status			1. _____	_____	_____	_____			2. _____	_____	_____	_____			_____ = Total Cover						% Bare Ground in Herb Stratum <u>15</u>	% Cover of Biotic Crust <u>0</u>				
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Remarks: 50/20 . 25/10  
*Croton is a summer annual that colonizes open ground. – not a good indicator for the early growing season when soils are saturated.*

**SOIL**

Sampling Point: dp11

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 3/3	100						
2-8	10YR 4/2	95	10YR 4/6	5	C	M, PL	claystone	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

Soil indicates saturation to the rootzone during the growing season

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply)**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Alluvial bench above Reservoir - LATE SEASON IS NOT saturated  
 bench adjacent to stream above Reservoir suggest high water table during the growing season

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: Sp 12  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): < 5  
 Subregion (LRR): C Lat: 38.715662 Long: -121.065230 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky silt loam NMI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>2m</u>)</b>				
1. <u>Rubus armeniacus</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Juncus arcticus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Bromus diandrus</u>	<u>10</u>		<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>80</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>		

Remarks: 50/20 = 40/16  
Presence of FACW Juncus above the stream probably not wetland Related.

**SOIL**

Sampling Point: dp12

**Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 3/3	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

No Evidence for saturation.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

no evidence for saturation - hillslope with FACw plant (perennial)  
Investigated. ;)

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 13  
 Investigator(s): Virginia Dains - Robert Hallak Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): Alluvial deposit Local relief (concave, convex, none): FLAT/<sup>Slight</sup>Concave Slope (%): 0  
 Subregion (LRR): C Lat: 38.715738 Long: -121.067685 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: A None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <i>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</i>	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<del>Tree Stratum</del>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (AB)
3. _____				
4. _____				
_____ = Total Cover				
<del>Shrub/Straw Stratum</del>				<b>Prevalence Index worksheet:</b>
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
<b>Herb Stratum</b> (Plot size: <u>2m</u> )				Column Totals: _____ (A) _____ (B)
1. <u>Lolium perenne</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Rumex (Saxifolius?) crispus</u>	<u>5</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>85</u> = Total Cover				
<del>Woody Vine Stratum</del>				<b>Hydrophytic Vegetation Indicators:</b>
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				_____ Prevalence Index is ≤3.0 <sup>1</sup>
				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
				_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks: 50/20 = 40/16

**SOIL**

Sampling Point: dp 13

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					clay loam	
2-10	10YR 4/1	95	10YR 4/6	5	C	M, PL	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply)**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Bloated Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (Inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (Inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (Inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

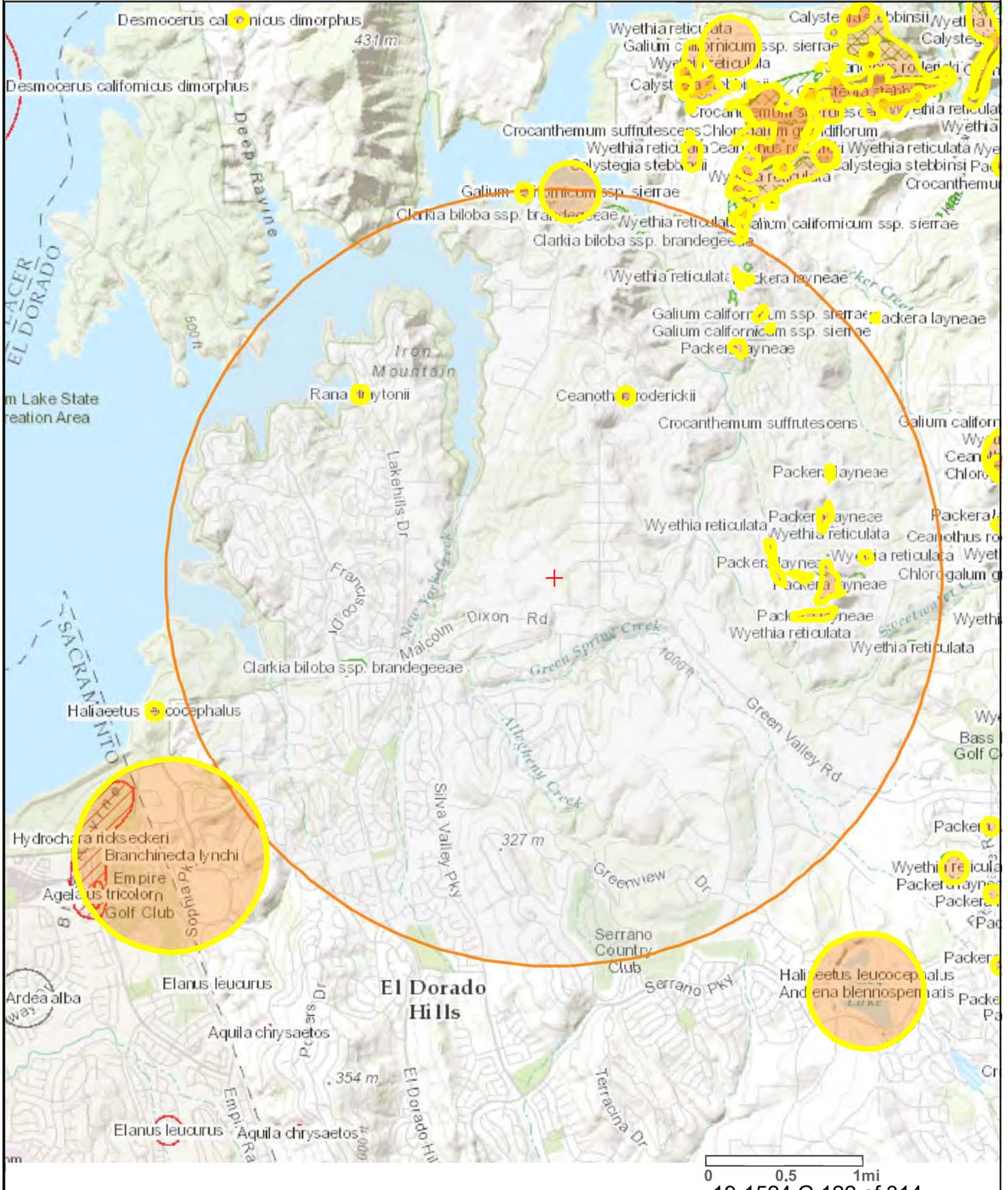
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

depression with all FAC plants in dry year. was historic streambed and has silted in.

**ATTACHMENT C – CNDDDB Map and Table**

# CALIFORNIA DEPARTMENT OF FISH and WILDLIFE BIOS



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# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** (Federal Listing Status is (Endangered or Threatened) or State Listing Status is (Endangered or Threatened or Rare)) and County is (El Dorado)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	400 400	751 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,000 1,500	13 S:8	1	1	4	0	2	0	1	7	6	1	1
<i>Ceanothus roderickii</i> Pine Hill ceanothus	G1 S1	Endangered Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	860 2,059	8 S:8	1	3	1	0	0	3	3	5	8	0	0
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	G3T2 S2	Threatened None		760 840	271 S:2	0	0	1	1	0	0	2	0	2	0	0
<i>Empidonax traillii</i> willow flycatcher	G5 S1S2	None Endangered	IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	6,250 7,500	87 S:5	2	0	0	0	0	3	3	2	5	0	0
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	G1 S1	Endangered Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBBG-UC Berkeley Botanical Garden	1,400 2,000	10 S:7	1	0	2	0	0	4	4	3	7	0	0
<i>Galium californicum ssp. sierrae</i> El Dorado bedstraw	G5T1 S1	Endangered Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	440 1,920	16 S:16	3	6	0	1	0	6	6	10	16	0	0
<i>Gulo gulo</i> California wolverine	G4 S1	None Threatened	CDFW_FP-Fully Protected IUCN_NT-Near Threatened USFS_S-Sensitive	5,500 8,100	173 S:4	0	1	0	0	0	3	4	0	4	0	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Haliaeetus leucocephalus</i> bald eagle	G5 S2	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	475 6,230	318 S:6	0	4	1	0	0	1	0	6	6	0	0
<i>Oncorhynchus clarkii henshawi</i> Lahontan cutthroat trout	G4T3 S2	Threatened None	AFS_TH-Threatened	6,280 8,400	27 S:2	0	0	1	0	1	0	1	1	1	0	1
<i>Oncorhynchus mykiss irideus</i> steelhead - Central Valley DPS	G5T2Q S2	Threatened None	AFS_TH-Threatened		31 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Packera layneae</i> Layne's ragwort	G2 S2	Threatened Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	680 2,900	48 S:34	2	12	6	2	2	10	14	20	32	2	0
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	485 4,200	1374 S:6	0	2	2	0	0	2	1	5	6	0	0
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	G1 S1	Endangered Threatened	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered USFS_S-Sensitive	3,150 9,000	664 S:54	0	7	5	1	1	40	23	31	53	1	0
<i>Riparia riparia</i> bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	2,000 6,240	296 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Rorippa subumbellata</i> Tahoe yellow cress	G1 S1	Candidate Endangered	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	6,225 7,900	28 S:20	0	6	3	0	2	9	3	17	18	1	1
<i>Strix nebulosa</i> great gray owl	G5 S1	None Endangered	CDF_S-Sensitive IUCN_LC-Least Concern USFS_S-Sensitive	2,540 4,094	75 S:5	4	0	0	0	0	1	0	5	5	0	0
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	G5T1T2 S1	None Threatened	USFS_S-Sensitive	1,150 6,200	201 S:4	0	0	0	0	0	4	4	0	4	0	0

## **APPENDIX C.4**

### **Oak Mitigation Planting Plan for Vineyards at El Dorado Hills Project (2018)**



California Tree and Landscape Consulting,



## Arborist's Report

**February 28, 2018**

**De Novo Planning Group  
1020 Suncoast Lane, Suite 106  
El Dorado Hills, CA 95762**

**Omni Financial LLC  
1260 41st Avenue, Suite O  
Capitola, CA 95010**

**Project Location  
The Vineyards at El Dorado Hills  
North of Malcolm Dixon Rd  
El Dorado Hills, CA  
APN: 126-100-24**

**Oak Woodland Canopy Analysis, Preservation, and Replacement Plan  
For Vineyards at El Dorado Hills**

**Prepared by:  
Gordon Mann, Consulting Arborist**

## **Arborist Disclosure Statement**

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

### **Assignment**

The subject site is proposed for a 42 single family home development of an approximately 114 acre parcel. The client contacted our office and requested we provide the confirmation of the oak canopy cover and verify the calculations to meet the County of El Dorado's Oak Tree requirements under General Plan Policy 7.4.4.4, Option A for Oak Woodland Resource Conservation. This report is the result of onsite inspections and review of the images and plans. The Grading, Drainage, and Tree Preservation Plan dated February 2018 were used for completing the site assessment. The purpose of this report is to identify and quantify existing oak canopy, verify the planned oak canopy removal, and verify that the planned mitigation for the project will comply with El Dorado County General Plan Policy 7.4.4.4, Option A. The site was visited on February 18, 2018 to verify the tree canopy and tree locations.

### **Assignment limits**

All the trees were observed while standing on the ground. Data collected is limited to a visual ground inspection. The aerial image was provided and integrated with the Grading and Drainage plans. Ground inspections and measurements were used to insure the accuracy of the canopy area, tree removals, and proposed planting areas. The plans were field reviewed for accuracy.

### **Current Existing Tree Status (general)**

The site is a 114 acre "L" shaped parcel. The top half of the vertical portion of the L is not proposed for development. The Oak canopy was determined to be 30.73 acres, or 27% of the site.

One acre is proposed to be removed for road and infrastructure development. 0.6 acres are proposed to be removed for residential lots, totaling 1.6 acres of oak canopy removal requiring replacement. There are 4.6 acres of available mitigation planting area present on the site.

### **Technical Recommendations**

It is recommended that all tree care follow specifications written in accordance with ANSI A-300 standards. Working on the oak trees during dormancy could help lessen the chance of insect, sun, and heat damage to the trees. It is also recommended that when root pruning, the smallest size roots as possible be pruned, cuts be performed with handsaws, loppers, or chainsaws appropriate for the size of the root being cut. The roots should be exposed by excavating prior to cutting. Roots should be pruned prior to root removal within the tree protection area to limit the damage and tearing of roots back towards the tree. Root pruning should be overseen by a qualified arborist.

Tree protection fencing shall be shown on the construction plans and be in place prior to any clearing, grading, or construction activities on the site. Tree protection shall remain in place throughout the project and shown on the landscape plans in order to protect trees during the landscaping phase of the project.

It is recommended that all planting follow the specifications and details in Appendix A and B. There are 4.6 acres identified for tree planting mitigation on the site, and all the mitigation for oak tree canopy removal will be accomplished on site.

### **General Tree Care and Maintenance**

The following information is given so that an onsite landscape manager can properly take care of the remaining protected trees, and newly planted trees. Established native oak trees in this vicinity do not like to have their roots or the surrounding soil disturbed or tampered with. Applying or having unintentional landscape water in the root zone can cause catastrophic and negative affects to most species of native oak trees. It is, therefore, recommended that a landscape be designed using drought tolerant plants that will require little to no watering after establishment. Irrigation should be delivered using an on-surface drip type system that does not require trenching to install. The plants should be spaced at least 6 feet away from the trunk of native oak trees, and the drainage from irrigation should be managed so water does not flow to the trunks of the oak trees. Trees that are growing in high use areas should be inspected by a qualified arborist on a routine basis, depending on use and tree risk. For other considerations about the native trees during changes to the site use, please discuss with a qualified arborist.

### **Canopy Preservation Plan**

The site was field verified on February 26, 2018. The aerial image and drainage plan representation of the oak canopy was confirmed. The site, canopy, proposed removal, and mitigation planting areas were calculated using computerized Geographic Information program. The El Dorado County General Plan Policy 7.4.4.4 requires tree removal to align with the limits based on existing canopy cover. This project has been under design and review must align with the El Dorado County General Plan Policy 7.4.4.4 (Option A). The required canopy mitigation is to be a 1:1 area replacement.

The trees proposed to be removed are shown on the Tree Preservation Exhibit. A total of 43 trees are proposed for removal. Twenty-Four (24) trees are growing in the road and infrastructure area. Nineteen (19) trees are proposed to be removed in the housing site areas. The total canopy area of the trees proposed for removal is 59,696 square feet or 1.6 acres.

There is an oak corridor along the west side of the property, and in the northwest corner of the property. The proposed oak removal does not impact this corridor. The proposed roads and homes are located in the sparsest oak canopy area on the property and will have minimal impact on the remaining oak canopy on the site.

The allowable removable canopy is shown on the following chart based on El Dorado County General Plan Policy 7.4.4.4 (Option A) in the chart below:

**Option A**

Percent Existing Canopy Cover	Canopy Cover to be Retained
80-100	60% of existing canopy
60-79	70% of existing canopy
40-59	80% of existing canopy
20-39	85% of existing canopy
10-19	90% of existing canopy
1-9 for parcels > 1 Acre	90% of existing canopy

The total project site area is 4,965,840 square feet or 114 acres. The existing oak canopy cover is 1,338,599 square feet, or 30.73 acres, equaling 27% existing canopy. This existing canopy percent falls into the 20 to 39 percent existing canopy cover and allows up to 15% total oak canopy removal on the site, 200,376 square feet, or 4.6 acres. The proposed plan includes the removal of 59,696 square feet or 1.6 acres of oak canopy equaling 5.2% canopy removal, which is within the allowable 15% percent. The required mitigation planting is 59,696 square feet or 1.6 acres and can be planted on site. The available mitigation planting area on the site is 200,376 square feet, 4.6 acres, and exceeds the 1.6 acres required for mitigation.

In summary:

Total square feet of the project area: 4,965,840 sq ft, 114 acres

Total square feet of oak canopy: 1,338,599 sq ft, 30.73 acres, 27% existing canopy

Total square feet of total oak canopy to be removed: 59,696 sq ft, 1.6 acres, 5.2%

Total square feet of pre-mitigated oak canopy to be removed: 0 sq. ft.

Total square feet of oak canopy required to be replaced: 59,696 sq ft, 1.6 acres 5.2%

Total current available replanting location size: 200,376 sq ft, 4.6 acres, 14.97%

The project is in compliance with the above table and EDC 7.4.4.4 Option A.

The project is in compliance with General Plan Policy 7.4.5.2 by preserving native oaks wherever possible by avoiding large expanses of oak woodland, identifying how trees in the vicinity of the

project or construction site will be protected and by following approved preservation methods specified in the mitigation measures.

It has been determined that the proposed project would result in less than significant impacts to oak woodland resources with incorporation of mitigation measures listed below.

### **Mitigation and Replanting**

Under Option A, the project applicant shall also replace woodland habitat canopy removed at a 1:1 canopy cover acreage ratio. Woodland replacement shall be based on the formula, developed by the County, that accounts for the number of trees and acreage affected, per El Dorado County's "**GENERAL PLAN POLICIES RELATED TO OAK WOODLANDS**" document. There is no additional mitigation for Heritage Trees required under Option A.

The total required mitigation area is 59,696 square feet, or 1.6 acres. Using the formula of 200 seedlings or #one container sized trees per acre, it has been determined that 320 trees will need to be planted for project acceptance, and prior to receiving a final on the property's building permit.

The replacement of the 320 trees will be planted with Blue Oak, *Quercus Douglasii*, Valley Oak, *Quercus lobata*, and Interior Live Oak, *Quercus wislizenii*, to match the species ratio being removed. The mitigation plan is to install 55 trees as available with 0-40 Blue Oak, 0-40 Valley Oak, and 0-30 Interior Live oak trees. The trees will either be grown from acorns collected on site, and be grown to at least Deepot Cells (GP352, 2-1/2 inch diameter by 10 inches deep) size or greater, or planted with local nursery stock saplings or #1 container sized plants.

There are 4.6 acres available for tree mitigation planting on the site shown as Replacement Area A, 2.03 acres, and Replacement Area B, 2.57 acres on the Tree Preservation Exhibit dated February 2018. The preferred area to place the proposed mitigation planting of 1.6 acres is in Replacement Area A located in the southeast portion of the property, shown above (north of) lots 3, 4, 5, 6, and 7 as shown on the Tree Preservation Exhibit dated February 2018.

The trees shall be evenly spaced in the available planting area in the most likely positions for growing long term oak canopy. Irrigation, maintenance, and monitoring will be performed to provide the best opportunities for successful establishment and growth of the mitigation trees. The planting spacing and quantity may be adjusted to increase the number of trees by up to 10% to assure the survival and establishment of the required number and canopy of mitigation trees.

The quality of the grown seedlings will be approved by a qualified arborist or nursery grower, and the spacing, design, and irrigation plan will be approved by a qualified arborist. Planting will be performed to the specifications included in Appendices A and B.

Appropriate reporting and validation of the successful tree establishment and growth will be provided by the Property Owner.

Please contact California Tree and Landscape Consulting, Inc., if there are questions regarding this report.

Disclaimer: I, Gordon Mann, have analyzed the situation, applied the proper method(s) utilized within the profession, and performed a reasonableness test to support the project tree related decisions. I, Gordon Mann, nor the employees or subcontractors of California Tree and Landscape Consulting, Inc., may be held liable for the misuse or misinterpretation of this report. As the author of this report, I do hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.

Respectfully submitted,



Gordon Mann

Registered Consulting Arborist #480

ISA Certified Arborist and Municipal Specialist WE-0151AM

CaUFC Certified Urban Forester #127

ISA TRAQ Qualified Tree Risk Assessor

Attachments:

Appendix A Tree Planting Specifications

Appendix B Nursery Stock and Tree and Landscape Planting

Appendix C Tree Protection

Appendix D Avoiding Damage During Construction

Tree Preservation Exhibit dated February 2018

Resume for Gordon Mann

Appendix A  
Tree Planting Specifications

Trees shall be free of major injury such as scrapes that remove greater than 20% of the bark circumference, a broken central leader, or constrictions from staking or support. The graft, if present, shall be consistent for the production of the cultivar or species. The trunk flare shall be at grade, not buried by soil, and adventitious roots shall not be growing from above the trunk flare.

The tree shall not be root bound in the container, and the trunk diameter relative to the container sizes, within the limits of American National Standards Institute (ANSI) Z-60 Nursery Standards.

Prior to acceptance, upon delivery, trees may be pulled from the container, so the rootball can be inspected for compliance with the specifications. An agreed upon maximum percent of trees may be checked for compliance. The nursery should provide post delivery care specifications to keep the trees in optimum condition until planting.

### Tree Planting

#### **1.0 INSPECT THE TREE**

- 1.1 Carefully remove the soil at the top of the container to locate the trunk flare. Check for girdling roots and damage to the root system and lower trunk.
- 1.2 Until a relationship is established with the supplying nursery, randomly select an acceptable sample for the delivery. Inspect the root system by taking the rootball out of the container, and remove all the soil from the root system. Inspect the inner roots to verify that the roots were properly pruned when moved from the initial container to the next larger size. Keep the root system moist during the check. If the roots were properly pruned during container transfer, and the roots have been kept moist, the tree can be planted as a bare root tree.
- 1.3 If the trees are acceptable, each tree shall be removed from the container prior to digging the hole, and the depth of the rootball from the trunk flare to the bottom of the rootball shall be measured. This measurement, less 1" is the depth the pedestal in the center of the planting hole shall be excavated to.

#### **2.0 DIG THE HOLE**

- 2.1 Shave and discard grass and weeds from the planting site.
- 2.2 The hole should be a minimum 3 times the diameter of the container diameter.
  - 2.2.1 Square containers shall be dug with a circular hole 3 times the container measurement.
- 2.3 Dig the hole, leaving an undisturbed pedestal in the center that the root ball will be set on.
- 2.4 The pedestal shall be excavated to the depth measurement determined above

#### **3.0 ROOT BALL PREPARATION**

- 3.1 Loosen and straighten outside and bottom roots prior to placing the rootball on the pedestal. The trunk flare (the point where the trunk meets the roots) should be 1" above ground level.
- 3.2 Winding and girdling roots shall be pruned to either the point they are perpendicular to the root ball, or a point where they can be straightened and placed perpendicular to the rootball.
- 3.3 Keep the roots moist during this process so they do not dry out.

#### **4.0 BACKFILL**

- 4.1 Hold the tree so the trunk and central leader are in a straight upright position.
- 4.2 Backfill soil with the soil you removed around the base of the pedestal and rootball no higher than 2/3, so the tree stands in the upright position
- 4.3 Tamp the soil to remove air gaps, or fill with water and allow soil to settle and drain. Continue to fill the entire hole with existing soil in layers and tamping, up to finished grade. Backfill soil shall not be placed on top of the rootball.
- 4.4 Build a berm at the outside edge of the rootball. The berm shall be a minimum 3 inches high and wide.
- 4.5 Cover the remainder of the backfill soil outside the berm with a set level of mulch (2 to 4 inches deep).

#### **5.0 STAKING**

- 5.1 Remove the nursery stake (the thin stake tied to the trunk) that is secured to the tree.
- 5.2 Install the appropriate number of stakes – for example, two stakes on the windward and leeward side of the tree, set at least 2 feet into the native soil outside the rootball.
  - 5.2.1 If the area is exceptionally windy, high traffic, or when specified, install 3 or 4 stakes spaced evenly around the circumference, outside the rootball.
- 5.3 One tie per stake shall be placed at the lowest point on the trunk where the tree crown stands upright. Ties shall be placed using a “figure 8” crossing pattern wrapped around the trunk and firmly tied or attached to the stake.
  - 5.3.1 Ties shall be loose enough so the tree crown moves up to 3 times the trunk diameter in the wind, and taut enough that the trunk does not rub the stakes during movement.
- 5.4 The stakes shall be cut off above the tie point so branches do not rub the stake above the tie point.
- 5.5 Check the stakes and ties periodically, removing them when the tree is able to stand on its own.
- 5.6 If a leader that should be vertical is drooping, the leader may be temporarily straightened using a bamboo or small diameter wood splint approximately 25% longer than the drooping section of stem, tied to the stem at the top and bottom of the splint to hold the stem vertical. The splint shall be removed prior to girdling or constricting the stem, and may be re-installed as necessary.

## **6.0 MULCH**

- 6.1 Apply a set depth (2 to 4 inches) of wood chips or other organic mulch over the planting hole excavated soil.
- 6.2 Mulch may be placed inside the berm and shall be kept at least 4” away from the trunk flare.
- 6.3 The soil area of the planting hole shall be kept clear of grass and landscape plantings.

## **7.0 WATER/IRRIGATION**

- 7.1 Apply water using a low pressure application, i.e.: trickle from a hose, soaker hose, or bubbler.
- 7.2 Use low water volume to apply the water. Add water long enough to saturate the rootball and planting area.
  - 7.2.1 Lawn sprinklers shall not be considered an acceptable method of applying irrigation to newly planted trees.
- 7.3 The initial watering frequency shall be checked by monitoring the soil moisture. Based on the temperature and humidity, learn how long the soil retains the moisture.
- 7.4 After the soil is below field capacity, and before it dries out, repeat the watering process, every so determined days.
  - 7.4.1 As the weather and seasons change, the irrigation frequency may change. This will be evaluated by checking soil moisture following water application.
    - 7.4.1.1 For example: you may learn irrigation should be applied twice a week during the fall, except in cool or rainy weather. Irrigation may need to be applied every two days during hot dry summer periods.
- 7.5 Irrigation shall be continued for the first three years after planting.
  - 7.5.1 Avoiding drying out the rootball and adjacent soil is critical for tree growth and establishment.

## **8.0 PROTECT THE TRUNK**

- 8.1 Avoid damage from mowers and string trimmers to the tender bark of the young tree.
- 8.2 Maintain a clear area free of vegetation around the trunk in the berm or basin area.
- 8.3 Keep the set depth of mulch (2 to 4 inches) coverage of the area around the tree.
- 8.4 Retain temporary low branches along the trunk to shade and feed the trunk.

## **9.0 PRUNING NEWLY PLANTED TREES**

- 9.1 Broken and dead branches shall be pruned.
- 9.2 A central leader shall be identified and retained if present. If co-dominant leaders are present, they shall be pruned to be shorter than the central leader by 20%.
- 9.3 All low temporary branches on the lower trunk shall be retained, and if needed shortened for clearance.



Detail for #1, #5 and #15 container planting stock

**10. FUTURE CARE**

10.1 During subsequent years, the berm should be enlarged or removed in order to provide water to the increasing root growth. The watering area should target new root growth and projected root growth.

10.2 Pruning should retain a dominant central leader; and retain low temporary branches until trunk bark hardens or remove before branch diameter becomes too large.

Appendix B

Nursery Stock and Tree and Landscape Planting

Nursery Stock purchase

Trees purchased for the subject project shall be the Genus, species, and cultivar specified in the purchase documents. Trees shall be grown to be free of bound root systems caused by winding roots or kinked roots from a previous smaller container. As trees are moved to larger containers, circling roots shall be either pruned to a point where they can grow straight, straightened in the new container, or removed. Kinked roots shall be pruned to a point where they will grow straight outward or downward.

The trunk and branches shall be of a structure where a central leader is defined, or the central leader can be easily selected. The competing leaders have a smaller diameter, and can be pruned shorter.

Placement of Plants

- The Project landscape and irrigation plan should avoid application of any irrigation water, or planting of landscaping requiring irrigation water, within 10 feet of the trunk of retained native oak trees. Extensive landscaping will disturb the root system and compete for available water and minerals. If plantings are necessary within 15 feet of the trunk, use drought tolerant landscaping compatible with native oaks (Hagen et al. 2007).

- Drip irrigation should be used in the vicinity of retained oak trees. No sprinklers or spray irrigation should be used where water may reach within 15 feet of the trunk.
- Project stormwater and irrigation runoff should be directed away from retained oak trees.
- The area within the dripline of retained oaks should be kept as natural and undisturbed as possible. Four inches of organic compost or mulch (i.e. natural ground tree parts and/or leaf litter) may be used to cover soil within the dripline of retained oaks. Mulch moderates soil temperature, maintains soil moisture, reduces soil compaction, enhances root growth, and reduces competition with weeds.

## Appendix C

### Tree Protection

The edge of the site outside of the construction area protecting outside trees shall be fenced off with construction fencing, either temporary orange fence or chain link fence. The fence shall be placed as far from the trees as possible, targeting 1 foot outside the dripline. If the fence cannot be placed outside of the dripline, the project arborist shall determine if the distance is acceptable or some other soil protection is necessary. The fence will be marked with weather appropriate signage clearly stating the area as "Protected! Do not enter! Tree Protection Zone." Sign(s) will be placed at least every 35' of fence line.

No storage of supplies or materials, parking, or other construction activity shall occur within the fenced area. If a construction activity is required within the construction area, specific specifications and mitigation shall be written to cover the work, and the fencing may be entered during the necessary construction activity, then the fencing shall be replaced after the activity is completed for the day.

The construction protection shall remain in place until the project is completed, including landscape activities. Landscape activities shall have specifications that protect the trees during the landscape activities.

Any bare soil around protected trees should be covered with a 4-inch layer of mulch consisting of ground-up tree parts.

If the protected trees appear to show signs of yellowing leaves, dead leaves, or other abnormal appearance, contact the project arborist for inspection and mitigation.

#### Tree Protection Zone Specifications:

- A tree protection zone (TPZ) shall be established around retained trees. The TPZ shall extend 1 foot beyond the dripline where possible given approved grading limits. The TPZ around some trees will be much smaller. In a smaller TPZ, the soil protection is more important for the remaining root system.
- For protection from compaction from people and light vehicles, four inches of wood chip mulch shall be placed and maintained over the soil in the TPZ.
- For protection from compaction from heavier vehicles, six inches of wood chip mulch shall be placed and maintained over the soil in the TPZ.
- For protection from compaction from very large heavy equipment, six inches of wood chip mulch shall be placed and maintained over the soil, and steel plates or 1" thick plywood boards shall be placed over the mulch in the TPZ.
- The TPZ shall be marked with minimum 4-foot high orange construction fence hung on posts (such as T-posts) before clearing, grading, or construction occurs. The fence shall not be supported by trees or other vegetation. The fence shall remain in place until construction is complete. There may be a change in the tree protection plan for the landscape construction, as the landscape may take place within the TPZ.

- There shall be no driving, parking, or storage of supplies or equipment within the TPZ. Entry of construction personnel into the TPZ is not allowed except for maintenance of the fence or other activities undertaken for the protection of trees. The tree canopy along the TPZ boundary shall be inspected prior to vegetation clearing in the area of grading.
- The canopy of retained trees that overhangs the area to be graded shall be pruned to the minimum height required for construction.

### Long Term Landscape Maintenance Plan and Specifications

#### General

This plan and specifications are intended to promote the optimum landscape growth and lifespan. Individual tree planting in specific sites in the parking lot are intended to provide a large shade canopy over time covering 50% or greater of the parking lot. The border and natural screening plantings are overplanted and intended to fill the space initially, and have the weaker trees removed over time, to create the space and site resources necessary for the remaining trees. Trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. As trees are thinned, they may be transplanted or removed, as best suited to the remaining trees on the site.

These trees shall be pruned to establish a central leader, to provide the best structure by managing size relationships between parent and subordinate trunk and branches, and to encourage growth into a large shade canopy. These trees shall not be topped or rounded over. Trees may have competing leaders headed back to promote the strong central leader necessary to eliminate co-dominant stems and weak branching.

#### Design Intent

The trees planted around the perimeter and alongside the sidewalk or street are intended to replicate natural areas and to screen the project and adjacent properties. The native oaks shall be more tightly spaced at planting and thinned over time to promote the growth of the final or climax trees on the site. The thinning for spacing shall be performed as the trees get larger and their crowns begin to overlap. When the desired tree crowns are being impacted by an adjacent tree, the adjacent tree should either be pruned or removed, to provide the optimum screening while enhancing the desired tree growth. Pruning shall retain a dominant central leader and for decurrent tree structures, remove competing leaders, and maintain the appropriate size relationships between parent and subordinate trunk and branches.

#### Pruning Small Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees up to six inches in diameter, all dead branches greater than one-half inch diameter shall be removed. All weakly attached branches and potential co-dominant branches shall either be reduced by at least 20% or be removed, as most appropriate for the long term structure of the tree. The weakest or most damaged branch of a pair or group of rubbing branches shall be shortened to avoid rubbing, or removed. All temporary branches along the trunk should be retained and shortened to obtain necessary clearance. When either temporary branches exceed one-inch diameter, or the trunk forms mature bark, the temporary branches should be removed.

Stakes shall be installed as necessary to support a straight growing tree, and reduce crooked growth caused by high wind. The trunk shall be supported at the lowest point to keep the crown supported straight, and the portions of the stake above the tie point cut off to avoid rubbing branches. After the tree becomes firmly rooted, and the stake is no longer necessary to support the tree, the stakes shall be removed.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum

removed during any planned pruning cycle. Follow-up pruning for structure or clearance on young trees can be performed at any time if pruning small amounts of foliage (up to 10%) and retaining the central leader and branch size relationships.

### Pruning Large Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees larger than six inches in diameter, all dead branches greater than one-inch diameter shall be removed. Long heavy branches that are either growing flat or bending down shall have approximately 15% of the end weight reduced, accomplished by a combination of pruning the downward growing branches, shortening long tips, and thinning endweights. If any structural issues are observed by the climber working in the tree, they shall notify the property manager immediately to discuss the tree's needs.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle.

Any special site issues for utility clearance or conflicts with other objects shall be managed by early pruning to direct growth away from the target lines, overhead lights, flags, or buildings.

### Thinning of Dense Planting

Many landscape plantings and natural landscape areas are over-planted by installing a greater number of plants at closer spacing than optimum for the full-sized plants. Over time, plants will grow into each other, the crowns will conflict, and the spacing will need to be corrected. Correct spacing is obtained by removing the least desirable plants to meet the final spacing target, within reasonable tolerances.

If conflicting plants are all healthy, it won't matter which plants are removed to achieve the spacing distances. Spaced thinning should be performed before the foliar crowns are intertwined or overlapping. The thinning may be performed over two or three cycles as the trees grow over time, depending on the density and desired final spacing.

The trees initially will be planted on approximate 10-foot to 15-foot centers, with the long term spacing to be approximately 20 foot to 25 foot centers. The healthiest and best specimens should be retained on site. As trees are thinned, they may be transplanted or removed, as best suits the remaining trees on the site.

### Root Pruning

Where excavation will occur adjacent to trees, the roots 2 inches in diameter and greater shall be cut at the edge of the excavation trench closest to the tree prior to excavating the roots. The roots shall be cut with the appropriate sharp tool for the size of the root. Tools include hand pruners, loppers, hand saw, chain saw, axe, skill saw, or reciprocating saw. This will limit the damage to the roots at the point of cutting, and avoid roots being torn or ripped back towards the tree beyond the trench wall.

Exposed roots shall be protected after trenching by covering the visible roots with either moist soil or moist material such as burlap. The moist material may be covered with a tarp to reduce evaporation, as the moist soil or material should be kept moistened on a regular basis.

**Appendix D****Avoiding Tree Damage During Construction**

Copied and edited from the 's tree protection guidelines.

As cities and suburbs expand, wooded lands are being developed into commercial and residential sites. Homes are constructed in the midst of trees to take advantage of the aesthetic and environmental value of the wooded lots. Wooded properties can be worth as much as 20 percent more than those without trees, and people value the opportunity to live among trees.

Unfortunately, the processes involved with construction can be deadly to nearby trees. Unless the damage is extreme, the trees may not die immediately but could decline over several years. With this delay in symptom development, you may not associate the loss of the tree with the construction.

It is possible to preserve trees on building sites if the right measures are taken. The most important step is to hire a professional arborist during the planning stage. An arborist can help you decide which trees can be saved and can work with the builder to protect the trees throughout each construction phase.

**How Trees Are Damaged During Construction**

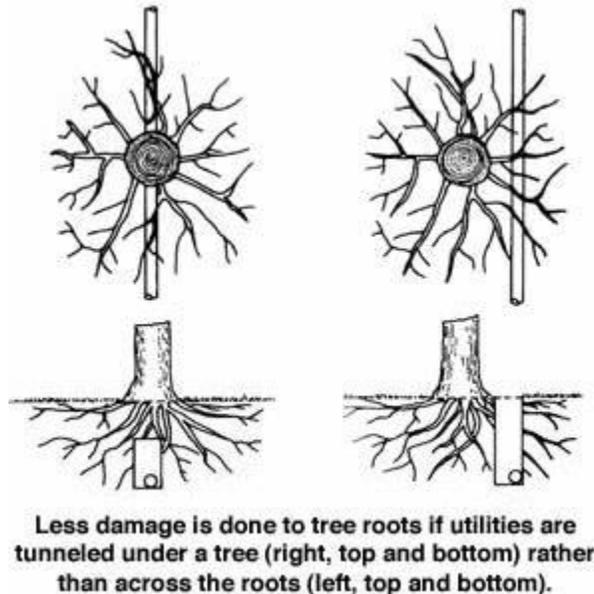
**Physical Injury to Trunk and Crown.** Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

**Cutting of Roots.** The digging and trenching that are necessary to construct a house and install underground utilities will likely sever a portion of the roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 6 to 24 inches of the soil. In a mature tree, the roots extend far from the trunk. In fact, roots typically are found growing a distance of one to three times the height of the tree. The amount of damage a tree can suffer from root loss depends, in part, on how close to the tree the cut is made. Severing one major root can cause the loss of 5 to 20 percent of the root system.



The roots of a tree extend far from the trunk and are found mostly in the upper 6 to 12 inches of soil.

Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.



Less damage is done to tree roots if utilities are tunneled under a tree rather than across the roots.

**Soil Compaction.** An ideal soil for root growth and development is about 50 percent pore space. These pores—the spaces between soil particles—are filled with water and air. The heavy equipment used in construction compacts the soil and can dramatically reduce the amount of pore space. This compaction not only inhibits root growth and penetration but also decreases oxygen in the soil that is essential to the growth and function of the roots, and water infiltration.

**Smothering Roots by Adding Soil.** Most people are surprised to learn that 90 percent of the fine roots that absorb water and minerals are in the upper 6 to 12 inches of soil. Roots require space, air, and water. Roots grow best where these requirements are met, which is usually near the soil surface. Piling soil over the root system or increasing the grade smothers the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

**Exposure to the Elements.** Trees in a forest grow as a community, protecting each other from the elements. The trees grow tall, with long, straight trunks and high canopies. Removing neighboring trees or opening the shared canopies of trees during construction exposes the remaining trees to sunlight and wind. The higher levels of sunlight may cause sunscald on the trunks and branches. Also, the remaining trees are more prone to breaking from wind or ice loading.

### Getting Advice

Hire a professional arborist in the early planning stage. Many of the trees on your property may be saved if the proper steps are taken. Allow the arborist to meet with you and your building contractor. Your arborist can assess the trees on your property, determine which are healthy and structurally sound, and suggest measures to preserve and protect them.

One of the first decisions is determining which trees are to be preserved and which should be removed. You must consider the species, size, maturity, location, and condition of each tree. The largest, most mature trees are not always the best choices to preserve. Younger, more vigorous trees usually can survive and adapt to the stresses of construction better. Try to maintain diversity of species and ages. Your arborist can advise you about which trees are more sensitive to compaction, grade changes, and root damage.

## Planning

Your arborist and builder should work together in planning the construction. The builder may need to be educated regarding the value of the trees on your property and the importance of saving them. Few builders are aware of the way trees' roots grow and what must be done to protect them.

Sometimes small changes in the placement or design of your house can make a great difference in whether a critical tree will survive. An alternative plan may be more friendly to the root system. For example, bridging over the roots may substitute for a conventional walkway. Because trenching near a tree for utility installation can be damaging, tunneling under the root system may be a good option.

## Erecting Barriers

Because our ability to repair construction damage to trees is limited, it is vital that trees be protected from injury. The single most important action you can take is to set up construction fences around all of the trees that are to remain. The fences should be placed as far out from the trunks of the trees as possible. As a general guideline, allow 1 foot of space from the trunk for each inch of trunk diameter. The intent is not merely to protect the aboveground portions of the trees but also the root systems. Remember that the root systems extend much farther than the drip lines of the trees.

Instruct construction personnel to keep the fenced area clear of building materials, waste, excess soil, and equipment. No digging, trenching, or other soil disturbance such as driving vehicles and equipment over the soil should be allowed in the fenced area.

Protective fences should be erected as far out from the trunks as possible in order to protect the root system prior to the commencement of any site work, including grading, demolition, and grubbing.

## Limiting Access

If at all possible, it is best to allow only one access route on and off the property. All contractors must be instructed where they are permitted to drive and park their vehicles. The construction access drive should be the route for utility wires; underground water, sewer, or storm drain lines; roadways; or the driveway.



**Protective fences should be erected as far out from the trunks as possible in order to protect the root systems.**

Specify storage areas for equipment, soil, and construction materials. Limit areas for burning (if permitted), cement wash-out pits, and construction work zones. These areas should be away from protected trees.

### Specifications

Specifications are to be put in writing. All of the measures intended to protect your trees must be written into the construction specifications. The written specifications should detail exactly what can and cannot be done to and around the trees. Each subcontractor must be made aware of the barriers, limitations, and specified work zones. It is a good idea to post signs as a reminder.

Fines and penalties for violations should be built into the specifications. Not too surprisingly, subcontractors are much more likely to adhere to the tree preservation clauses if their profit is at stake. The severity of the fines should be proportional to the potential damage to the trees and should increase for multiple infractions.

### Maintaining Good Communications

It is important to work together as a team. You may share clear objectives with your arborist and your builder, but one subcontractor can destroy your prudent efforts. Construction damage to trees is often irreversible.

Visit the site at least once a day if possible. Your vigilance will pay off as workers learn to take your wishes seriously. Take photos at every stage of construction. If any infraction of the specifications does occur, it will be important to prove liability.

### Final Stages

It is not unusual to go to great lengths to preserve trees during construction, only to have them injured during landscaping. Installing irrigation systems and roto-tilling planting beds are two ways the root systems of trees can be damaged. Remember also that small increases in grade (as little as 2 to 6 inches) that place additional soil over the roots can be devastating to your trees. ANSI A300 Standards Part 5 states that tree protection shall be in place for the landscape phase of the site

development. Landscape tree protection may be different than other construction process tree protection, and a conference with the landscape contractor should be held prior to the commencement of the landscape work. Careful planning and communicating with landscape designers and contractors is just as important as avoiding tree damage during construction.

### Post-Construction Tree Maintenance

Your trees may require several years to adjust to the injury and environmental changes that occur during construction. The better construction impacts are avoided, the less construction stress the trees will experience. Stressed trees are more prone to health problems such as disease and insect infestations. Talk to your arborist about continued maintenance for your trees. Continue to monitor your trees, and have them periodically evaluated for declining health or safety hazards.

Despite the best intentions and most stringent tree preservation measures, your trees still might be injured from the construction process. Your arborist can suggest remedial treatments to help reduce stress and improve the growing conditions around your trees. In addition, the International Society of Arboriculture offers a companion to this brochure titled "Treatment of Trees Damaged by Construction".

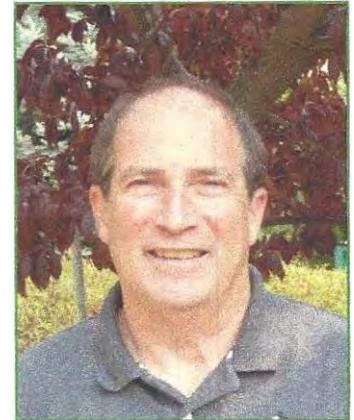


# California Tree and Landscape Consulting, Inc.

## GORDON MANN

### EDUCATION AND QUALIFICATIONS

- 1977 Bachelor of Science, Forestry, University of Illinois, Champaign.
- 1982 - 1985 Horticulture Courses, College of San Mateo, San Mateo.
- 1984 Certified as an Arborist, WE-0151A, by the International Society of Arboriculture (ISA).
- 2004 Certified as a Municipal Specialist, WE-0151AM, by the ISA.
- 2011 Registered Consulting Arborist, #480, by the American Society of Consulting Arborists (ASCA).
- 2003 Graduate of the ASCA Consulting Academy.
- 2006 Certified as an Urban Forester, #127, by the California Urban Forests Council (CaUFC).
- 2011 TRACE Tree Risk Assessment Certified, continued as an ISA Qualified Tree Risk Assessor (T.R.A.Q.).



### PROFESSIONAL EXPERIENCE

- 2016 – Present CALIFORNIA TREE AND LANDSCAPE CONSULTING, INC (CalTLC). President and Consulting Arborist.  
Auburn. Mr. Mann provides consultation to private and public clients in health and structure analysis, inventories, management planning for the care of trees, tree appraisal, risk assessment and management, and urban forest management plans.
- 1986 - Present MANN MADE RESOURCES. Owner and Consulting Arborist. Auburn.  
Mr. Mann provides consultation in municipal tree and risk management, public administration, and developing and marketing tree conservation products.
- 2015 – 2017 CITY OF RANCHO CORDOVA, CA. Contract City Arborist.  
Mr. Mann serves as the City's first arborist, developing the tree planting and tree maintenance programs, performing tree inspections, updating ordinances, providing public education, and creating a management plan,
- 1984 – 2007 CITY OF REDWOOD CITY, CA. City Arborist, Arborist, and Public Works Superintendent.  
Mr. Mann developed the Tree Preservation and Sidewalk Repair Program, supervised and managed the tree maintenance program, performed inspections and administered the Tree Preservation Ordinance. Additionally, he oversaw the following Public Works programs: Streets, Sidewalk, Traffic Signals and Streetlights, Parking Meters, Signs and Markings, and Trees.
- 1982 – 1984 CITY OF SAN MATEO, CA. Tree Maintenance Supervisor.  
For the City of San Mateo, Mr. Mann provided supervision and management of the tree maintenance program, and inspection and administration of the Heritage Tree Ordinance.
- 1977 – 1982 VILLAGE OF BROOKFIELD, IL. Village Forester.  
Mr. Mann provided inspection of tree contractors, tree inspections, managed the response to Dutch Elm Disease. He developed an in-house urban forestry program with leadworker, supervision, and management duties to complement the contract program.
- 1979 - Present INTERNATIONAL SOCIETY OF ARBORICULTURE. Member.
  - Board of Directors (2015 - Present)

- True Professional of Arboriculture Award (2011); In recognition of material and substantial contribution to the progress of arboriculture and having given unselfishly to support arboriculture.

1982 - Present WESTERN CHAPTER ISA (WCISA). Member.

- Chairman of the Student Committee (2014 - 2017)
- Member of the Certification Committee (2007 - Present)
- Chairman of the Municipal Committee (2009 - 2014) • Award of Merit (2016) In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.
- Annual Conference Chair (2012)
- Certification Proctor (2010 – Present)
- President (1992 - 1993)
- Award of Achievement and President's Award (1990)

1985 - Present CALIFORNIA URBAN FORESTS COUNCIL (CaUFC). Member; Board Member (2010 - Present)

1985 - Present SOCIETY OF MUNICIPAL ARBORISTS (SMA). Member. e Legacy Project of the Year (2015) o In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.

- Board Member (2005 - 2007)

2001 - Present AMERICAN SOCIETY OF CONSULTING ARBORISTS.  
Member. e Board of Directors (2006 - 2013)

- President (2012)

2001 - Present CAL FIRE. Advisory Position.

- Chairman of the California Urban Forestry Advisory Committee (2014 - 2017)

2007 – Present AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI): A300 TREE MAINTENANCE  
STANDARDS

COMMITTEE. SMA Representative and Alternate.

- Alternative Representative for SMA (2004 - 2007; 2012 - Present)
- Representative for SMA (2007 - 2012)

2007 - Present SACRAMENTO TREE FOUNDATION. Member and Employee.

- Co-chair/member of the Technical Advisory Committee (2012 - Present)
- Urban Forest Services Director (2007 - 2009) e Facilitator of the Regional Ordinance Committee (2007 - 2009)
- 1988 - 1994 TREE CLIMBING COMPETITION.
  - Chairman for Northern California (1988 - 1992)
  - Chairperson for International (1991 - 1994)

#### PUBLICATIONS AND LECTURES

Mr. Mann has authored numerous articles in newsletters and magazines such as Western Arborist, Arborist News, City Trees, Tree Care Industry Association, Utility Arborists Association, CityTrees, and Arborists Online, covering a range of topics on Urban Forestry, Tree Care, and Tree Management. He has developed and led the training for several programs with the California Arborist Association. Additionally, Mr. Mann regularly presents at numerous professional association meetings on urban tree management topics.

**Assumptions and Limiting Conditions**

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of the those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

**Certificate of Performance**

I have personally inspected the trees and site referred to in this report, and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and Certified Arborist. I am also a member in good standing of the American Society of Consulting Arborists. Gordon Mann has been involved in the practice of arboriculture and the care and study of trees for over 37 years.

Signed:



Gordon Mann

Date: February 28, 2018

## **APPENDIX C.5**

### **Biological & Wetlands Resources Assessment (2018)**

# **Biological & Wetlands Resources Assessment**

of the

## **Vineyards at El Dorado Hills Tentative Map Residential Project Area**

**(APN 126-100-24)**

**Malcom Dixon Road, El Dorado Hills  
El Dorado County, California**

*Prepared For:*

**Orbis Financial  
1260 41st Ave., Suite O  
Capitola CA 95010**

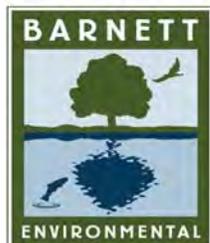
April 27, 2018

*Prepared By*

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## 1.0 Introduction

Barnett Environmental has updated our October 2015 *Jurisdictional Wetland Delineation & Biological Resources Assessment* Report for CEQA evaluation on behalf of the Orbis Financial.

### 1.1 Location

The 113.11-acre Tentative Map (TM16-1528) area (APN 126-100-24) is located north of Malcom Dixon Road in El Dorado Hills, California, in Section 14 of Township 10 North, Range 8 East, of the Clarksville, California 7.5-minute USGS quadrangle (Figure 1). The Study Area ranges in elevation from approximately 680 to 880 feet above mean sea level and is geographically situated at approximately 38°43'10" North latitude and 121°4'00" West longitude, within the South Fork American River Watershed (Hydrologic Unit Code 18020129).

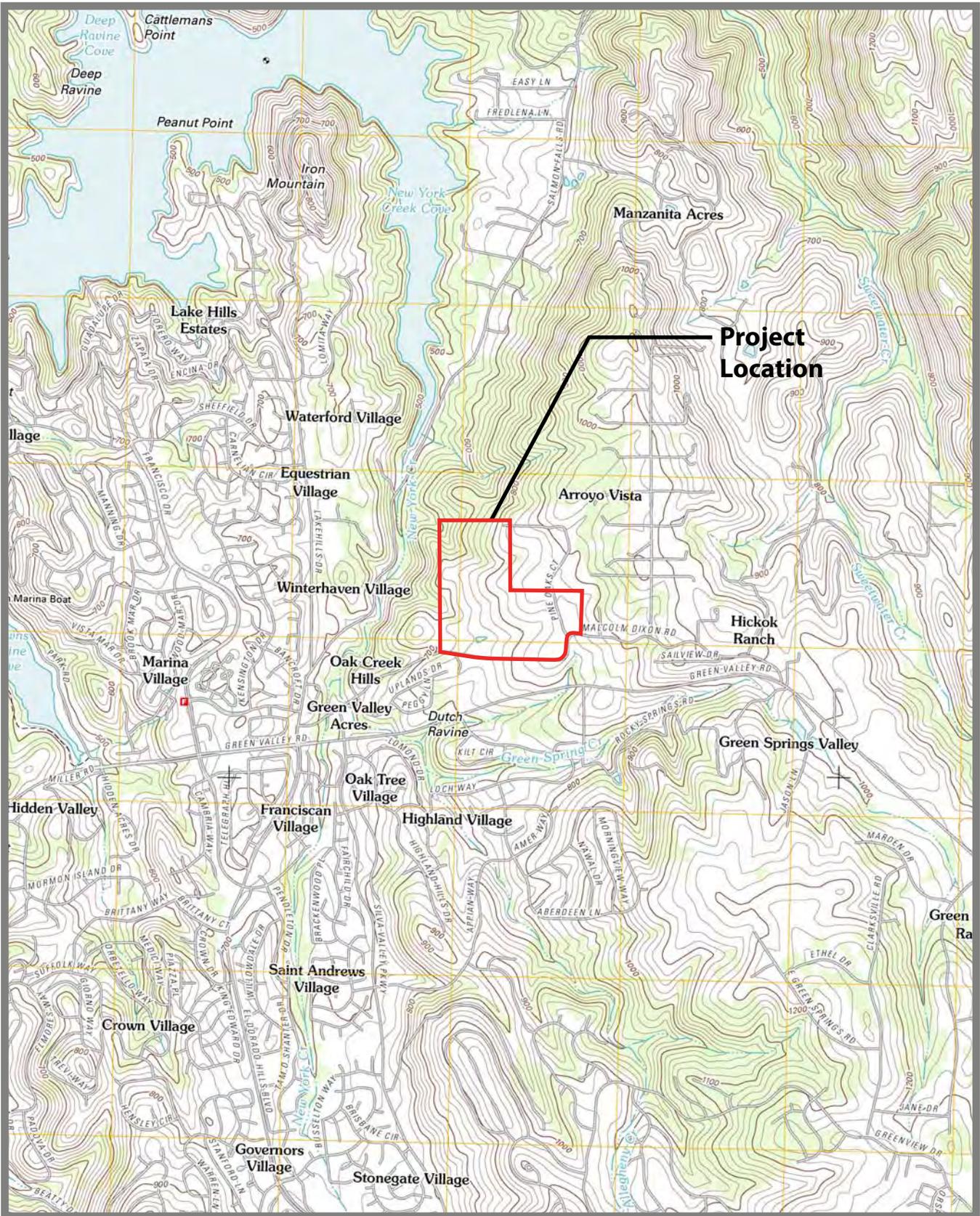
### 1.2 Project Description

The proposed project is approximately 114 acres of non-native annual grasslands, blue oak woodlands and savannas, montane hardwood (black oak woodland), hardwood-conifer (black oak – gray pine woodland), and riparian habitat. The Tentative Map Area is designated as Low Density Residential (LDR) and zoned as Estate Residential – acre (RE-5) in the (July 2004) El Dorado County General Plan. The Applicant proposes to develop 42 single-family residential lots on approximately 42 acres (Figure 9). Each of the 42 residential lots will be a minimum of one-acre in size, ranging from 43,560 to 46,562 square feet. The remaining 72 acres would include 6.22 acres of internal roadway access and approximately 66 acres contained in five Open Space parcels that avoid impacts to existing waters and wetlands. Open Space areas would serve a dual purpose of providing passive and active recreational amenities to residents while also protecting natural resources. Recreational amenities would include bike trails, designated areas for hobby or small-scale commercial vineyard cultivation, and open areas for non-specific recreation, as well as other uses that may be proposed in the future.

### 1.3 Purpose of Report

- Identify and describe vegetation communities present;
- Record all plant and animal species observed during the field survey(s);
- Evaluate and identify federal, state, and local regulated sensitive habitats and special status plant and animal species that may occur in the Study Area and could be affected by project activities; and
- Provide conclusions and recommendations for mitigating potential adverse impacts to identified resources.

C:\Users\Chuckles\Dropbox\Barnett Environmental\Projects\Vineyards @ EDH



Source: USGS 7.5-Minute Series Topographic Map - Clarksville Quadrangle

# FIGURE 1: VICINITY MAP

VINEYARD ESTATES • EL DORADO COUNTY, CALIFORNIA

Not to Specific Scale



19-1524 G-151 of 314

## 2.0 Regulatory Setting

The following federal laws, regulations and/or policies provide the legal framework guiding the protection of biological resources. We have included those laws most relevant to biological and wetland resources in and around the Study Area.

### 2.1 Relevant Federal Laws & Regulations

#### Federal Endangered Species Act (FESA)

The FESA, enacted in 1973, prohibits the taking, possession, sale, or transport of endangered species. Under the FESA, the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered. FESA is administered by both the National Marine Fisheries Service (NMFS) and the U.S. Fish & Wildlife Service (USFWS). NMFS is accountable for animals that are threatened or endangered (16 United States Code [USC] 1533[c]) and spend most of their lives in marine waters, including marine fish, most marine mammals, and anadromous fish such as Pacific salmon. The USFWS is accountable for all other federally-listed plants and animals.

Pursuant to the requirements of FESA, a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species could be present in the Permit Area and whether the project will have a potentially significant impact on such species. In addition, federal agencies are required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]).

Projects that would result in a “take” of any federally-listed threatened or endangered species are required to obtain authorization from NMFS and/or USFWS through either Section 7 (interagency consultation) or section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project. The Section 7 authorization process is used to determine if a project with a federal nexus would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species. The Section 10(a) process allows take of endangered species or their habitat in non-federal activities.

#### Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10.13. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors).

## **Bald and Golden Eagle Protection Act**

The federal Bald and Golden Eagle Protection Act regulates or prohibits taking, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). "Take" includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb (16 U.S.C. 668c; 50 CFR 22.3).

## **Federal Clean Water Act (CWA)**

### ***Section 404***

Section 404 of the CWA identifies the U.S. Army Corps of Engineers (USACE) as the principal authority to regulate activity that could discharge fill or dredge material or otherwise adversely modify wetlands or Waters of the U.S. (WOUS). The USACE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function. U.S. Congress has authorized the Environmental Protection Agency (EPA) to have a specific oversight role over USACE's authority.

### ***Section 401***

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, as well as the Porter-Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy.

The CWA requires that an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) first obtain a certificate from the appropriate state agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the SWRCB to the nine regional boards. The Central Valley Regional Water Quality Control Board (CVRWQCB) is the appointed authority for Section 401 compliance in the project site. A request for certification or waiver is submitted to the regional board at the same time an application is filed with the USACE. The regional board has 60 days to review the application and act on it. Because no USACE permit is valid under the CWA unless "certified" by the state, these boards may effectively veto or add conditions to any USACE permit.

## **2.2 Relevant State Laws & Regulations**

### **California Endangered Species Act (CESA)**

The CESA was enacted in 1984. Under the CESA, the California Fish and Wildlife Commission (CFWC) has the responsibility for maintaining a list of threatened and endangered species, while The California Department of Fish & Wildlife (CDFW) is responsible for enforcement. CDFW also maintains lists of species of special concern. A Species of Special Concern (CSC) is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, in its primary seasonal or breeding

role;

- is listed as Federally-, but not State-, threatened or endangered;
- meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (nonscyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

CESA prohibits the take of California listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions. Pursuant to the requirements of CESA, a State agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present in the project site and determine whether the project would have a potentially significant impact on such species. In addition, CDFW encourages consultation on any project that could affect a listed or candidate species.

### **California Fish and Game Code – Sections 3503, 3503.5, 3513**

The California Fish and Game Code, Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act.

### **California Fish and Game Code – Sections 1600-1616**

Under Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the "... *bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit ...*" (Section 1601). In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider. The CDFW also derives its authority to oversee activities that affect wetlands from state legislation. This authority includes Sections 1600-1616 of the Fish and Game Code (lake and streambed alteration agreements), Section 30411 of the California Coastal Act (CDFW becomes the lead agency for the study and identification of degraded wetlands within the Coastal Zone), CESA (protection of state listed species and their habitats - which could include wetlands), and the Keene-Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, the CDFW asserts authority over wetlands within the state either through review and comment on USACE Section 404 permits, review and comment on CEQA documents, preservation of state listed species, or through stream and lakebed alteration agreements.

## **Fish and Game Code – Sections 1900-1913**

These Sections of the Fish and Game Code embody the Native Plant Protection Act, which is intended to preserve, protect, and enhance endangered or rare native plants in the state. The act directs CDFW to establish criteria for determining what native plants are rare or endangered. Under Section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. Under the act, CDFW may adopt regulations governing the taking, possessing, propagation or sale of any endangered or rare native plant.

Section 1913 of that Act allows landowners in conducting certain activities to take actions that will destroy rare or endangered plants, provided that, where the Department of Fish and Game (DFG) has previously notified the owner “that a rare or endangered plant is growing” on his or her land, the owner notifies CDFW “at least 10 days in advance of hanging the land” to allow the state agency to come and “salvage” the plants. Subject to this requirement, section 1913 states that “the presence of rare or endangered plants” on a property shall not restrict (1) timber operations conducted pursuant to an approved timber harvest plan, (2) “required mining assessment work pursuant to federal or state mining laws,” (3) “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, other right-of-way by the owner of the land or his agent,” or (4) “the performance by a public agency or publicly or privately owned public utility of its obligation to provide service to the public.”

## **California Fish and Game Code – Sections 3511, 4700, 5050, and 5515**

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as “fully protected.” Fully protected species, or parts thereof, may not be taken or possessed at any time, and no provision of the CFWC or any other law may be construed to authorize the issuance of permits or licenses to take any fully protected species. No such permits or licenses heretofore issued may have any force or effect for any such purpose, except that the CFGC may authorize the collecting of such species for necessary scientific research. Legally imported and fully protected species or parts thereof may be possessed under a permit issued by CDFW.

## **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act established the SWRCB and each Regional Water Quality Control Board (RWQCB) as the principal state agencies for coordinating and controlling water quality in California. Responsibility for the protection of water quality in California rests with the SWRCB and nine RWQCBs. The SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. Pursuant to the Act, each of California’s nine regional boards must prepare and periodically update basin plans that set forth water quality standards for surface and groundwater, as well as actions to control point and non-point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to achieve wetlands protection through enforcement of water quality standards.

The Porter-Cologne Water Quality Control Act provides that “All discharges of waste into the waters of the State are privileges, not rights.” Waters of the State are defined in Section 13050(e) of the Porter-Cologne Water Quality Control Act as “...any surface water or groundwater, including saline waters, within the boundaries of the state.” All dischargers are subject to regulation under the Porter-Cologne Water Quality Control Act, including both point and nonpoint source dischargers. The RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction, which would include the project site. As noted above, the RWQCB is the appointed authority for Section 401 compliance in the project site. If the USACE determines that they have no regulatory authority on the project site and they also determine that a CWA Section 404 permit is not required, the project proponent could still be responsible for obtaining the appropriate CWA Section 401 permit or waiver from RWQCB for impacts to Waters of the State.

### **California Environmental Quality Act**

Although specific federal and state statutes protect threatened and endangered species, California Environmental Quality Act (CEQA) Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals, and allows a public agency to undertake a review to determine if a significant effect on a species that has not yet been listed by either the USFWS or CDFW (i.e., species of concern) would occur. Whether a species is rare, threatened, or endangered can be legally significant because, under CEQA Guidelines Section 15065, an agency must find an impact to be significant if a project would “substantially reduce the number or restrict the range of an endangered, rare, or threatened species.” Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

### **El Dorado County General Plan**

El Dorado County General Plan Policy 7.3.3.5 establishes that rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

### **El Dorado County Oak Tree Ordinance**

El Dorado County Ordinance No. 5061 (2017) establishes new standards for implementing the County’s Oak Resources Management Plan (ORMP) in compliance with General Plan Policy 7.4.4.4 and Implementation Measure CO-P. Pursuant to Section 130.10.040.C of the Zoning Ordinance, projects in progress do not need to comply with this new ordinance, but instead should comply with the 2004 El Dorado County General Plan Policy 7.4.4.4, requiring 200 one-gallon oak trees per acre of impact to existing oak canopy.

## El Dorado County Site Planning and Project Design Standards

Title 13, Section 130.30.030 of the county's site planning and design standards requires the following:

- d. Ministerial development, including single family dwellings and accessory structures, shall be set back a distance of 25 feet from any intermittent stream, wetland or sensitive riparian habitat, or a distance of 50 feet from any perennial lake, river or stream. This standardized setback may be reduced, or grading within the setback may be allowed if a biological resource evaluation is prepared which indicates that a reduced setback would be sufficient to protect the resources.
- e. All discretionary development which has the potential to impact wetlands or sensitive riparian habitat shall require a biological resource evaluation to establish the area of avoidance and any buffers or setbacks required to reduce the impacts to a less than significant level. Where all impacts are not reasonably avoided, the biological resource evaluation shall identify mitigation measures that may be employed to reduce the significant effects. These mitigation measures may include the requirement for compliance with the mitigation requirements of a state or federal permit, if required for the proposed development activity.
- f. Any setback or buffer required by this subsection shall be measured from the ordinary high-water mark of a river, perennial or intermittent stream, and the ordinary high water mark or spillway elevation of a lake or reservoir.
- g. Except where otherwise provided in this section, filing, grading, excavating, or obstructing streambeds is prohibited except where necessary for placement of storm drain and irrigation outflow structures approved by the county; placement of public and private utility lines; construction of bridges and connecting roadways; maintenance activities necessary to protect public health and safety; and creek restoration and improvement projects.

### 3.0 Methodology

We queried both the U.S. Fish & Wildlife Service's *National Wetland Inventory* (NWI; Figure 2) and EcoAtlas' *California Aquatic Resource Inventory* (CARI; Figure 3) to determine whether any wetlands or "other waters of the U.S." or "waters of the State" had been historically recorded on or around the site. We updated ECORPS Consulting, Inc. 2008, as well as, Barnett's 2015 *Jurisdictional Wetland Delineation & Biological Resources Assessment* of the Study Area in accordance with the 1987 U.S. Army Corps of Engineers (Corps) *Wetlands Delineation Manual* and its 2008 *Arid West Region Regional*. We prepared the current and previous (2015) report in accordance with the Sacramento District U.S. Army Corps of Engineers' January 2016 *Minimum Standards for Acceptance of Preliminary Wetlands Delineations*.

We performed a Level 3, routine onsite determination – as defined in the 1987 Wetlands Delineation Manual – that evaluates three parameters that identify and determine the boundaries of jurisdictional wetlands and "other waters of the U.S." including: (1) the dominance of wetland

vegetation; (2) the presence of hydric soils; and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. We also referenced:

1. The Jepson Manual: Higher Plants of California to identify vascular plant species observed during the field delineation;
2. The National List of Plant Species That Occur in Wetlands: California (Region 0) to determine the wetland indicator status of each plant species observed; and
3. The NRCS Web Soil Survey and Hydric Soil Map Units for El Dorado County, California to identify soil types within the Study Area (Appendix A).

The July 9, 2015 field wetland delineation involved collection of detailed data on vegetation, soils, and hydrologic site characteristics within the Study Area to identify the upland/wetland boundaries of each identified feature and mapping of perimeters of all drainages and depressions on foot using a Trimble GeoXH™ GPS unit with sub-meter accuracy. Besides identifying vascular plants at each sampling location, we also recorded the:

1. Percent dominance of hydrophytic vegetation; and
2. Presence/absence of positive hydrologic indicators (e.g., sediment deposits, biotic crust, drainage patterns).

As a first step in assessing the Study Area's biological resources, we queried the following online resources:

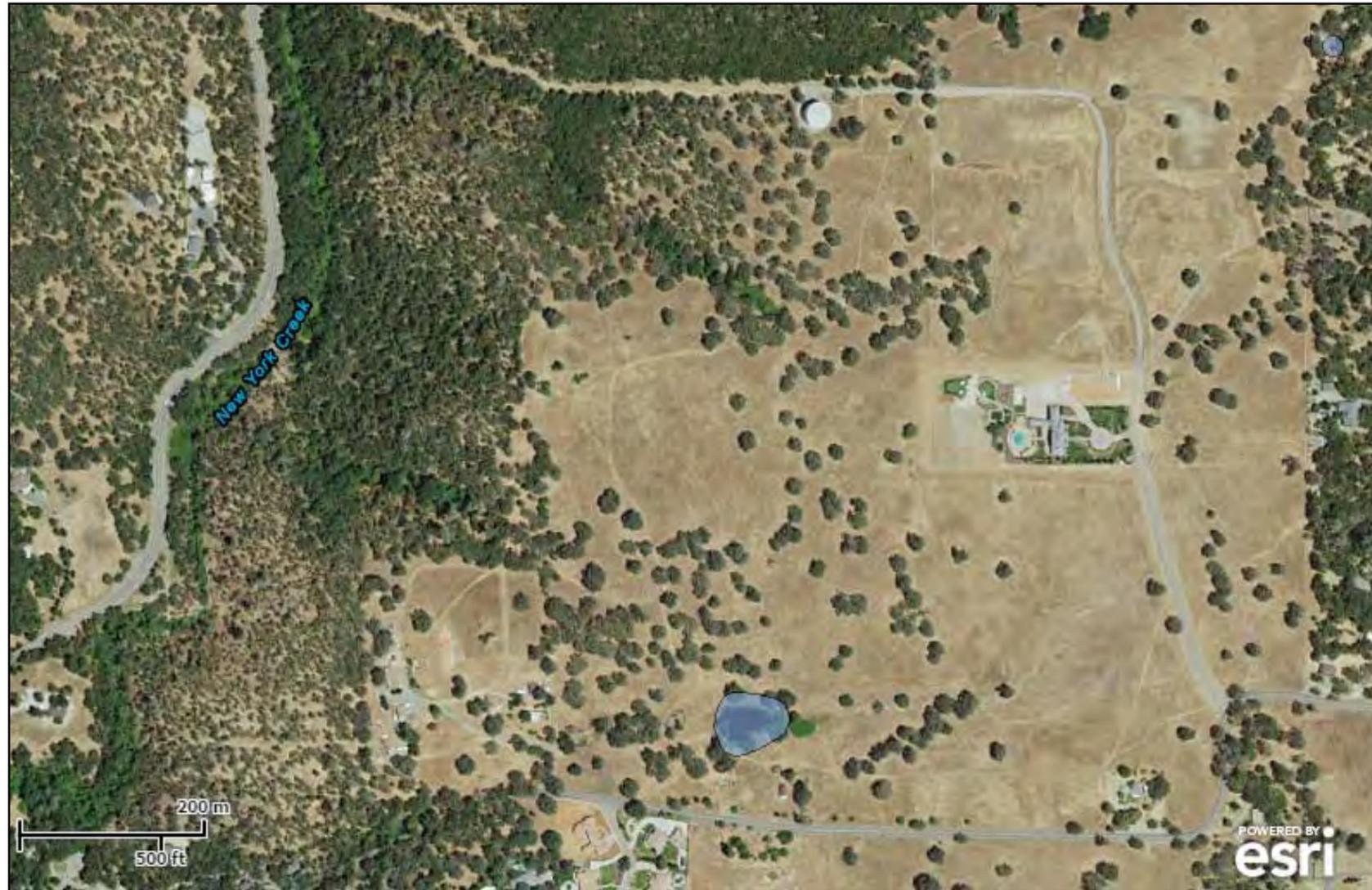
1. California Department of Fish & Wildlife's Natural Diversity Database (RareFind 5) for observations of special status plant and animal species in the appropriate geographic and elevational ranges and suitable Study Area habitats within five miles of the Study Area (Table 4, Appendix B),
2. U.S. Fish and Wildlife Service's iPac Database of federally-listed special status species in El Dorado County (Appendix C), and
3. The California Native Plant Society's Inventory of Rare & Endangered Plants in California (Appendix D)

Barnett Environmental biologists surveyed the Study Area on July 9, 2015 and February 15, 2018 for special status plant and wildlife species and suitable habitats existing onsite and recorded observations of: (1) dominant plant communities, (2) observed plant and animal species or their sign (nests, burrows, tracks, scat), with emphasis on special status species and (3) the suitability of existing, onsite habitats and those immediately adjoining the Study Area to support special status plant or animal species. We used the California Department of Fish & Wildlife's *Wildlife Habitat Relationship* (WHR) classification schemes to identify onsite habitat types (CDFW, 2007).



# U.S. Fish and Wildlife Service National Wetlands Inventory

Aug 27, 2015



## Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

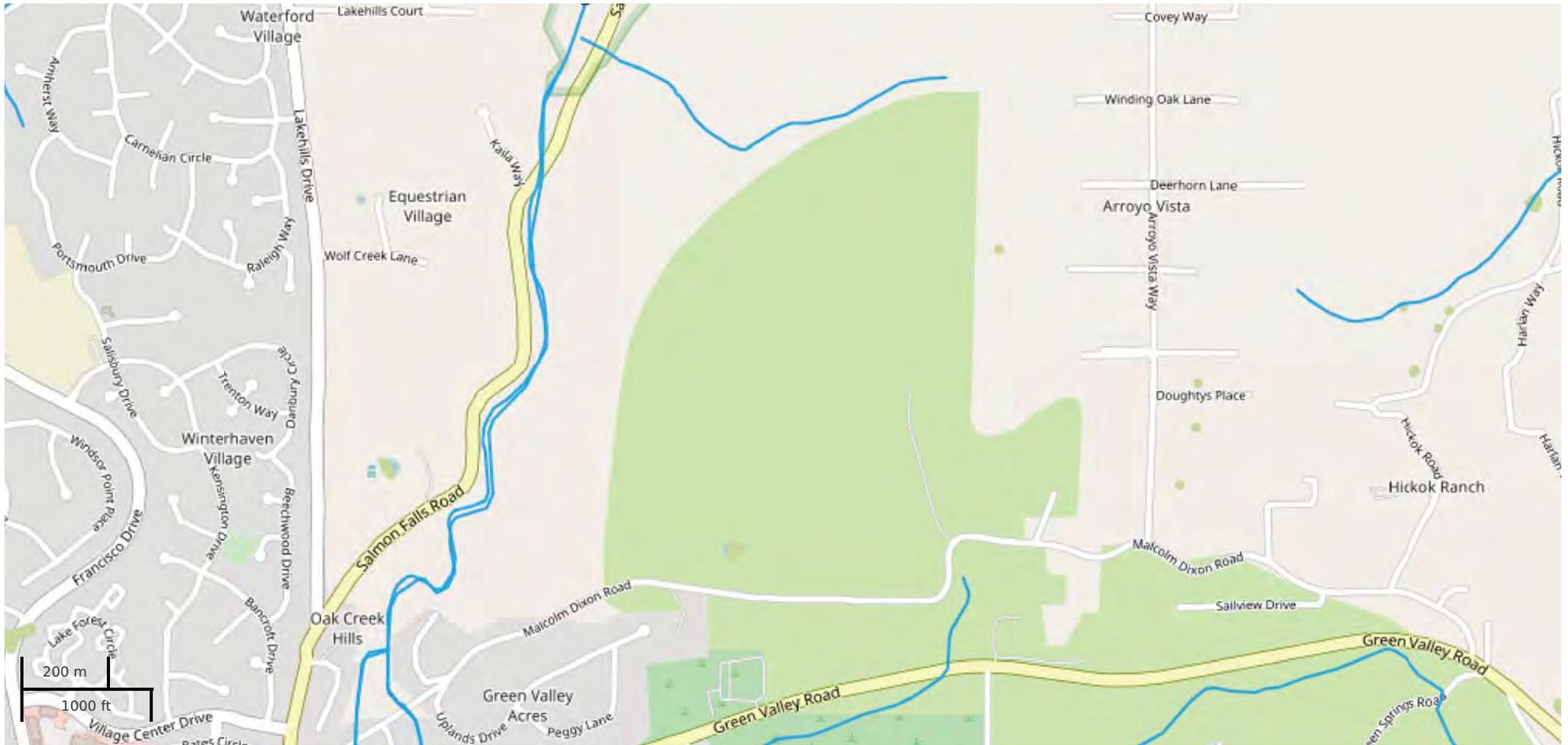
User Remarks:

## FIGURE 2: NATIONAL WETLANDS INVENTORY

VINEYARD ESTATES • EL DORADO COUNTY, CALIFORNIA

Date: October 6, 2015  
Scaled to Fit





**Legend**

- |  |   |
|--|---|
|  Pond and Associated Vegetation            |  Fluvial Channel         |
|  Lake, Reservoir and Associated Vegetation |  Slope and Seep Wetlands |
|  Playa                                     |  Vernal Pool             |
|  Project Boundary                          |   |

**FIGURE 3: CALIFORNIA AQUATIC RESOURCES INVENTORY**



## 4.0 Existing Conditions

### 4.1 Soils

Soils underlying most of the property are mapped as Auburn very rocky silt loam 2-30% slopes (Figure 4). The northern boundary of the property and a small section of the northeastern portion of the site are mapped as Auburn very rocky silt loam (30% slopes and 50%, respectively). A small portion of the northwest corner of the project site is mapped as Auburn silt loam 2-30% slopes. The Auburn very rocky silt loam (2-30%) and Auburn silt loam (2-30%) soils are well drained soils that have developed on differing bedrock with the potential for medium runoff rates and generally low to moderate permeability. The Auburn very rocky silt loam (30-50%) slopes however have a high run off rate with moderately low permeability. This series is classified as a Lithic Haploxerepts. Outcrops of bedrock are common in the rocky phase of the soil series that is mapped on the Vineyard property. While the classification of this soil is not hydric, the occurrence of bedrock near the soil surface can cause percolated water to rise the surface and form springs or seeps. The natural fracture planes of the metamorphic rock from which this soil is derived can also channel deeper sources of water to the surface.

### 4.2 Hydrology

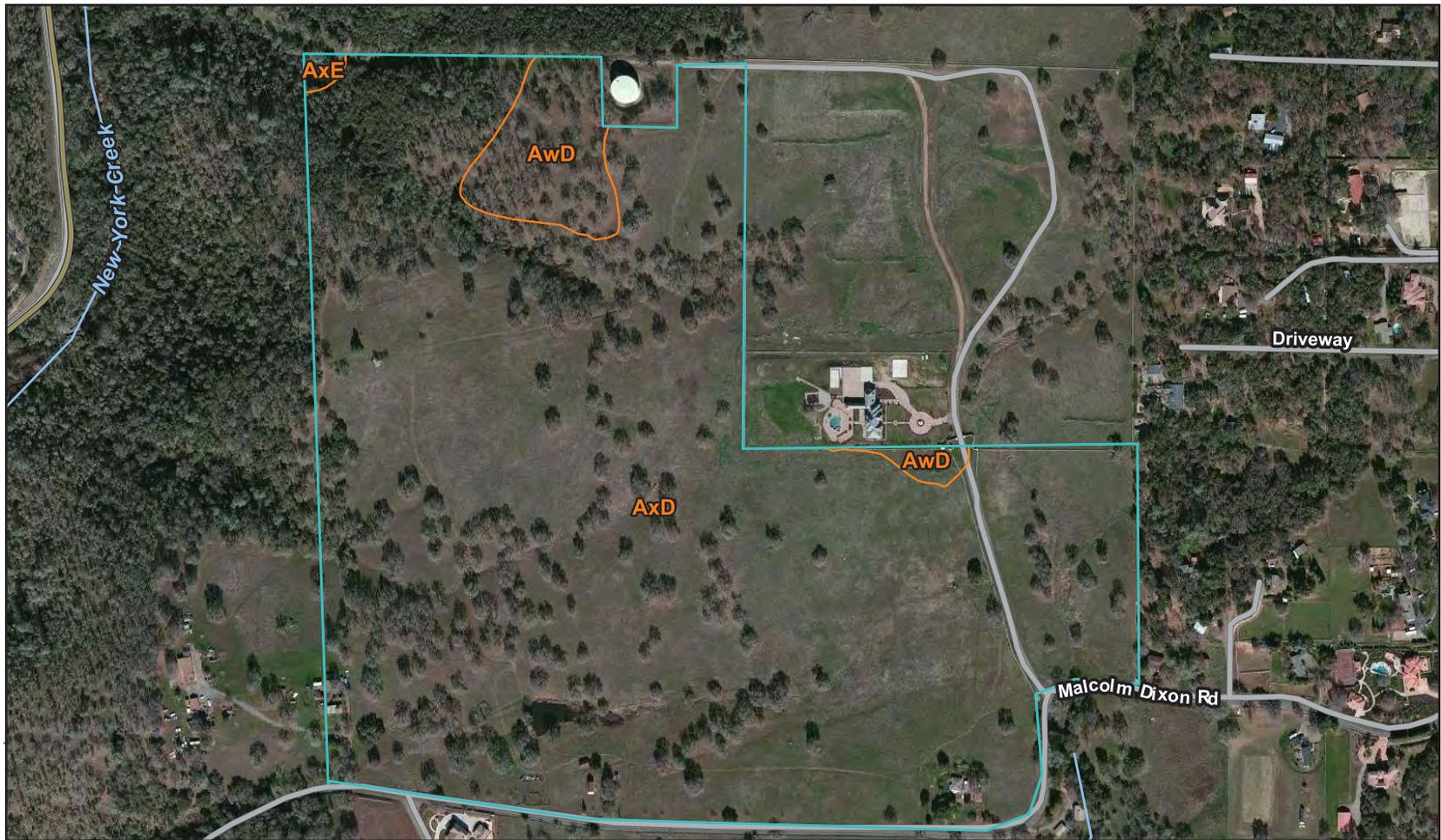
The hydrologic regime of the Vineyard property is driven by rainfall, local runoff, and groundwater seepage. Four years of drought conditions in California's Great Central Valley and Sierra Nevada foothills have consequently diminished local water tables and runoff-driven wetland systems, including seasonal wetlands and intermittent streams. The 2011 through 2015 water years (July-1 through June-30) preceding this survey were significantly drier than the yearly average of 18.3 inches. A lack of grazing in annual grasslands also reduces runoff and ponding in seasonal wetlands, since more water is removed from the soil through transpiration (Pyke and Marty 2005).

Running water was, however, observed in a spring fed drainage in the northern half of the property and there was standing water in a ponded portion (aka reservoir) of the Study Area's southern drainage. This same standing water can also be observed on the *National Wetlands Inventory* map in Figure 3. The remainder of the mapped features were dry.

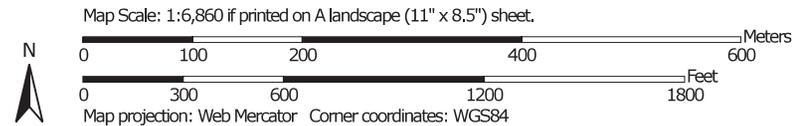
### 4.3 Wetlands and "Other Waters of the U.S"

A total of 1.57 acres of "other waters of the U.S." were mapped within the Study Area (Figure 5). These prominent features are comprised of:

1. Two perennial drainages (aka streams) of varying width (6,483 sq. ft., 0.15 acre);
2. 21 ephemeral drainages of varying width (13,308 sq. ft., 0.31 acre);
3. Seven seasonal wetlands (15,676 sq. ft., 0.37 acre);
4. Three seeps/springs (16,442 sq. ft., 0.38 acre); and
5. One pond (15,739 sq. ft., 0.36 acre).



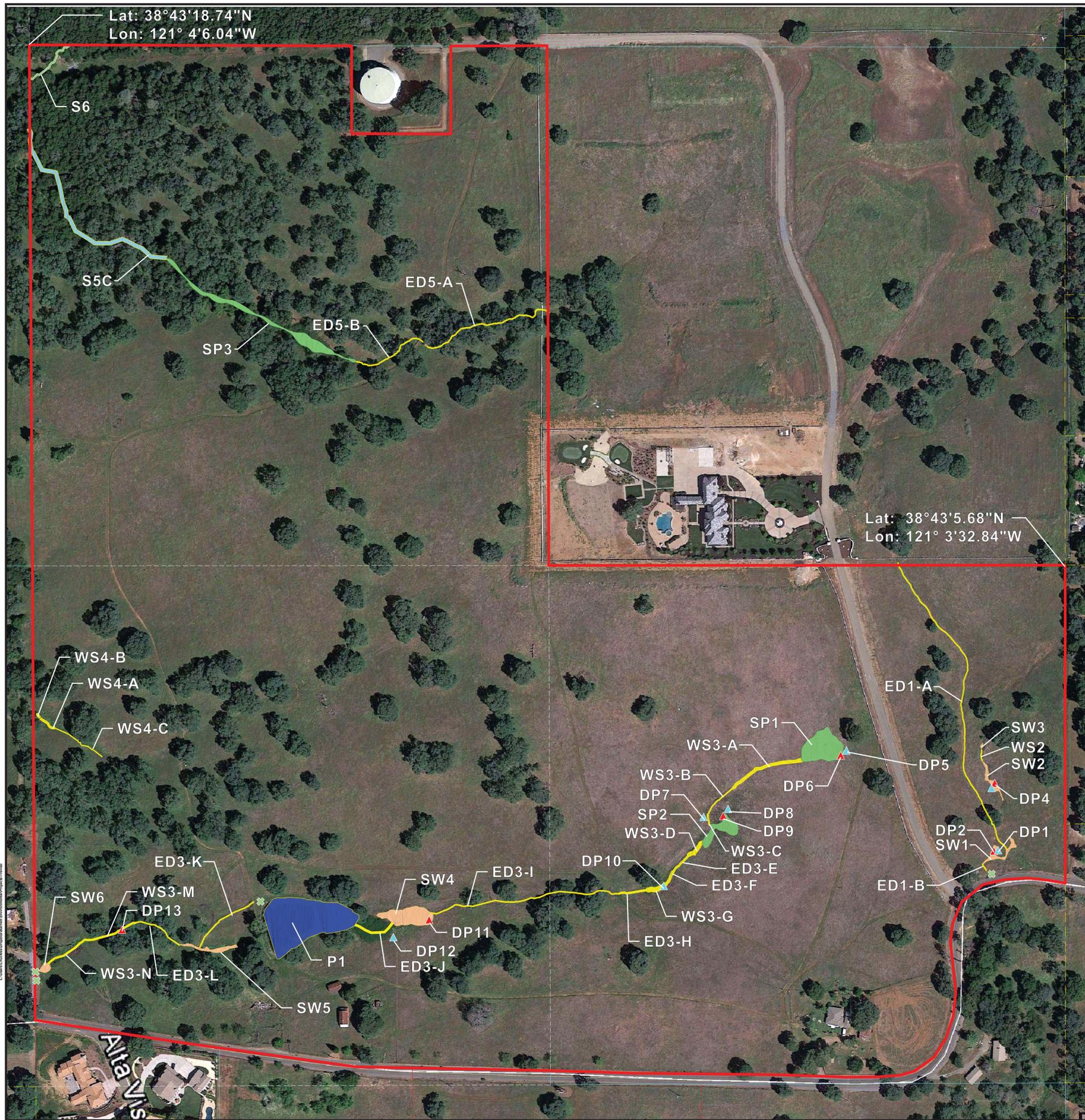
El Dorado Area, California (CA624)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AwD	Auburn silt loam, 2 to 30 percent slopes	5.9	4.8%
AxD	Auburn very rocky silt loam, 2 to 30 percent slopes	115.8	94.9%
AxE	Auburn very rocky silt loam, 30 to 50 percent slopes	0.3	0.3%
<b>Totals for Area of Interest</b>		<b>122.0</b>	<b>100.0%</b>



C:\Users\Chad\Documents\Barnett Environmental\Projects\Mapworks & EIR

# FIGURE 4: SOILS IN PROJECT VICINITY

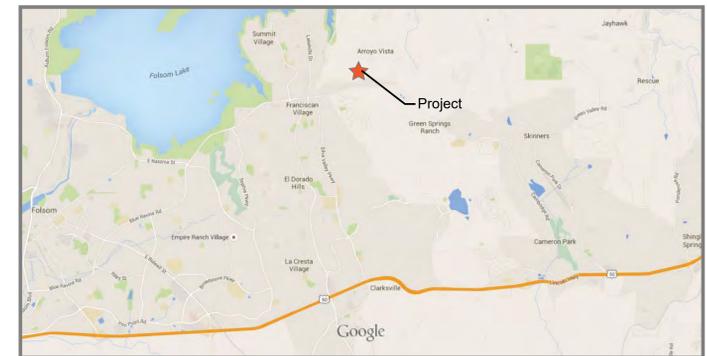




Aerial Photography taken in April, 2015

**Legend**

- Ephemeral Drainage
- Spring
- Pond
- Stream
- Seasonal Wetland
- Data Point - Wetland
- Data Point - Upland
- Culvert
- Easement Line
- Previous Delineation
- Project Boundary
- Parcel Line



Vicinity Map - Not to Scale

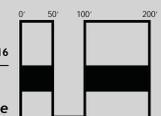
**Delineation Table**

Features	Length (LF)	Width (LF)	Area (SF)	Area (AC)
<b>Ephemeral Drainage</b>				
ED1-A	834	3	2,504	0.057
ED1-B	19	3	57	0.001
ED3-E	58	5	287	0.007
ED3-F	48	7	348	0.008
ED3-H	72	5	359	0.008
ED3-I	506	3	1,516	0.035
ED3-J	114	6	670	0.015
ED3-K	191	3	569	0.013
ED3-L	135	3	423	0.010
ED5-A	12	6	1,105	0.025
ED5-B	208	6	625	0.014
WS2	29	3	88	0.002
WS3-A	200	8	1,616	0.037
WS3-B	98	3	313	0.007
WS3-C	28	4	107	0.002
WS3-D	50	10	517	0.012
WS3-G	48	12	570	0.013
WS3-M	156	5	768	0.018
WS3-N	100	5	500	0.011
WS4-A	46	6	284	0.007
WS4-B	12	6	82	0.002
WS4-C	504	2	297	0.007
			<b>Subtotal</b>	<b>13,605</b>
<b>Pond</b>				
P1			22,659	0.520
			<b>Subtotal</b>	<b>22,659</b>
<b>Seasonal Wetland</b>				
SW1			1,180	0.027
SW2			857	0.020
SW3			62	0.001
SW4			5,023	0.115
SW5			1,114	0.026
SW6			519	0.012
			<b>Subtotal</b>	<b>8,755</b>
<b>Spring</b>				
SP1			6,863	0.158
SP2			3,007	0.069
SP3			6,572	0.151
			<b>Subtotal</b>	<b>16,442</b>
<b>Stream</b>				
S5-C	417	10	5,725	0.131
S6	142	6	758	0.017
			<b>Subtotal</b>	<b>6,483</b>
<b>Grand Total</b>			<b>67,944</b>	<b>1.558</b>

**FIGURE 5: DELINEATION MAP**

VINEYARD ESTATES DEVELOPMENT • EL DORADO COUNTY, CALIFORNIA

Date: February 18, 2016



Plan Scale: 1" = 100' @ 30X42 Sheet Size

The pond (P-1) is the only “waters” mapped in the National Wetland Inventory (USFWS, 1987). Table 1 on the following page provides the map ID numbers and surface areas of each water feature on the Property.

Perennial (i.e. stream) and Ephemeral Drainages – the perennial drainage channels within the Study Area do not display all three wetland parameters – hydrophytic vegetation, hydric soils, and wetland hydrology – but do display bed-and-bank geomorphology and evidence of an annual, ordinary high-water mark (OHWM). These drainages vary in width from three to 12 feet on average and the narrower drainages display bed and bank cross-sectional topographies that are discontinuously interspersed with broader floodplains that take on some wetland characteristics. Hydromorphic soils were not always present in these drainages, even though some wetland plants were present. Water flowing through and across these soils is likely to be oxygenated and does not result in reducing conditions characteristic of wetland soils. In other areas where the drainage enters a shallow basin, it is interrupted by seasonal wetlands that pond water as well as overflow into the channel. These wetlands remain ponded or saturated after flowing water is absent and are positive for all three wetland criteria as discussed below. Similarly, a spring found within one of the drainages is mapped as a seep/spring wetland rather than a water conveyance channel.

The drainage within the headwaters of Dutch Ravine, along the eastern property boundary, is shallowly channelized and appears to have been modified by historic placer diggings. The bed and bank of the larger drainages is well defined with bare gravel or cobble streambeds and little in-stream vegetation. Even with drought conditions, piles of leaves and sticks and other floating debris form wrack lines well above the incised channel giving evidence of annual high flows from the most recent rains.

Seasonal Wetlands – Seven seasonal wetlands are formed in shallow basins along the above-described drainage channels and demonstrate positive criteria for hydromorphic soils and wetland hydrology (Figure 4). With the current four-year drought, some of the mapped wetlands lack dominant hydrophytic vegetation over their entire extent and display annual facultative wetland or upland plant encroachment into the features, where the underlying soils had hydromorphic characteristics and wetland hydrology was also present. The dominant hydrophytic vegetation included common annuals such as ryegrass (*Lolium perenne*), annual fescue (*Vulpia bromoides*), and seaside barley (*Hordeum marinum*), intermixed with invasive annuals such as ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and medusa-head (*Taeniathrum caput-medusae*).

A single seasonal wetland on an alluvial terrace just above the pond within the Study Area’s southern perennial drainage is dominated by arctic rush (*Juncus articus*) and clustered field sedge (*Carex praegracilis*) – both spreading perennials, which are positive indicators for wetland vegetation. The hydrology of this seasonal wetland is due to its position in the alluvial fan adjacent to the drainage and a high water table created by ponding in the adjacent feature. Given the presence of other seeps and springs on the property, it is possible that seepage from impervious bedrock may be also be involved.

Table 1: “Other Waters of the U.S.” in the Vineyards at El Dorado Hills Study Area

Features	Measurements			
	Length (LF)	Width (LF)	Area (SF)	Area (AC)
<b>Ephemeral Drainage</b>	<b>21</b>	<b>21</b>	<b>13,308</b>	<b>0.31</b>
ED1-A	1	1	2,504	0.06
ED1-B	1	1	57	-
ED3-E	1	1	287	0.01
ED3-F	1	1	348	0.01
ED3-H	1	1	359	0.01
ED3-I	1	1	1,516	0.03
ED3-J	1	1	670	0.02
ED3-K	1	1	569	0.01
ED3-L	1	1	423	0.01
ED5-A	1	1	1,105	0.03
ED5-B	1	1	625	0.01
WS2	1	1	88	-
WS3-A	1	1	1,616	0.04
WS3-B	1	1	313	0.01
WS3-C	1	1	107	-
WS3-D	1	1	517	0.01
WS3-G	1	1	570	0.01
WS3-M	1	1	768	0.02
WS3-N	1	1	500	0.01
WS4-A	1	1	284	0.01
WS4-B	1	1	82	-
<b>Pond</b>			<b>15,739</b>	<b>0.36</b>
P1			15,739	0.36
<b>Seasonal Wetland</b>			<b>15,676</b>	<b>0.37</b>
SW1			1,180	0.03
SW2			857	0.02
SW3			62	-
SW4			5,023	0.12
SW5			1,114	0.03
SW6			519	0.01
SW7			6,921	0.16
<b>Spring</b>			<b>16,442</b>	<b>0.38</b>
SP1			6,863	0.16
SP2			3,007	0.07
SP3			6,572	0.15
<b>Stream</b>	<b>2</b>	<b>2</b>	<b>6,483</b>	<b>0.15</b>
S5-C	1	1	5,725	0.13
S6	1	1	758	0.02
<b>Grand Total</b>	<b>23</b>	<b>23</b>	<b>67,648</b>	<b>1.57</b>

Spring/Seep – Two of the three springs/seeps mapped on the Vineyards at El Dorado Hills property (Figure 4) were found on open grassy hillsides and marked by patches of iris-leaved rush (*Juncus xiphiodes*), a native perennial that spreads rhizomatously, i.e. by underground stems. Most of the plants in these patches were dried at the time of the delineation survey, though live green leaves and roots were observed within the data plots. The soils underlying this hydrophytic vegetation are low in chroma and mottled, suggesting saturation to the surface during the early part of the growing season. Surface water was not present at the time of our July survey, but oxidation mottles were observed around living roots of the dominant rush. The distal boundary of the seep wetlands was mapped at the boundary of hydric and upland soils.

The third spring/seep occurs in the larger of two northern drainages, with standing water and hydrophytic vegetation marking the boundary of this feature. Though much of the spring/seep

boundary was covered in dense thickets of Himalayan berry bramble (FACU), the wetland boundary interpolated from GPS points taken at several places where the spring/seep edge was accessible. This spring showed evidence of man-made improvement, i.e. rock walls and paths adjacent to the stream, and supports a well-developed riparian community of willows and cottonwoods requiring a perennial water supply. The influence of the spring was mapped at its distal end, where the streamside vegetation was replaced with oaks, and the channel was bare. The upper end of the spring is defined by a rock waterfall that may be part of the spring's historic improvements.

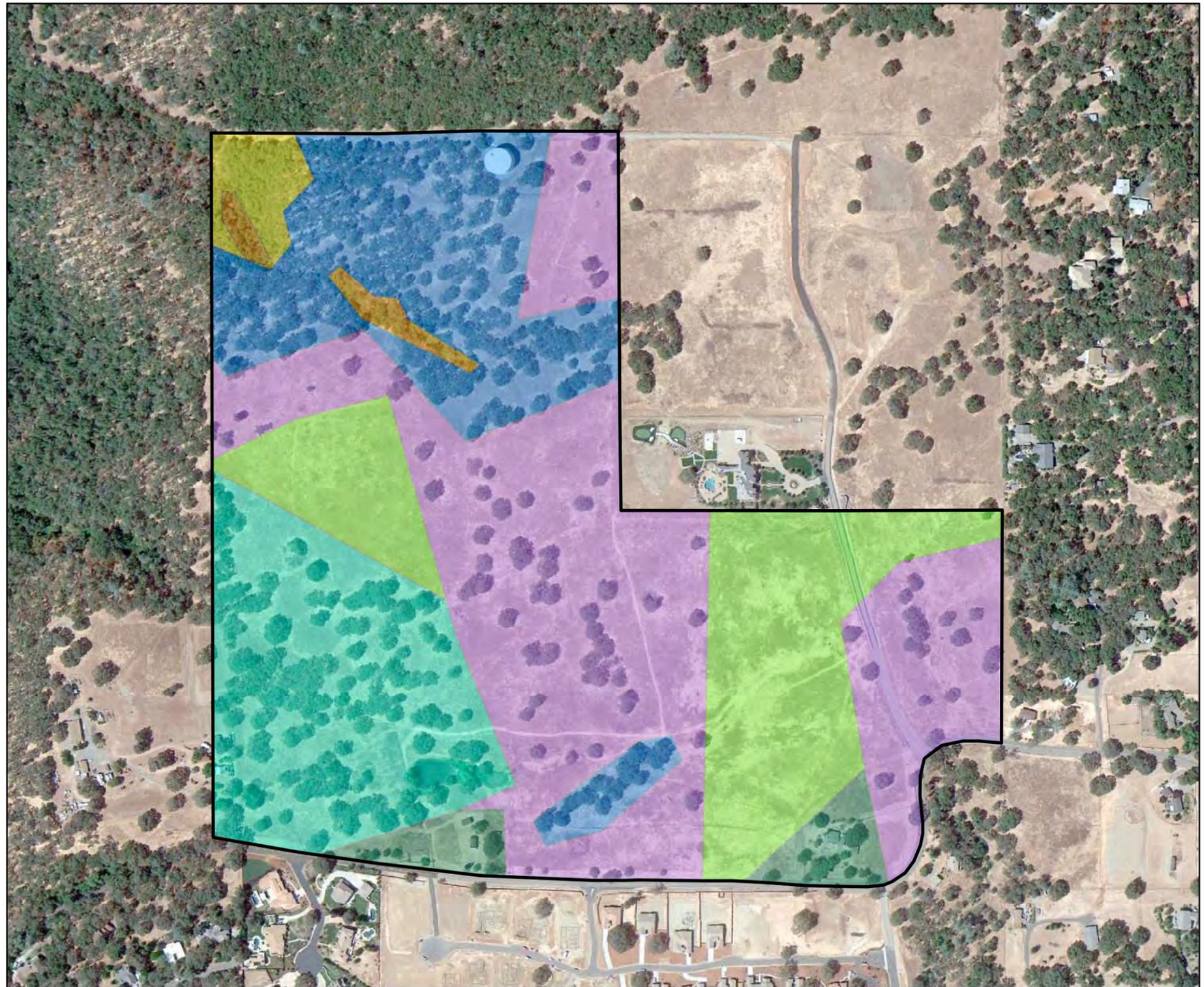
Pond – This feature was previously mapped and is shown in a *National Wetland Inventory* map of the site (Figure 3). We observed standing water in this feature during our July survey and mapped the pond's boundary to include a fringe of herbaceous, wetland plants growing well above the level of standing water (Figure 4). A culvert at the north end of the dam leads to a created channel that connects the upper reaches of this drainage to its lower reaches, which eventually become a tributary to New York Creek.

#### 4.4 Vegetation Communities

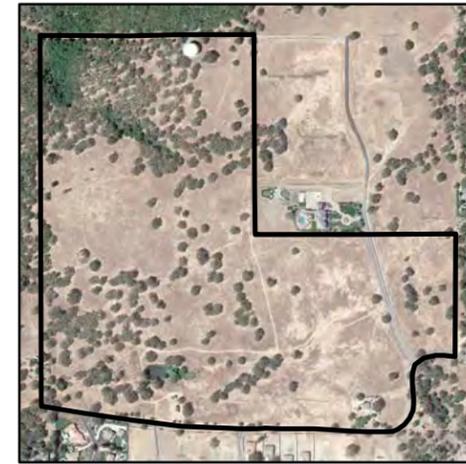
The Study Area is comprised of seven vegetation communities, including annual grasslands, blue oak woodlands, (blue) oak savannas, montane riparian, montane hardwood (=black oak woodland), and montane hardwood-conifer (black oak – gray pine). There are several rural residential areas also mapped within the Study Area, as shown in Table 2 below and Figure 6 on the following page. A list of plant species observed during the biological survey can be found in Appendix E.

**Table 2: Vegetation Communities within the Study Area**

Annual Grassland	21.81	18.19%
Blue Oak Woodland	22.46	18.71%
Montane Hardwood (Black Oak Woodland)	2.49	2.07%
Montane Riparian	1.43	1.19%
Montane Hardwood Conifer (Blue Oak - Gray Pine)	21.88	18.22%
Blue Oak Savanna	45.41	37.83%
Rural Residential	4.55	3.79%
<b>Total:</b>	<b>120.05</b>	<b>100.00%</b>



0 500 1,000  
Feet



Type	Acreage	Percentage
Annual Grassland	21.81	18.19%
Blue Oak Woodland	22.46	18.71%
Montane Hardwood	2.49	2.07%
Montane Riparian	1.43	1.19%
Blue Oak - Gray Pine	21.88	18.22%
Oak Savanna	45.41	37.83%
Rural Residential	4.55	3.79%
<b>Total:</b>	<b>120.05</b>	<b>100.00%</b>



# FIGURE 6: VEGETATION COMMUNITIES WITHIN THE STUDY AREA

VINEYARDS ESTATES DEVELOPMENT • EL DORADO COUNTY, CALIFORNIA

Date: January 27, 2018

Scaled to Fit



For this report, we applied the California Department of Fish & Wildlife’s (CDFW’s) *Wildlife Habitat Relationships* (WHR) vegetation types to existing communities, which can be compared to the Department’s CNDDDB habitat types according to Table 3, below.

**Table 3: CDFW Vegetation Community Types Cross-Reference**

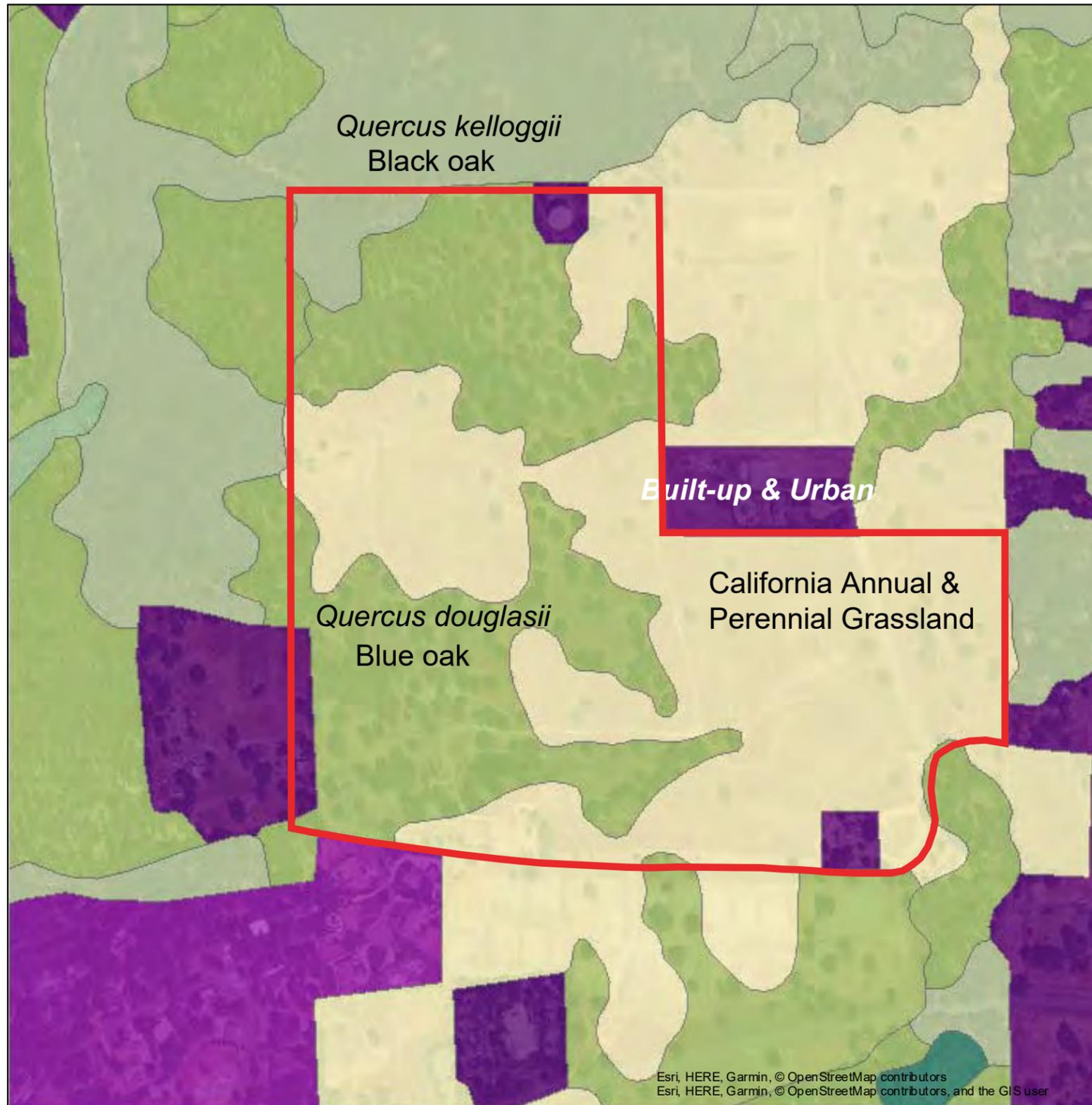
<b>WHR Vegetation Type</b>	<b>CNDDDB Vegetation Type</b>
Annual Grassland (AGS)	Valley & Foothill Grassland (42000)
Blue Oak Woodland & Savanna (BOW)	Blue Oak Woodland (71140)
Montane Hardwood (MHW)	Black Oak Woodland (71120)
Montane Riparian (MRI)	Montane Riparian Forest/Scrub (61500/63500)
Blue Oak – Gray Pine (BOP)	Gray Pine – Oak Woodland (71410)

In 2011, the CDFW, California Native Plant Society (CNPS), and Aerial Information Systems (AIS) mapped the current Study Area using aerial photography as part of the *Northern Sierra Nevada Foothills Vegetation Project: Vegetation Mapping Report*. This lower resolution mapping (relative to the current effort) of the Study Area (Figure 7) identifies only oak and grassland habitats, but does not break them down further.

Blue Oak Woodland and Savanna (BOW)– Blue oak woodlands cover approximately 22.5 acres of the northwestern and southern portions of the Study Area and transition into approximately 45 acres of blue oak savanna habitat in the central and southeastern portions of the Study Area. These vegetation communities are dominated by a closed (woodland) or open (savanna) overstory of mature blue oaks (*Q. douglasii*) and interior live oaks (*Quercus wislizenii*). The herbaceous understory, where it occurs, consists of non-native annual grasses such as medusa head (*Taeniathrum caput medusae*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*) and herbs such as rose clover (*Trifolium hirtum*), and filaree (*Erodium botrys* & *E. cicutarium*). Associated shrub species include poison oak (*Toxicodendron diversilobum*) and California buckeye (*Aesculus californica*).

Montane Hardwood (MHW) – Montane hardwood communities comprise a variety of hardwood woodlands, but in this case consist of black oak woodland in approximately 2.5 acres of the northwest corner of the Study Area. This woodland is composed of a pronounced hardwood (black oak; *Quercus kelloggii*) canopy with an infrequent and poorly developed shrub stratum. Trees in this woodland are only 10-13 feet apart so that canopy crowns nearly overlap. Tree heights are uniform throughout the stand and range between 50 and 90 feet in height. An occasional Madrone (*Arbutus menziesii*) sub-dominant also occurs in this woodland.

Montane Riparian (MRI) – Two small stands (1.43 acres) of this hardwood habitat occur along the streamcourse (S5C) in the northwestern portion of the Study Area. Dominant tree species include: Fremont (eastern) cottonwood (*Populus deltoides*), California black walnut (*Juglans hindsii*), interior live oak (*Quercus wislizenii*), with an understory of black elderberry (*Sambucus nigra*), poison oak (*Toxicodendron diversilobum*) and various willow species (*Salix* sp.)



Author: B Barnett  
Printed from <http://bios.dfg.ca.gov>

# FIGURE 7: NORTHERN SIERRA NEVADA FOOTHILLS VEGETATION PROJECT 2011

VINEYARDS ESTATES DEVELOPMENT • EL DORADO COUNTY, CALIFORNIA

Date: January 27, 2018

Scaled to Fit



The spring-fed drainage and pond in the southern portion of the Study Area also support Himalayan blackberry (*Rubus armeniaca*), the occasional riparian trees such as Fremont cottonwood (*Populus deltoides*), northern California black walnut (*Juglans hindsii*), and several willows including Gooddings willow (*Salix gooddingii*), gray willow (*Salix exigua*), smooth willow (*Salix laevigata*), and weeping willow (*Salix babylonica*) – a landscape species native to China. Some emergent marsh vegetation of cattail (*Typha latifolia*), false water-pepper (*Persicaria hydropiperoides*), and rice cutgrass (*Leerzia oryzoides*) also occur around the pond's shoreline.

Annual Grassland (AGS) – Annual grassland covers approximately 22 acres of the western and southeastern portions Study Area. This vegetation community is comprised of a variety of non-native grasses such as wild oat (*Avena barbata*), English rye-grass (*Lolium perenne*), dog-tail grass (*Cynosurus echinatus*), foxtail barley (*Hordeum murinum*), and hedgehog dogtail grass (*Cynosurus echinatus*). Common forbs include filaree (*Erodium botrys*), rose clover (*Trifolium hirtum*), milk thistle (*Silybum marianum*), hedge parsley (*Torilis arvensis*), and spikerush (*Eleocharis palustris*). Seeps and/or springs within the Study Area grasslands are marked by clonal patches of iris-leaved rush (*Juncus xiphiodes*), whereas other seasonal wetlands on the site are dominated by annual grasses such as ryegrass (*Lolium perenne*), and also support rabbits-foot grass (*Polypogon monspeliensis*), and facultative upland and upland species resulting from persistent drought conditions, such as soft chess (*Bromus hordeaceus*), rip-gut brome (*Bromus diandrus*), or medusa head grass (*Taeniathrum caput-medusae*).

#### 4.5 Wildlife

Blue oak woodlands and savannas within the Study Area offer diverse, abundant, and valuable wildlife habitat. Oak trees provide nesting sites for cavity-nesting birds and small mammals, including acorn woodpeckers (*Melanerpes formicivorus*), Nuttall's woodpeckers (*Picoides nuttallii*), northern flickers (*Colaptes auratus*), white-breasted nuthatches (*Sitta carolinensis*), oak titmice (*Baeolophus inornatus*), western bluebirds (*Sialia mexicana*), western gray squirrels (*Sciurus griseus*), and raccoons (*Procyon lotor*). Oak trees also provide roosting sites for some species of bats including the hoary bat (*Lasiurus cinereus*) and pallid bat (*Antrozous pallidus*). Acorns are used by a variety of wildlife, including California quail (*Callipepla californica*), wild turkeys (*Meleagris gallopavo*), northern flickers, western scrub-jays (*Aphelocoma californica*), western gray squirrels, and mule deer (*Odocoileus hemionus*). Oak foliage provides a foraging substrate for insectivorous birds such as ruby-crowned kinglets (*Regulus calendula*), bushtits (*Psaltriparus minimus*), warbling vireos (*Vireo gilvus*), Hutton's vireos (*Vireo huttoni*), and Wilson's warblers (*Wilsonia pusilla*). Blackberries and elderberries are eaten by many species of birds and mammals, including American robins (*Turdus migratorius*), Bullock's orioles (*Icterus bullockii*), house finches (*Carpodacus mexicanus*), spotted towhees (*Pipilo maculatus*), California towhees (*Pipilo crissalis*), and gray foxes (*Urocyon cinereoargenteus*). Finally, the shrub understory of these habitats provide cover for many species of songbirds as well as for gopher snakes (*Pituophis catenifer catenifer*), common kingsnakes (*Lampropeltis getula*), bobcats (*Lynx rufus*), gray foxes, and a variety of rodents.

Montane hardwood, conifer, and riparian habitats within the deeper ravines on the property have high value for wildlife and provides cover, nesting habitat, and foraging habitat for many wildlife species, including habitat particularly suitable for migratory songbirds, Belted kingfishers (*Ceryle alcyon*), Anna's hummingbirds (*Calypte anna*), American bushtits (*Psaltriparus minimus*), ruby-crowned kinglets (*Regulus calendula*), Wilson's warblers (*Cardellina pusilla*), yellow warblers (*Dendroica petechia*), and lesser goldfinches (*Carduelis psaltria*). Pacific treefrogs (*Hyla regilla*), raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), and mule deer also frequent these riparian corridors.

Annual grasslands provide suitable habitat to a variety of animal species including reptiles such as the western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalus viridis*). Mammal species that maybe observed include the California ground squirrel (*Spermophilus beecheyi*) and western harvest mouse (*Reithrodontomys megalotis*). Common birds like the western scrub jay (*Aphelocoma californica*), western meadowlark (*Sturnella neglecta*), killdeer (*Charadrius vociferus*), and western kingbird (*Tyrannus verticalis*) could be found within this grassland habitat. Other bird species like raptors such as the burrowing owl (*Athene cunicularia*) and short-eared owl (*Asio flammeus*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*) black-shoulder kite (*Elanus axillaris*), and the prairie falcon (*Falco mexicanus*) are known to inhabit grasslands.

## 5.0 Wildlife & Special Status Species

Special status species are those that fall into one or more of the following categories:

- Listed as endangered or threatened under the Federal Endangered Species Act (FESA) (50 CFR 17.11/17.12) (or formally proposed for listing) (64 FR 205, October 25, 1999; 57533-57547),
- Designated as a Species of Concern by the Sacramento District of the U.S. Fish and Wildlife Service,
- Listed as endangered or threatened under the California Endangered Species Act (CESA) (or proposed for listing) (14 California Code of Regulations [CCR] 670.5),
- Designated as rare, protected, or fully protected pursuant to California Fish and Game Code (FGC, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).
- Designated a Species of Concern by the California Department of Fish and Game,
- Defined as rare or endangered under the California Environmental Quality Act (CEQA), or
- Occurring on List 1 or 2 maintained by the California Native Plant Society.

Barnett reviewed CNDDDB, CNPS, and iPAC for special status species with similar habitat and elevation requirements occurring within nine USGS 7.5-minute quadrangles (Clarksville, Rocklin, Pilot Hill, Coloma, Folsom, Shingle Springs, Buffalo Creek, Folsom SE, Latrobe) surrounding the Study Area (Figure 8). Five (5) special status plant species – the Pine Hill

Flannelbush (*Fremontodendron decumbens*), Stebbins' morning-glory (*Calystegia stebbinsii*), Pine Hill Ceanothus (*Ceanothus roderickii*), El Dorado Bedstraw (*Galium californicum*), and Layne's ragwort (*Packera layneae*) – are known to occur in the vicinity of the Study Area, along with seven (7) animal species, including: California red-legged frog (*Rana draytonii*), Sierra Nevada yellow-legged frog (*Rana sierrae*), willow flycatcher (*Empidonax traillii*), California black rail (*Laterallus jamaicensis coturniculus*), great gray owl (*Strix nebulosi*), Sierra Nevada red fox (*Vulpes vulpes nector*), and California wolverine (*Gulo gulo*). The 12 species listed in Table 4 are known to occur within the elevation range and seven vegetation communities found within the Study Area. However, a query of the California Natural Diversity Database (Rarefind) resulted in no recorded occurrence of special status species within Study Area (Table 4 and Appendix B).

**Table 4: Special Status Species with Potential to Occur in the Study Area**

Species	Federal	State	CNPS	Habitat	Potential for Occurrence in Study Area	Rationale for Assessing Potential for Occurrence
<b>Plants</b>						
<b>Stebbins' morning-glory</b> <i>Calystegia stebbinsii</i>	-	-	1B	Gabbroic or serpentine soils in Chaparral and cismontane woodland	None	The Study Area lacks suitable habitat such as red clay gabbroic soils. Majority of the project site consists of Auburn silt loam. There is a single recorded CNDDDB occurrence two and a half miles northeast.
<b>Pine Hill Ceanothus</b> <i>Ceanothus roderickii</i>	-	-	1B	Gabbroic or serpentine soils in chaparral and cismontane woodlands.	None	The Study Area lacks suitable habitat such as red clay gabbroic soils. Majority of the project site consists of Auburn silt loam. There are six recorded CNDDDB occurrences with the nearest occurrence one-mile northeast.
<b>Pine Hill Flannelbush</b> <i>Fremontodendron decumbens</i>	-	-	1B	Gabbroic or serpentine soils in Chaparral and cismontane woodland	None	The Study Area lacks suitable habitat such as red clay gabbroic soils. Majority of the project site consists of Auburn silt loam. There are seven recorded CNDDDB occurrences with the nearest occurrence three miles east.

Species	Federal	State	CNPS	Habitat	Potential for Occurrence in Study Area	Rationale for Assessing Potential for Occurrence
<b>Plants</b>						
<b>El Dorado Bedstraw</b> <i>Galium californicum</i>	-	-	1B	Gabbroic or serpentine soils in Cismontane woodland, chaparral, and lower montane coniferous forest	None	The Study Area lacks suitable habitat such as red clay gabbroic soils. Majority of the project site consists of Auburn silt loam. There are seven recorded CNDDDB occurrences with the nearest occurrence two miles north.
<b>Layne's ragwort</b> <i>Packera layneae</i>	-	-	1B	Gabbroic or serpentine soils in Cismontane woodland, chaparral	None	The Study Area lacks suitable habitat such as red clay gabbroic soils. Majority of the project site consists of Auburn silt loam. There are 17 recorded CNDDDB occurrences with the nearest occurrence one and a half miles west.
<b>Insects</b>						
<b>Valley elderberry longhorn beetle</b> <i>Desmocerus californicus dimorphus</i>	FT	-	-	Riparian and oak woodlands. Requires the presence of blue elderberry shrubs.	Moderate	There are host plant (elderberry) observed in the northwest corner of the Study Area. There are four recorded occurrences of VELB within a five-mile radius of the Study Area with the nearest occurrence three and a half miles northwest.
<b>Amphibians</b>						
<b>California red-legged frog</b> <i>Rana draytonii</i>	FT	-		Prefers lowlands and foothills in or near permanent sources of deep water with dense shrubby or emergent vegetation.	Low	The Study Area contains marginal suitable habitat (i.e pond). Requires 11-20 weeks of permanent water for larval development. According to CNDDDB, there is a single occurrence one-mile northwest of the Study Area.

Species	Federal	State	CNPS	Habitat	Potential for Occurrence in Study Area	Rationale for Assessing Potential for Occurrence
<b>Birds</b>						
<b>Willow Flycatcher</b> <i>Empidonax traillii</i>	-	CE		Inhabits extensive thickets or low, dense willows on edge of wet meadows, ponds, or backwaters.	Low	The Study Area provides potential suitable habitat (i.e. ponds, or backwaters), with willow thickets for nesting/roosting. However, there are no recorded CNDDDB occurrences within five miles of the Study Area.
<b>California black rail</b> <i>Laterallus jamaicensis coturniculus</i>	-	CT	-	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays.	Low	The Study Area has suitable habitat along northern drainage (i.e. freshwater marshes, wet meadows, and saltwater marshes) but no work in this habitat. However, there are no CNDDDB occurrences of this species within five miles of the Study Area.
<b>Great Gray Owl</b> <i>Strix nebulosa</i>	-	CE		Resident of mixed conifer or red fir forest habitat, in or on else of meadows.	Low	Great gray owls require large diameter snags in a forest with high canopy closure, which provides a cool sub-canopy microclimate. The Study Area contains marginal suitable habitat of annual grasslands and oak woodlands that can be utilized for foraging and nesting. However, there are no CNDDDB recorded occurrences of this species within five miles of the Study Area.

Species	Federal	State	CNPS	Habitat	Potential for Occurrence in Study Area	Rationale for Assessing Potential for Occurrence
<b>Mammals</b>						
<b>Sierra Nevada Red Fox</b> <i>Vulpes vulpes nector</i>	-	CT		Inhabits a variety of habitats such as alpine, alpine dwarf scrub, broadleaved upland forest, meadows, and seeps.	Low	The Study Area contains marginal suitable chaparral and oak woodland habitat. This species prefers dense vegetation and rocky areas for cover and den sites. Additionally, they favor forest interspersed with meadows or alpine fell-fields. According to CNDDDB, there are no recorded occurrences of this species within five miles of the Study Area.
<b>California Wolverine</b> <i>Gulo gulo</i>	-	CT		Found in the north coast mountains and the Sierra Nevada. Inhabits a wide variety of high elevation habitats such as alpine, alpine and montane dwarf scrub, meadows, and seeps.	Very Low	The Study Area contains marginal suitable oak woodland and chaparral habitat. Needs water source. Uses caves, logs, burrows for cover and den areas. According to CNDDDB, there are no recorded occurrences of this species within five miles of the Study Area.

**Special Status Species Codes:**

Federal: FE = Federal Endangered

FT = Federal Threatened

State: CSC = California Species of Concern

CE = California Endangered

CFP = California Fully Protected

CT = California Threatened

CR = California Rare

CEC = California Endangered Candidate

Species

CNPS: 1B = Rare or threatened in CA and elsewhere

2B = Rare, threatened, or Endangered in CA, but more common elsewhere

**Potential for Occurrence Codes:**

None: No suitable habitat for the special status species within the Study Area

Low: Either the special status species is known to occur within five miles but no suitable habitat exists in the Study Area, or the Study Area provides suitable habitat but the species is not known to occur within a five-mile radius.

Moderate: The special status species is known to occur within a five-mile radius of the Study Area, however, the Study Area provides only moderately suitable habitat.

- High:* The Study Area provides suitable habitat and there is either documentation of species occurrence within a five-mile radius or evidence gathered by a professional surveyor during an onsite field assessment.
- Present:* Species known to occur within the Permit Area based on record search and/or evidence collected during onsite field surveys.

## 5.1 Critical Habitat for Special Status Species

The Federal Endangered Species Act (FESA) requires the federal government to designate critical habitat for any listed species. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. There is no designated critical habitat within the Study Area (Appendix C)

## 5.2 Special Status Plants with the Potential to Occur in the Study Area

There are five (5) special status plant species with a potential to occur within the Study Area - Pine Hill Flannelbush (*Fremontodendron decumbens*), Stebbins' morning-glory (*Calystegia stebbinsii*), Pine Hill Ceanothus (*Ceanothus roderickii*), El Dorado Bedstraw (*Galium californicum*), and Layne's ragwort (*Packera layneae*). According to CNDDDB there are no documented occurrences of special status plants within the Study Area; however, these species are known to occur within a five-mile radius of the Study Area. Based on the particular habitat requirements, geographic and elevational ranges and soil composition (i.e. gabbro/serpentine) of these species, none of the six special status plant species would appear to have the potential to occur onsite. Stebbins' morning glory, Pinehill flannelbush, Pinehill ceanothus, El Dorado bedstraw, and Layne's ragwort require serpentinite, volcanic, or gabbroic soils, or soils specifically found on Pine Hill or Ione formations. These do not occur within the Study Area.

## 5.3 Special Status Wildlife with the Potential to Occur in the Study Area

### Federally Listed Species

Two wildlife species has the potential to occur within the Study Area. (Appendix C, Table 4). Potential for occurrence is based on habitat requirements, elevation range, and observances within a five-mile radius. These include:

1. **California red-legged frog (*Rana draytonii*)** – California red-legged frog is a federally-listed threatened species. This species is approximately two to five inches long with reddish coloring on the underside of the legs and belly. Their back and head have a rough texture that can range from red to brown and /or gray coloring with folds running down the side of its back. The back and top of the legs are covered in small black spots and large dark blotches. They also tend to have a dark mask and a tan or light-colored stripe above the jaw that extends to the shoulder. Their diet consists of mainly invertebrates however, on occasion, they will consume smaller amphibians and mammals. California red-legged frogs

like slow-moving or standing deep ponds, pools, and streams. Tall vegetation, like grasses, cattails, and shrubs, provide protection from predators and the sun. This species breeds around November and continue through April. The females lay large egg masses and the males fertilize the eggs. The eggs hatch and the larvae go through metamorphosis throughout the summer. California red-legged frogs are threatened by invasive species like non-native bullfrogs, habitat loss, and overexploitation of water resources. California red-legged frogs have a low potential to occur, given their habitat requirements and there are no recorded CNDDDB occurrences within five miles of the Study Area (Figure 8). Additionally, no red-legged frogs were observed during ECORP's 2008 and Barnett's 2015 and February 2018 biological surveys.

2. **Valley elderberry longhorn beetle** (*Desmocerus californicus dimorphus*) – This beetle is listed as threatened by the U. S. Fish and Wildlife Service. Live blue elderberry shrubs (*Sambucus mexicana*) are this borer's exclusive host plant. Elderberry shrubs are primarily associated with riparian corridors and moist oak woodlands at elevations below 2,500 feet. Exit holes made by the emerging adults are distinctive small oval openings (approx. ¼-inch width). Adults eat elderberry foliage until about June when they mate. Females lay eggs in crevices in the bark before dying a short time later. Upon hatching the larvae then begin to tunnel into the tree where they spend 1-2 years eating the interior wood, which is their sole food source. No live blue elderberry scrubs were observed within the Study Area therefore it is unlikely that valley elderberry longhorn beetles occur here. Valley elderberry longhorn beetle has a moderate potential to occur, given their habitat requirements. There are elderberry trees located in the northwest corner of the Study Area. Additionally, there are four recorded occurrences of this species within five miles of the Study Area with the nearest occurrence three and a half miles to the northwest (Figure 8). However, no valley elderberry longhorn beetles were observed during ECORP's 2008 and Barnett's 2015 and February 2018 biological surveys.

## State Listed Species

State listed species are plants and animals that are legally protected under the California Endangered Species Act (CESA). Five species has potential to occur within the vicinity but is not known to occur within the Study Area. Potential for occurrence is based on habitat requirements, elevation range, disturbance, migration potential, and observances within a five-mile radius:

1. **Willow flycatcher** (*Empidonax traillii*) – The willow flycatcher is a California endangered species. This bird species is approximately five to seven inches long with brown-olive upperparts, darker on the wings and tail, and with whitish underparts. Additional, they have an indistinct white eye ring, white wing bars and a small bill. Habitats consisting of thickets of deciduous trees and shrubs often near streams or marshes. However, they winter around clearings and second growth in the tropics, especially near water. Their diet is comprised of a variety of insects such as wasps, bees, wings ants, beetles, flies, moths, and more. Willow flycatchers breed in moist, shrubby areas consisting of willows, often with standing or running water. Nests are built low within a bush or small tree neat water, on outer edge of shrub. Nest have an open cup appearance comprised of weed stems, plant fibers, pine



Detail Map



Not to Scale

Vicinity Map



Not to Scale



# FIGURE 8: CALIFORNIA NATIONAL DIVERSITY DATABASE

VINEYARDS ESTATES DEVELOPMENT • EL DORADO COUNTY, CALIFORNIA

Date: January 27, 2018

Scaled to Fit



19-1524 G 178 of 314

needles, shredded bark, and grass; lined with feathers, hair, rootlets, and fine materials. Females lay between three to five eggs per clutch that have an incubation period of 12 to 15 days with fledging around 12 to 14 days. Willow flycatchers has a low potential to occur, given the Study Area contain some habitat requirements and there is a single occurrence within five miles, with the nearest sighting approximately four and a half miles to the southeast (Figure 8). However, no willow flycatchers were observed during ECORP's 2008 and Barnett's 2015 and February 2018 biological surveys.

2. **California black rail** (*Laterallus jamaicensis coturniculus*) – The California black rail is a California threatened species. This species is very small approximately four to six inches in length and weighs about an ounce. Black rails are blackish above, with white speckling, chestnut nape, and greyish underneath with white barring on flanks. Habitats consists of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation. Their diet primarily consists of small invertebrates and seeds. Black rails build well concealed nests on the ground, and often under dense vegetation. Breeding occurs during the summer and they usually lay between five to eight eggs per clutch. California black rail has a low potential to occur, given habitat requirements and that there are no recorded CNDDDB occurrence within five miles of the Study Area (Figure 8). No California black rails were observed during ECORPS's 2008 and Barnett's 2015 and February 2018 biological surveys.
3. **California Wolverine** (*Gulo gulo*) – The California wolverine is a California threatened species. This species is approximately 26 to 42 inches long, 6 to 10 inches tall, and weighs from 20 to 55 pounds. Wolverines have thick, dark, oily fur, with a light silvery facial mask, and a pale buff stripe that runs laterally from the shoulders along the side and crossing the rump just above their bushy tail. Like many other mustelids, wolverines possess a potent anal scent glands used for marking territory and sexual signaling. This species can be found in the north coast mountains and the Sierra Nevada, in a wide variety of high elevation habitats such as alpine, alpine and montane dwarf scrub, meadows, and seeps. The wolverine's diet consists of mainly small to medium sized mammals which include porcupines, squirrels, beavers, marmots, rabbits, mice, shrews, white-tailed deer, sheep, moose, and elk. Mating season is in the summer with the female giving birth to two to three young in the spring with weaning at ten weeks. California wolverine has a low potential to occur, given the habitat requirements and that there are no CNDDDB recorded occurrences of this species within five miles of the Study Area (Figure 8). No California wolverines were observed during ECORPS's 2008 and Barnett's 2015 and February 2018 biological surveys.
4. **Great gray owl** (*Strix nebulosa*) – The great gray owl is a California endangered species. Adults have a large, rounded head with a grey face and yellow eyes with darker circles around them. The underparts are light with dark streaks; the upper parts are grey with pale bars. This owl does not have ear tufts and has the largest facial disc of any raptor. The length ranges from 24 to 33 inches, averaging 28 inches for females and 26 inches for males. The wingspan can exceed 60 inches, but averages 56 inches for females and 55 inches for males. The adult weight ranges from 1.28 to 4.19 pounds, averaging 2.84 pounds for females and 12.2 pounds for males. The males are usually smaller than females, as with most owl species. The great gray owl forages primarily on small rodents with voles being their most important food source. However, local alternative prey animals which comprise less than 20% of their intake include hares, moles, shrews, weasels, thrushes, grouse grey jays, small hawks, and

ducks. This species nests in dense boreal and coniferous forest often adjoining areas like bogs, muskegs, or meadows. Breeding occurs from March through May where the females lays an average of four eggs. Incubation period is about 30 days with the young fledging several months after hatching. Great gray owls have a low potential to occur, given the habitat requirements; however there are no recorded occurrence five miles of the Study Area (Figure 8). No great gray owls were observed ECORPS's 2008 and Barnett's 2015 and February 2018 biological surveys.

5. **Sierra Nevada red fox (*Vulpes vulpes nector*)** - The Sierra Nevada red fox is a California threatened species. This species is approximately 3.2 to 3.4 inches long and weighs from 7.7 to 9.2 pounds. They have a narrow pointed muzzle, long thin legs, red and white coat with a thick bushy tail with a white tip. This species can be found in a variety of high elevation habitats (above 7000ft) such as alpine, alpine dwarf scrub, broadleaved upland forest, meadows, and seeps within the Sierra Nevada mountains. The Sierra Nevada red fox's diet consists of mainly mammals such as rodents, mule deer, and birds. Breeding occurs between December and March and the pups are born in early to mid-April. The Sierra Nevada red fox has a low potential to occur, given the habitat requirements and that there are no CNDDDB recorded occurrences of this species within five miles of the Study Area (Figure 8). No California wolverines were observed during ECORPS's 2008 and Barnett's 2015 and February 2018 biological surveys.

## 6.0 Effects of the Proposed Action

### 6.1 Effects of Proposed Action on Wetlands or "Other Waters of the U.S."

The proposed project not have any direct or indirect effects on wetlands or "other waters of the U.S." or waters of the State, as the applicant proposes a minimum 25 to 50 feet setback from any wetted feature within the Study Areas as shown in Figure 9. Therefore, no mitigation should be required.

### 6.2 Effects of Proposed Action on Wildlife and Habitat

The following discussion of biological resources impacts and mitigation measures is based on implementation of the proposed project in comparison to existing conditions.

#### Rare plants

According to CNDDDB there are five (5) special status plant species - Pine Hill Flannelbush (*Fremontodendron decumbens*), Stebbins' morning-glory (*Calystegia stebbinsii*), Pine Hill Ceanothus (*Ceanothus roderickii*), El Dorado Bedstraw (*Galium californicum*), and Layne's ragwort (*Packera layneae*) that have the potential to occur within the Study Area. However, there are no documented occurrences of these special status species within the Study Area and none were observed by ECORP during their 2008 and Barnett's 2015 and February 2018 field surveys. While these five special status plants are known to occur within a five-mile radius of the

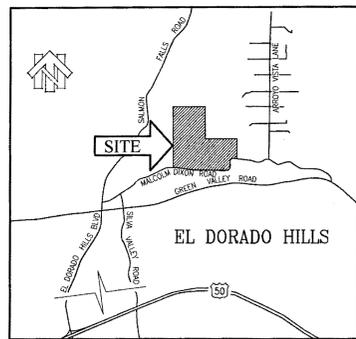
# TENTATIVE SUBDIVISION MAP

# VINEYARDS AT EL DORADO HILLS

COUNTY OF EL DORADO

MARCH, 2016

STATE OF CALIFORNIA



VICINITY MAP

NOT TO SCALE

### OWNER OF RECORD

OMNI FINANCIAL A CA LLC  
1260 41ST AVE STE 0  
CAPITOLA, CA 95010

### ENGINEER

**cta** Engineering & Surveying  
Civil Engineering Land Surveying Land Planning  
3233 Miner Circle, Rancho Cordova, CA 95742  
T 916 858-0919 F 916 858-2479 www.cta.com

### MAP SCALE

1" = 100'

### CONTOUR INTERVAL

CONTOUR INTERVAL = 1 FEET

### SOURCE OF TOPOGRAPHY

(AERIAL PHOTOGRAPHY/TOPOGRAPHIC SURVEY)

### SECTION, TOWNSHIP, RANGE

SECTION 14, T.10N., R.8E., M.D.M.

### ASSESSOR'S PARCELS

A.P.N. 126-100-24

### EXISTING / PROP. ZONING

RE-5 / RE-5 PD

### TOTAL AREA

114.030 ACRES

### TOTAL NO. of LOTS

42 SINGLE FAMILY LOTS (INCLUDING ROADS)..... 42.23 AC  
1 ROADWAY LOT ..... 6.22 AC  
5 OPEN SPACE LOTS ..... 65.58 AC  
TOTAL AREA ..... 114.03 AC

### MINIMUM LOT AREA

43,560 SQUARE FEET

### WATER SUPPLY and SEWAGE DISPOSAL

WATER - EL DORADO IRRIGATION DISTRICT  
SEWER - ON SITE SEPTIC

### PROPOSED STRUCTURAL FIRE PROTECTION

EL DORADO HILLS COUNTY WATER DISTRICT

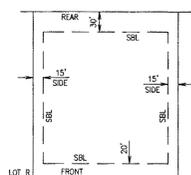
### PHASING PLAN NOTICE

THE SUBDIVIDER MAY FILE MULTIPLE FINAL MAPS FOR THIS PROJECT. THE SUBDIVIDER SHALL NOT BE REQUIRED TO DEFINE THE NUMBER OR CONFIGURATION OF THE PROPOSED MULTIPLE FINAL MAPS. (PER THE SUBDIVISION MAP ACT, SECTION 66456.1)

### ENGINEER'S CERTIFICATE

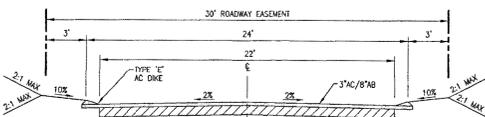
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS "VINEYARDS AT EL DORADO HILLS" HAS BEEN DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS AND GUIDELINES FURNISHED BY THE COUNTY OF EL DORADO.

*Olga Scorelli*  
OLGA SCORELLI P.E. 71204 DATE 3/1/16



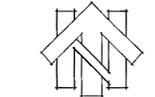
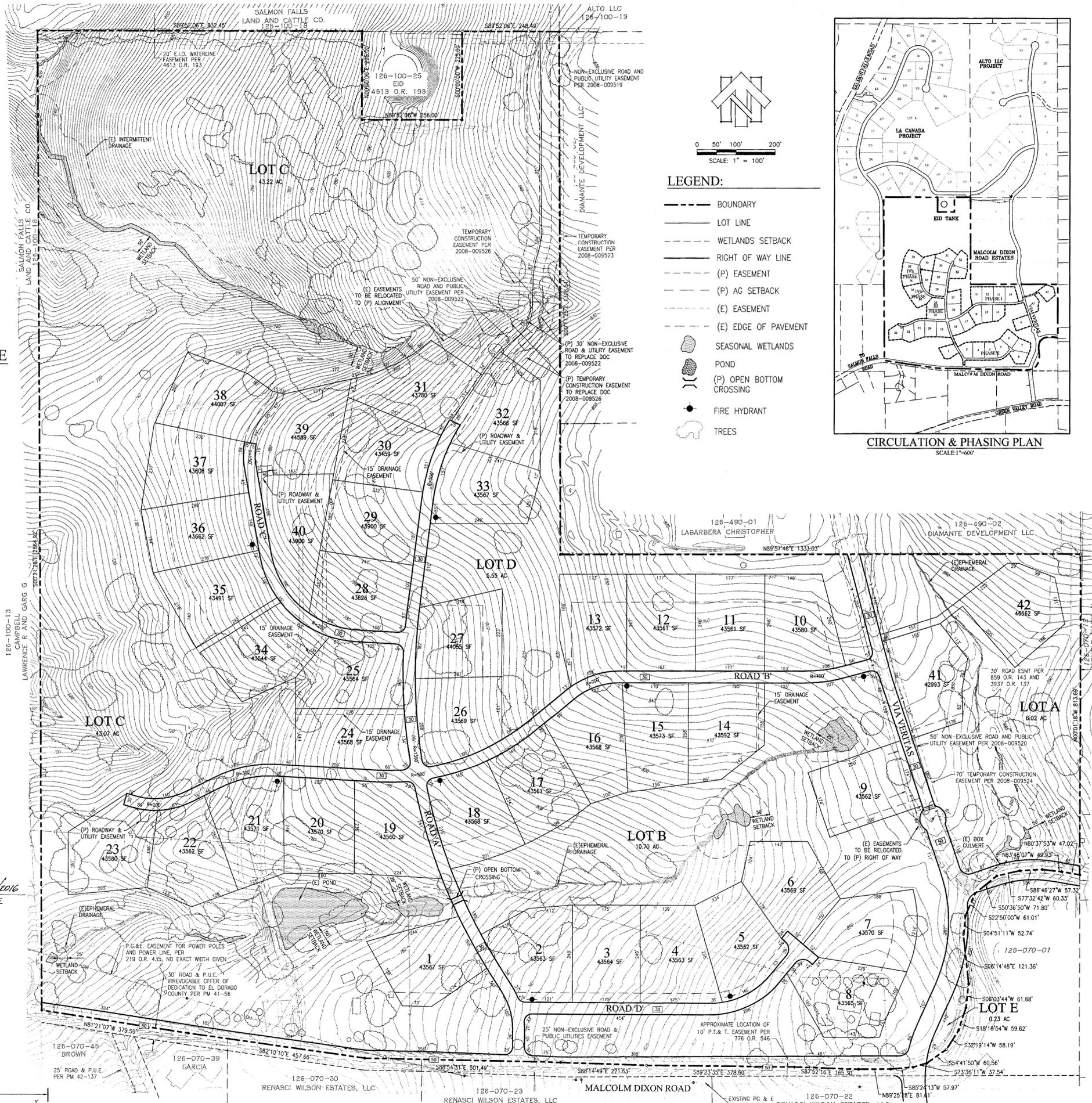
TYP. BUILDING SETBACKS

NOT TO SCALE



TYPICAL ROAD SECTION (101 C)

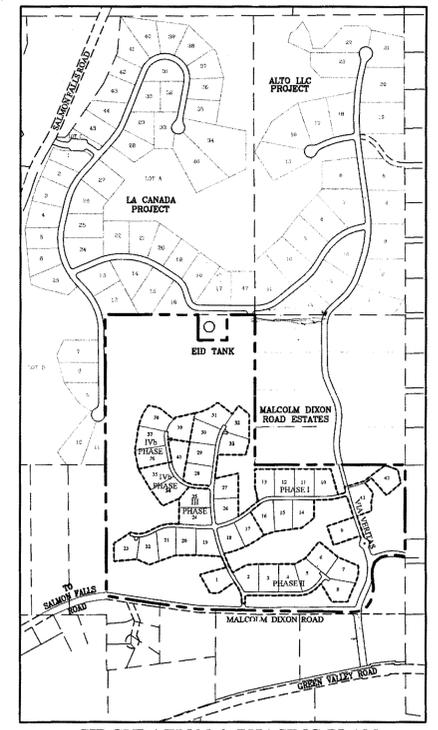
SCALE: 1"=5'



0 50' 100' 200'  
SCALE: 1" = 100'

### LEGEND:

- BOUNDARY
- LOT LINE
- WETLANDS SETBACK
- RIGHT OF WAY LINE
- (P) EASEMENT
- (P) AG SETBACK
- (E) EASEMENT
- (E) EDGE OF PAVEMENT
- SEASONAL WETLANDS
- POND
- (P) OPEN BOTTOM CROSSING
- FIRE HYDRANT
- TREES



CIRCULATION & PHASING PLAN  
SCALE: 1"=600'

PLANNING COMMISSION: \_\_\_\_\_  
 APPROVAL/DENIAL DATE: \_\_\_\_\_  
 BOARD OF SUPERVISORS: \_\_\_\_\_  
 APPROVAL/DENIAL DATE: \_\_\_\_\_

Study Area, the vegetation communities, elevation, and soil profile within the Study Area preclude them from occurring onsite. All of these species require serpentinite or gabbroic soils, such as those specifically found on Pine Hill or Ione formations. These are not present within the Study Area. To definitively determine whether the species occurs within the Study Area, a (CDFW) protocol-level floristic (pre-construction) survey could be conducted during the April through July blooming period for the species.

### **Oak Trees**

The most recent arborist report for the proposed project was conducted in May of 2006 by Sierra Nevada Arborists (SNA). During the survey, SNA identified 19 interior live oak and 343 blue oaks trees totaling 362 oak trees within a combined aggregate diameter of 8,029 inches (Appendix F). The conditions of the oaks trees may have changed in the last 12 years; therefore, Barnett recommends that another pre-construction tree survey be conducted by a ISA Certified Arborist to obtain a more accurate diameter at breast height (dbh) and canopy of each oak tree within the Study Area to determine the amount of canopy adversely affected by the proposed project. Under El Dorado County's General Plan Policy 7.4.2.8, the project would mitigate onsite for the adversely affect canopy using the County's formula of 200 one-gallon oak trees per acre of canopy impacted.

### **Special Status Bird Species, Nesting Raptors, and Migratory Bird**

The CNDDDB search, as well as, the Barnett's 2015 and February 2018 site surveys did not reveal any occurrences of special status bird or bat species within the Study Area. Bats typically roost in caves, under bridges, and in old abandoned buildings, meaning the potential for them occurring in the Study Area is very low. However, according to CNDDDB there is a single recorded occurrence of willow flycatcher approximately four miles southeast of the Study Area. Additionally, the Study Area does provide suitable grassland and oak woodland habitat for raptors and other migratory birds. Therefore, the following measures to avoid or minimize impacts to migratory birds and raptors include:

1. If any site disturbance or construction activity for any phase of development begins outside the February 1 to August 31 breeding season, a preconstruction survey for active nests shall not be required.
2. If any site disturbance or construction activity for any phase of development is scheduled to begin between February 1 and August 31, a qualified biologist shall conduct a preconstruction survey for active tree nests and ground nests from publicly accessible areas within 14 days prior to site disturbance for any phase of development. The survey area shall cover the construction site and a 100-foot radius surrounding the construction site. The preconstruction survey shall be submitted to the County of El Dorado Hills for review. If no nesting migratory birds are found, then further mitigation measures are not necessary.
3. If an active nest of a migratory bird, or other CDFW-protected bird is discovered that may be adversely affected by any site disturbance, or an injured or killed bird is found, the project applicant shall immediately:

- Stop all work within a 100-foot radius of the discovery.
- Notify the City of Colfax Development Department.
- Do not resume work within the 100-foot radius until authorized by the biologist.
- The biologist shall establish a minimum 100-foot Environmentally Sensitive Area (ESA) around the nest. The ESA may be reduced if the biologist determines that a smaller ESA would still adequately protect the active nest. Further work may not occur within the ESA until the biologist determines that the nest is no longer active.

### **Valley Elderberry Longhorn Beetle**

The Study Area does provide suitable elderberry tree habitat for this species located in the northwest corner of the Study Area; however, no valley elderberry longhorn beetle were observed during either the ECORP 2008 or Barnett 2015 or 2018 field surveys. According to the CNDDDB, there are four recorded occurrences of this species within five miles of the Study Area with the nearest occurrence three and a half miles northwest. Additionally, the proposed project does not have the potential to adversely affect this species as the development area does not include the northwest portion of the property (Figure 9). Therefore, no mitigation will be required.

### **Red-Legged Frog**

The Study Area does provide suitable pond habitat for this species; however, no red-legged frogs were observed during either the ECORP 2008 or Barnett 2015 or 2018 field surveys. According to the CNDDDB, there is a single recorded occurrence of this species one-mile northwest of the Study Area. The proposed project will not adversely affect this species as the applicant has applied 25 to 50-foot setbacks around all water features within Lots B and C Open Space parcels as shown in the tentative map in Figure 9. The set buffers should adequately avoid any impacts to California red-legged frogs should they occur, therefore, no mitigation will be required.

## **7.0 Development Evaluation and Mitigation Measures**

The project has been planned and designed in accordance with development policies and standards set forth in the El Dorado County General Plan related to avoidance of aquatic resources and ecological value. In general, the intended 42-lot residential subdivision has been situated within the Study Area to avoid its highest quality natural resources, including two wetland and drainage complexes totaling 1.57 acres and 30.73 acres of oak habitat. These resources have been set aside as designated Open Space for a dual purpose; to protect naturally occurring environmental features and to provide passive recreation and agricultural opportunities for residents. The county encourages development that includes Open Space through a density bonus, as noted in General Plan Policy 2.2.4.1. The main components of this policy are to cluster smaller residential parcels and dedicate larger swaths of Open Space in exchange for more units. Open space areas would then be managed and maintained by a homeowner's association.

Established Open Space could be used for any number of allowed uses consistent with the county's land use designation. Proposed uses include bike trails, open meadows, and spaces for "hobby" vineyard cultivators, as well as other future uses. While it is important to provide this Open Space amenity to the community, steps must also be taken to ensure that natural resources are not unintentionally damaged or impacted by an unaware public. With proper planning, education, and accountability, these areas will maintain their integrity after development is completed and residents are using this space. We therefore propose the following mitigation measures to ensure the integrity of avoided natural resources:

- **Biological Mitigation Measure 1 - Open Space Management:** Open Space could be effectively managed by a Homeowner's Association (HOA) only if capable of creating and enforcing the following conditions, covenants, and restrictions (CC&Rs) in perpetuity and without an option to arbitrarily and unilaterally dilute these CC&Rs in the future. The HOA should also be required to provide ongoing funding for management and maintenance of wetlands and riparian areas.
  
- **Biological Mitigation Measure 2 – Open Space Development Restrictions:** As noted in Section 130.30.030 of the county's *Site Planning and Project Design Standards* – "*no development is allowed to occur within 25 feet of any intermittent stream, wetland or sensitive riparian habitat, or 50 feet from any perennial lake, river or stream unless otherwise determined by a biological resource evaluation that indicates a reduced setback would be sufficient to protect resources.*" While most of the proposed project abides by these setbacks, some of this proposed development would in fact encroach upon these buffers. By employing proper best management practices (BMP), this encroaching development can be implemented without affecting aquatic resources. Specific BMPs include the following:
  - No use of nutrients, pesticides, fuel, or other potential pollutants within 50 feet of any aquatic resource and adherence to the mitigation measures discussed below under special uses.
  - A qualified biologist to monitor all construction to ensure that no resource violations related to the U.S. Clean Water Act (CWA), the California Porter-Cologne Act (PCA), or California Fish and Game Code (FGC) occur.
  - No grading, site construction, or other disturbance within 10 feet of any aquatic feature at any time.
  - Disturbance within, but more than 10 feet from, the above-mentioned setbacks until silt fencing, fiber rolls, or other similar BMP is installed at least 10 feet away and along the perimeter of the encroached feature.
  - No machinery operating closer than 15 feet from an aquatic resource. Required grading between 10 and 15 feet from the resource using only hand tools.
  - Machinery operating between 15 and 25 feet from an intermittent drainage, or between 25 and 50 feet from a perennial drainage to be checked daily for fuel or oil discharge and moved outside these setbacks if discharge is found.
  - No grading within aquatic resources setbacks for after 14 days following a storm event or 14 days before the next anticipated storm event.

- Graded areas to be covered with straw, mats, natural wood chips with no artificial dyes or preservatives, or other erosion control measure within 72 hours of exposure.
  - Grading that increases existing slope by more than 10 percent to include a means for diffusing water velocity at the toe of slope such as a water bar.
  - Any site construction that increases the overland runoff coefficient (e.g. pavement) to incorporate a water bar or other velocity reducing detention solution before runoff can enter an aquatic resource.
  - On completion of construction, disturbed areas to be replanted with locally native seed mix distributed through a hydroseed applicator and mixed with a tackifier. Native shrubs, plugs, and other plantings.
  - Installed landscaping to be irrigated with above-ground temporary irrigation equipment and removed once plantings have established. Irrigation timing and flow should be gradually reduced to naturally occurring rainfall after the first three months. Landscaping to be conducted under the direction of a qualified landscape designer or landscape architect.
  - All construction and erosion control materials to be removed from the construction site after work is completed unless needed for temporary stabilization. If materials are necessary after construction, contractor or owner's representative should designate a future removal time.
- **Biological Mitigation Measure 3 - Development Interface:** Along with Open Space development, several residential lots (1, 9, 20, and 21) are proposed within the allotted setbacks from aquatic features indicated above. Deed restrictions shall be placed on these parcels to ensure that private residential use of the property does not impact the nearby wetland, as follows:
    - A fence shall be installed along the property lines of each of these parcels capable of preventing access to the aquatic features by homeowners, or other individuals.
    - A bioswale with a three-foot minimum width and French drain or similar structure shall be installed inside the residential property along the entire length of fencing in a manner that ensures capture and detention of any irrigation or storm runoff.
  - **Biological Mitigation Measure 4 - Utility, Road, and Trail Crossings:** The project includes several aquatic resource crossings – Street A, an existing dam road adjacent to the pond, and the driveway leading to Lot 42. The Street A crossing and Lot 42 driveway will include an open bottom free span of the underlying drainage (ED3-I). For the span structure to not adversely affect this feature, all “bridge” supports and/or foundations should at least 25 feet away from the ordinary high-water mark (OHWM).

The existing dam road is included in the proposed Open Space trail system. Improvements that limit application of gravel or decomposed granite to within the confines of the existing road would avoid impacts to aquatic features. The following mitigation measures will ensure that any road, trail, or utility crossings constructed during initial development, or in the future will not impact any aquatic resource:

- No utility line, road, or trail within 10 feet of an aquatic resource unless accompanied by a CWA Section 404 permit, CWA Section 401 water quality certification, and a CFG Section 1602 permit.
  - A 1602 permit shall be obtained for any open-bottom road or trail span that connects to the ground within 25 feet of the OHWM of an aquatic feature.
- **Biological Mitigation Measure 5 - Special Uses:** Since Open Space areas serve a dual function of protecting natural resources and providing recreational opportunities for residents, anticipated uses such as hobby or small-scale commercial vineyards and sports fields could adversely affect the integrity of natural resources through their use of nutrients, pesticides, and other potential pollutants. The following mitigation measures would therefore serve to protect resources while also installing these amenities in a controlled fashion:
    - The HOA shall prepare an approval process for special uses that includes preparation and review of improvement plans.
    - Plans for proposed special uses shall include perimeter buffer zones such as bioswales or hedge plantings that impede, detain, and filter surface runoff.
    - Any use of a potential pollutant within designated Open Space shall be set back from aquatic resources by a minimum of 50 feet and be reviewed by El Dorado County or a qualified professional capable of understanding potential pollutant impacts and reviewing improvement plans. Qualified professionals include licensed civil engineers or landscape architects.
    - Any ground disturbance within Open Space, regulated under the County's grading ordinance, shall require a permit prior to grading.
    - Any agricultural use of Open Space, such as vineyards regulated by the California Central Valley Regional Water Quality Control Board (Water Board) under the irrigated lands program, shall first obtain approval from the agency and abide by any associated requirements, including additional setbacks prior to installation and operation.
- **Biological Mitigation Measure 6 - Environmental Permits:** Any proposed development within 25 feet of an aquatic resource and unable to meet the general requirements listed in Mitigation Measure 1 shall first obtain the required environmental permits as listed below:
    - Proposed development within 25 feet of an aquatic resource shall not occur unless a FGC Section 1602 permit is issued by the California Department of Fish and Wildlife (CDFW).
    - Proposed development within 10 feet of an aquatic resource shall not occur unless a CWA Section 404 permit, CWA Section 401 water quality certification, and FGC Section 1602 permit are issued by the Army Corps, Water Board, and CDFW, respectively.
- **Biological Mitigation Measure 7 - Long Term Management:** The HOA will be the designated manager of the Open Space areas and as such will be ultimately responsible for ensuring that passive uses are carried out in harmony with adjacent aquatic resources.

The following mitigation measures will provide the HOA with the tools it needs to carry out its long-term responsibilities related to these resources:

- Prior to the public use/access of Open Space areas, a formal *Open Space Management Plan* shall be prepared by a qualified professional and included with management and maintenance schedules in the HOA CC&Rs.
- Given the proximity of potentially conflicting land uses that could affect the project's Open Space aquatic resources, a qualified biologist shall be annually engaged to monitor the ecological health of these aquatic resources and direct specific maintenance activities to minimize establishment of invasive or non-native species. The biologist shall also ensure that activities in Open Space areas have not occasioned to affect any wetland or riparian area.

## 8.0 Conclusions

The project site contains approximately 1.57 acres of “other waters of the United States” and potential waters of the State. While some of these features have been modified or created (pond) by humans, all are self-sustaining, and some persist even in drought conditions. Activities that affect these areas would require a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act. The project would also need to obtain a Water Quality Certification from the Regional Water Quality Control Board pursuant to Section 401 of the federal Clean Water Act. Any disturbance of the perennial drainages or riparian areas on the property would also need to obtain a Streambed Alteration Agreement from the California Department of Fish & Wildlife under Section 1602 of the California Fish & Game Code.

The California Natural Diversity Database (Rarefind) contains no records of any species of special concern within the Vineyard at EDH Study Area. While the species listed in Table 3 may occur within the vicinity of the Study Area, only four have the potential to occupy the site based on habitat requirements, elevation, or observances within five miles. Barnett's recent biological survey in February 2018 did not reveal any occurrences of these species in the Study Area, therefore the proposed project will not adversely affect any special status plant or animal species.

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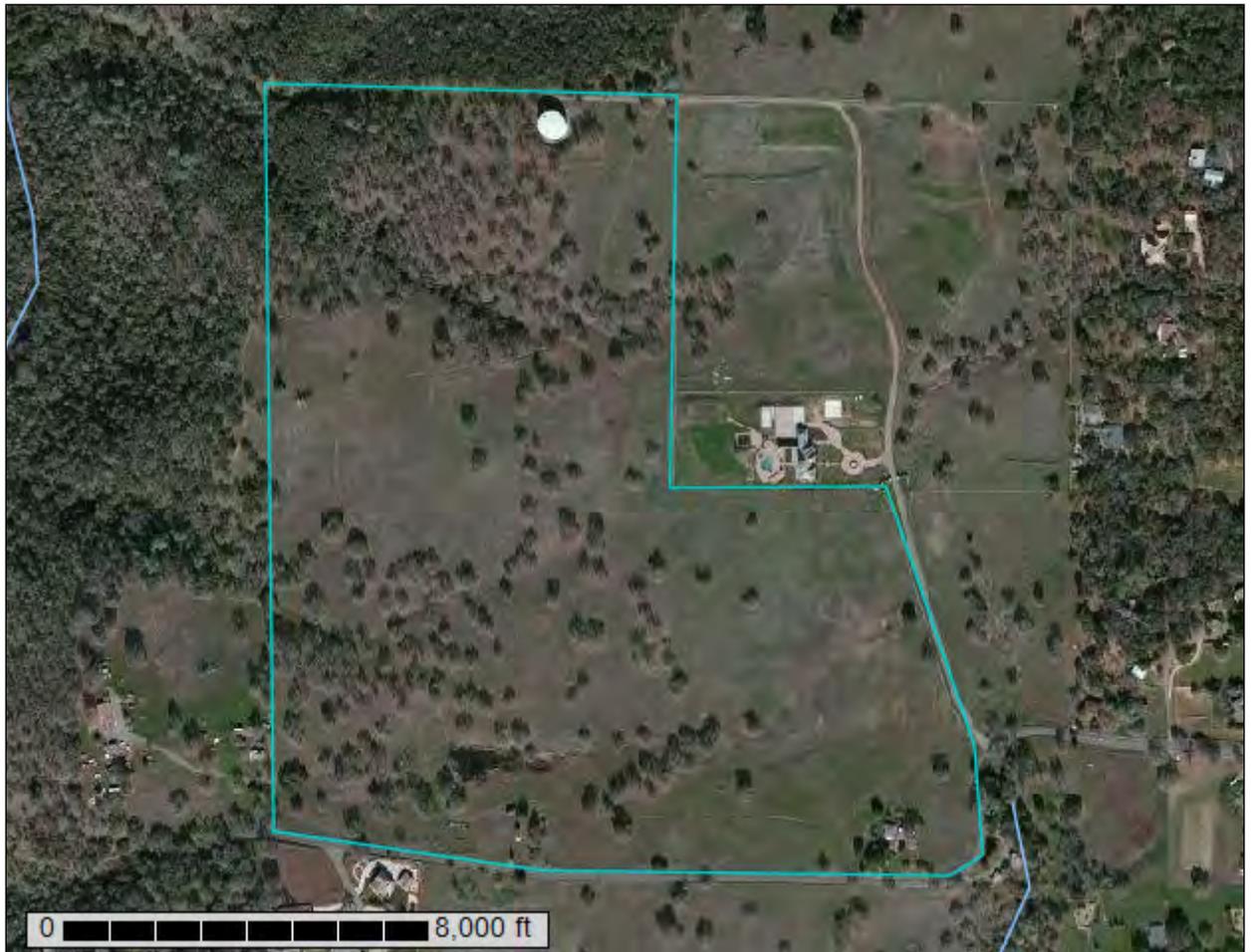
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# ATTACHMENT A – Natural Resource Conservation Service Soils Report

# Custom Soil Resource Report for El Dorado Area, California

## Vineyards at El Dorado Hills (aka Diamante Estates)



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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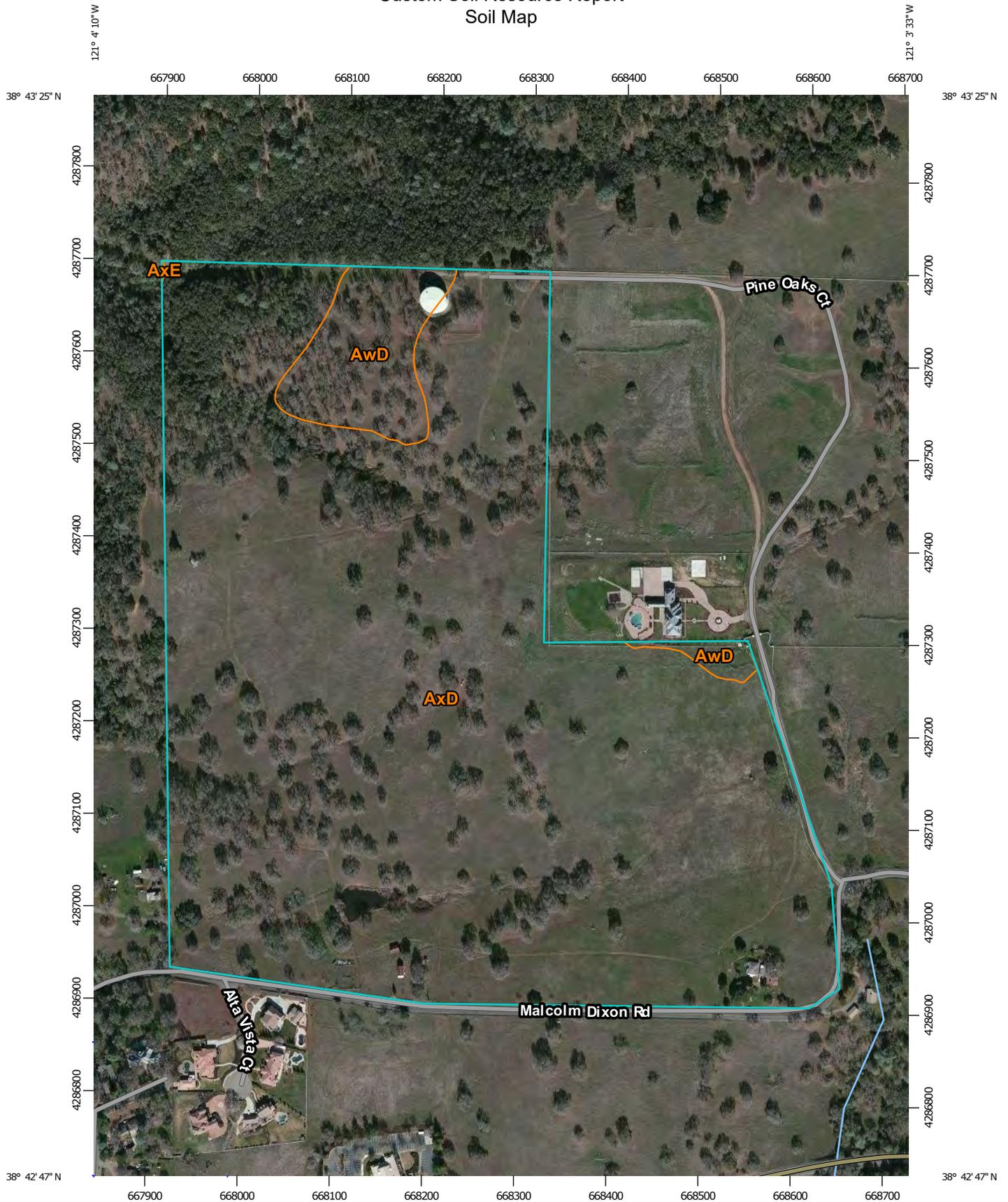
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# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:5,700 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters

0 250 500 1000 1500 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Dorado Area, California  
 Survey Area Data: Version 7, Sep 15, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2011—Apr 29, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

El Dorado Area, California (CA624)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AwD	Auburn silt loam, 2 to 30 percent slopes	6.5	6.0%
AxD	Auburn very rocky silt loam, 2 to 30 percent slopes	101.3	94.0%
AxE	Auburn very rocky silt loam, 30 to 50 percent slopes	0.0	0.0%
<b>Totals for Area of Interest</b>		<b>107.8</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments

## Custom Soil Resource Report

on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## El Dorado Area, California

### AwD—Auburn silt loam, 2 to 30 percent slopes

#### Map Unit Setting

*National map unit symbol:* hhyq  
*Elevation:* 120 to 3,000 feet  
*Mean annual precipitation:* 20 to 40 inches  
*Mean annual air temperature:* 55 to 63 degrees F  
*Frost-free period:* 175 to 275 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Auburn and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Auburn

##### Setting

*Landform:* Hills  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from basic igneous rock and/or basic residuum weathered from metamorphic rock

##### Typical profile

*H1 - 0 to 14 inches:* silt loam  
*H2 - 14 to 18 inches:* unweathered bedrock

##### Properties and qualities

*Slope:* 2 to 30 percent  
*Depth to restrictive feature:* 14 to 18 inches to lithic bedrock  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Very low (about 2.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 6e  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* SHALLOW LOAMY (R018XD076CA)

#### Minor Components

##### Argonaut

*Percent of map unit:* 4 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Shoulder

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*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

### **Perkins**

*Percent of map unit:* 4 percent

### **Sobrante**

*Percent of map unit:* 4 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex

### **Rock outcrop**

*Percent of map unit:* 3 percent

## **AxD—Auburn very rocky silt loam, 2 to 30 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* hhyr  
*Elevation:* 120 to 3,000 feet  
*Mean annual precipitation:* 20 to 40 inches  
*Mean annual air temperature:* 55 to 63 degrees F  
*Frost-free period:* 175 to 275 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Auburn and similar soils:* 75 percent  
*Rock outcrop:* 15 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Auburn**

#### **Setting**

*Landform:* Hills  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from basic igneous rock and/or basic  
residuum weathered from metamorphic rock

#### **Typical profile**

*H1 - 0 to 14 inches:* silt loam  
*H2 - 14 to 18 inches:* unweathered bedrock

#### **Properties and qualities**

*Slope:* 2 to 30 percent  
*Depth to restrictive feature:* 14 to 18 inches to lithic bedrock

## Custom Soil Resource Report

*Natural drainage class:* Well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Very low (about 2.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* 6e  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* SHALLOW LOAMY (R018XD076CA)

### Description of Rock Outcrop

#### Setting

*Parent material:* Metamorphic rock

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8

### Minor Components

#### Argonaut

*Percent of map unit:* 3 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

#### Boomer

*Percent of map unit:* 3 percent  
*Landform:* Mountain slopes, hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Mountainflank, side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex

#### Sobrante

*Percent of map unit:* 2 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex

#### Unnamed

*Percent of map unit:* 2 percent

## **AxE—Auburn very rocky silt loam, 30 to 50 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* hhys  
*Elevation:* 120 to 3,000 feet  
*Mean annual precipitation:* 20 to 40 inches  
*Mean annual air temperature:* 55 to 63 degrees F  
*Frost-free period:* 175 to 275 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Auburn and similar soils:* 75 percent  
*Rock outcrop:* 15 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Auburn**

#### **Setting**

*Landform:* Hills  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from basic igneous rock and/or basic residuum weathered from metamorphic rock

#### **Typical profile**

*H1 - 0 to 14 inches:* silt loam  
*H2 - 14 to 18 inches:* unweathered bedrock

#### **Properties and qualities**

*Slope:* 30 to 50 percent  
*Depth to restrictive feature:* 14 to 18 inches to lithic bedrock  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Very low (about 2.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 6e  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* SHALLOW LOAMY (R018XD076CA)

**Description of Rock Outcrop**

**Setting**

*Parent material:* Metamorphic rock

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8

**Minor Components**

**Boomer**

*Percent of map unit:* 5 percent

*Landform:* Mountain slopes, hillslopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Mountainflank, side slope

*Down-slope shape:* Concave

*Across-slope shape:* Convex

**Unnamed**

*Percent of map unit:* 5 percent

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## ATTACHMENT B – CNDDDB Report



**Multiple Occurrences per Page**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



**Query Criteria:** Quad

<b><i>Rana draytonii</i></b>		<b>Element Code:</b> AAABH01022	
California red-legged frog			
<b>Listing Status:</b>	<b>Federal:</b> Threatened	<b>CNDDDB Element Ranks:</b>	<b>Global:</b> G2G3
	<b>State:</b> None		<b>State:</b> S2S3
<b>Other:</b>	CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable		
<b>Habitat:</b>	<b>General:</b> LOWLANDS AND FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.		
	<b>Micro:</b> REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.		

<b>Occurrence No.</b>	814	<b>Map Index:</b>	61448	<b>EO Index:</b>	61484	<b>Element Last Seen:</b>	2005-05-12
<b>Occ. Rank:</b>	Fair	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2005-05-12	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2005-05-31	

**Quad Summary:** Clarksville (3812161)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.73547 / -121.08304	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4289167 E666615	<b>Elevation (ft):</b>	485
<b>PLSS:</b>	T10N, R08E, Sec. 10, SE (M)	<b>Acres:</b>	0.0

**Location:** DRAINAGE / WATERCOURSE AT THE END OF FITCH WAY, EAST SIDE OF FOLSOM LAKE, SW OF IRON MOUNTAIN.  
**Detailed Location:** THIS DRAINAGE EMANATES FROM A PVC PIPE AT THE END OF FITCH WAY; FROG OBSERVED ON A SMALL FOOTBRIDGE CROSSING THE WATERCOURSE.  
**Ecological:** HABITAT CONSISTS OF A SMALL WATERCOURSE THAT DRAINS INTO FOLSOM LAKE; VEGETATED BY SEDGES AND HIMALAYAN BLACKBERRY.  
**General:** 1 JUVENILE FROG WITH DISTINCT DORSOLATERAL FOLDS AND REDISH UNDER THIGHS OBSERVED ON 12 MAY 2005 BY A STATE PARK BIOLOGIST.  
**Owner/Manager:** DPR-FOLSOM LAKE SRA, USBOR

<b><i>Haliaeetus leucocephalus</i></b>		<b>Element Code:</b> ABNKC10010	
bald eagle			
<b>Listing Status:</b>	<b>Federal:</b> Delisted	<b>CNDDDB Element Ranks:</b>	<b>Global:</b> G5
	<b>State:</b> Endangered		<b>State:</b> S3
<b>Other:</b>	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern		
<b>Habitat:</b>	<b>General:</b> OCEAN SHORE, LAKE MARGINS, AND RIVERS FOR BOTH NESTING AND WINTERING. MOST NESTS WITHIN 1 MILE OF WATER.		
	<b>Micro:</b> NESTS IN LARGE, OLD-GROWTH, OR DOMINANT LIVE TREE WITH OPEN BRANCHES, ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTER.		



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<b>Occurrence No.</b>	130	<b>Map Index:</b> 22872	<b>EO Index:</b> 11783	<b>Element Last Seen:</b>	1996-01-16
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1996-01-16
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	1996-02-07

**Quad Summary:** Clarksville (3812161)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.67978 / -121.02259	<b>Accuracy:</b>	2/5 mile
<b>UTM:</b>	Zone-10 N4283097 E672004	<b>Elevation (ft):</b>	1250
<b>PLSS:</b>	T10N, R09E, Sec. 31, NE (M)	<b>Acres:</b>	0.0

**Location:** BASS LAKE, 3 MILES ENE OF EL DORADO HILLS.

**Detailed Location:**

**Ecological:** WINTERING TERRITORY. HABITAT CONSISTS OF FOOTHILL PINE/OAK WOODLAND; OAK WOODLAND DOMINATES THE NORTH AND WEST EDGE OF THE RESERVOIR, FOOTHILL PINES DOMINATE THE EAST EDGE, AND GRASSLAND IS FOUND ALONG THE REMAINING AREA.

**General:** EAGLES HAVE BEEN OBSERVED WINTERING AT THIS SITE FOR THE PAST 40 YEARS. TWO ADULTS WINTERED IN 1992-93; TWO ADULTS WINTERED IN 1993-94; ONE ADULT WINTERED IN 1994-95; ONE ADULT WINTERED IN 1995-96.

**Owner/Manager:** EL DORADO IRRIGATION DISTRICT

<b>Occurrence No.</b>	272	<b>Map Index:</b> 71321	<b>EO Index:</b> 72225	<b>Element Last Seen:</b>	2014-02-XX
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2014-05-29
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Stable	<b>Record Last Updated:</b>	2016-07-18

**Quad Summary:** Pilot Hill (3812171)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.79240 / -121.10377	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4295447 E664682	<b>Elevation (ft):</b>	475
<b>PLSS:</b>	T11N, R08E, Sec. 20, NE (M)	<b>Acres:</b>	0.0

**Location:** ANDERSON ISLAND NATURAL PRESERVE, NORTHERN ARM OF FOLSOM LAKE, ABOUT 0.8 MI SSE OF STERLING POINTE COURT, LOOMIS.

**Detailed Location:** NEST IN GRAY PINE IN MIDDLE OF NORTH SIDE OF ANDERSON ISLAND. ROOST SITES ON EAST SIDE OF LAKE AND ON 2 GRAY PINES ON SOUTH SIDE OF ISLAND.

**Ecological:** 1ST BALD EAGLE NEST RECORD AT FOLSOM LAKE. RECREATION LAKE SURROUNDED BY OAKS, GRAY PINES AND CALIF BUCKEYE. UNDERSTORY CONSISTED OF POISON OAK & ANNUAL GRASSES. SITE PREVIOUSLY USED BY EGRETS & HERONS. GREAT BLUE HERON ROOKERY IN VICINITY.

**General:** NEST ACTIVE IN 2005 & 2006. 2 FLEDGLINGS 20 JUN 2008. 1 FLEDGLING 24 JUN 2009. 2 EAGLETS / 2 ADULTS 12 APR 2010. ADULT IN NEST 1 APR 2011. ADULT IN NEST 4 MAY 2012. ADULT INCUBATING IN FEB 2013 & FEB 2014; UNKNOWN IF SUCCESSFUL IN 2014.

**Owner/Manager:** DPR-FOLSOM LAKE SRA, USBOR



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<b>Occurrence No.</b>	358	<b>Map Index:</b>	95316	<b>EO Index:</b>	96445	<b>Element Last Seen:</b>	2015-02-19
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2015-02-19	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2015-02-26	

**Quad Summary:** Clarksville (3812161)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.70592 / -121.10757	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4285843 E664551	<b>Elevation (ft):</b>	610
<b>PLSS:</b>	T10N, R08E, Sec. 21, SW (M)	<b>Acres:</b>	0.0

**Location:** 0.3 MI N OF GREEN VALLEY RD AT SOPHIA PKWY, BTWN MORMON ISLAND DAM & BROWN'S RAVINE, EL DORADO HILLS, FOLSOM LAKE SRA.

**Detailed Location:**

**Ecological:** BASED ON 2014 AERIALS, NEST IS LIKELY IN A GRAY PINE.

**General:** TWO ADULTS WERE OBSERVED AT THE NEST ON 19 FEB 2015.

**Owner/Manager:** DPR-FOLSOM LAKE SRA, USBOR

<b>Occurrence No.</b>	359	<b>Map Index:</b>	95962	<b>EO Index:</b>	97112	<b>Element Last Seen:</b>	2015-04-XX
<b>Occ. Rank:</b>	Unknown	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2015-04-XX	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2015-04-22	

**Quad Summary:** Pilot Hill (3812171)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.75430 / -121.06343	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4291293 E668275	<b>Elevation (ft):</b>	475
<b>PLSS:</b>	T11N, R08E, Sec. 34, SE (M)	<b>Acres:</b>	0.0

**Location:** ABOUT 0.6 MILE NNW OF SALMON FALLS ROAD AT EASY LANE, SOUTH FORK AMERICAN RIVER ARM OF FOLSOM LAKE, EL DORADO HILLS.

**Detailed Location:** SOUTH SIDE OF LAKE NEAR SHORE.

**Ecological:** NEST NEAR THE TOP OF A PONDEROSA PINE.

**General:** NEST FOUND IN APR 2015 WITH AT LEAST ONE CHICK, POSSIBLY 2; ADULTS OBSERVED IN THE AREA AND AT THE NEST.

**Owner/Manager:** USBOR



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<b><i>Laterallus jamaicensis coturniculus</i></b>		<b>Element Code:</b> ABNME03041
California black rail		
<b>Listing Status:</b>	<b>Federal:</b> None	<b>CNDDDB Element Ranks:</b> <b>Global:</b> G3G4T1
	<b>State:</b> Threatened	<b>State:</b> S1
<b>Other:</b>	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_NT-Near Threatened, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	
<b>Habitat:</b>	<b>General:</b> INHABITS FRESHWATER MARSHES, WET MEADOWS AND SHALLOW MARGINS OF SALTWATER MARSHES BORDERING LARGER BAYS.	
	<b>Micro:</b> NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DO NOT FLUCTUATE DURING THE YEAR AND DENSE VEGETATION FOR NESTING HABITAT.	

<b>Occurrence No.</b>	304	<b>Map Index:</b> A5574	<b>EO Index:</b> 107311	<b>Element Last Seen:</b>	2017-05-21
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2017-05-21
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-07-28
<b>Quad Summary:</b>	Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.63051 / -121.05533		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4277569 E669272		<b>Elevation (ft):</b>	550	
<b>PLSS:</b>	T09N, R08E, Sec. 13, SW (M)		<b>Acres:</b>	5.0	
<b>Location:</b>	NNE OF ALDRIDGE WAY AT BLACKSTONE PARKWAY, ABOUT 1.3 MILES SE OF WHITE ROCK RD AT LATROBE RD, SHINGLE SPRINGS.				
<b>Detailed Location:</b>	EAST SIDE OF BLACKSTONE PKWY AT CLOVER VALLEY LN. ACCESS IS LIMITED; SURROUNDED BY RESIDENTIAL HOUSES AND APPARENTLY CAN NOT BE HEARD FROM ROADWAY.				
<b>Ecological:</b>	AS LATE AS 2002 THIS WAS A MINOR DRAINAGE IN GRASSLAND. IT WAS DAMMED IN 2003 MOST LIKELY WITH RESPECT TO FUTURE RESIDENTIAL DEVELOPMENT THAT BEGAN WITH GRADING IN 2006.THIS IS NOW A POND W/IN RESIDENTAL DEVELOPMENT. VIRGINIA RAIL NEST TOO.				
<b>General:</b>	THIS MAY BE THE FIRST BREEDING RECORD FOR EL DORADO COUNTY. ORIGINALLY REPORTED ON EBIRD ON 27 APR 2017 FOLLOWED BY SEVERAL OTHER BIRDER REPORTS. RESIDENT REPORTED 2 ADULTS AND 2 TINY CHICKS (SMALLER THAN VOLE) ON 21 MAY 2017.				
<b>Owner/Manager:</b>	UNKNOWN				



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<b>Riparia riparia</b>		<b>Element Code:</b> ABPAU08010	
bank swallow			
<b>Listing Status:</b>	<b>Federal:</b> None	<b>CNDDDB Element Ranks:</b>	<b>Global:</b> G5
	<b>State:</b> Threatened		<b>State:</b> S2
	<b>Other:</b> BLM_S-Sensitive, IUCN_LC-Least Concern		
<b>Habitat:</b>	<b>General:</b> COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.		
	<b>Micro:</b> REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.		

<b>Occurrence No.</b>	295	<b>Map Index:</b>	78087	<b>EO Index:</b>	85439	<b>Element Last Seen:</b>	1873-XX-XX
<b>Occ. Rank:</b>	Unknown	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		<b>Record Last Updated:</b>	2011-12-06
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b>	Unknown			
<b>Quad Summary:</b>	Camino (3812066), Placerville (3812067), Shingle Springs (3812068), Slate Mtn. (3812076), Garden Valley (3812077), Coloma (3812078)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.72948 / -120.79835		<b>Accuracy:</b>	5 miles			
<b>UTM:</b>	Zone-10 N4289058 E691378		<b>Elevation (ft):</b>	2000			
<b>PLSS:</b>	T10N, R11E, Sec. 07 (M)		<b>Acres:</b>	0.0			
<b>Location:</b>	NEAR PLACERVILLE.						
<b>Detailed Location:</b>	LOCATION STATED AS "NEAR PLACERVILLE."						
<b>Ecological:</b>	COLONY NESTED IN THE "ROUGH FACE OF A HIGH GRAVELLY HILL, THAT HAD BEEN WASHED DOWN FOR YEARS BY THE PROCESS OF HYDRAULICING FOR GOLD."						
<b>General:</b>	AN ALBINO BANK SWALLOW OBSERVED SOMETIME DURING 1873.						
<b>Owner/Manager:</b>	UNKNOWN						



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***Oncorhynchus mykiss irideus pop. 11***

**Element Code:** AFCHA0209K

steelhead - Central Valley DPS

**Listing Status: Federal:** Threatened

**CNDDDB Element Ranks: Global:** G5T2Q

**State:** None

**State:** S2

**Other:** AFS\_TH-Threatened

**Habitat: General:** POPULATIONS IN THE SACRAMENTO AND SAN JOAQUIN RIVERS AND THEIR TRIBUTARIES.

**Micro:**

**Occurrence No.** 24      **Map Index:** 91514      **EO Index:** 92591      **Element Last Seen:** 2013-01-07

**Occ. Rank:** Unknown      **Presence:** Presumed Extant      **Site Last Seen:** 2013-01-07

**Occ. Type:** Natural/Native occurrence      **Trend:** Unknown      **Record Last Updated:** 2014-02-10

**Quad Summary:** Galt (3812133), Bruceville (3812134), Carbondale (3812141), Sloughouse (3812142), Elk Grove (3812143), Folsom SE (3812151)

**County Summary:** Amador, El Dorado, Sacramento, San Joaquin

**Lat/Long:** 38.49658 / -121.06664      **Accuracy:** nonspecific area

**UTM:** Zone-10 N4262685 E6688600      **Elevation (ft):**

**PLSS:** T08N, R08E, Sec. 35 (M)      **Acres:** 4344.0

**Location:** COSUMNES RIVER, FROM ITS MOUTH IN THE MOKELUMNE RIVER TO LATROBE FALLS (NEAR RM37.25).

**Detailed Location:** MAPPED TO RIVER REACH CURRENTLY ACCESSIBLE BY STEELHEAD (SH); LATROBE FALLS IS A NATURAL BARRIER TO ANADROMY. RECENT JUVENILE DETECTIONS BELOW LOW-WATER CROSSING AT ~RM6.75, THOUGH ADULTS SEEN ABOVE IT; IT MAY BE A BARRIER TO JUVENILE SH.

**Ecological:** COSUMNES MAY HOST NON-NATAL REARING HABITAT FOR SH FROM MOKELUMNE, OTHER NEARBY RIVERS. AVAILABLE HABITAT LOW-ELEVATION, LIKELY ONLY SUITABLE FOR SPAWNING IN WET YEARS. SH SEEN RECENTLY PRESUMED HATCHERY STRAYS. UNK IF HISTORIC RUN EXISTED.

**General:** 1 PRESUMED "STEELHEAD" CAUGHT IN GILL NET SAMPLES, 5-6 FEB 1974. 0 TROUT CAUGHT IN 2000, 1 IN 2001, & 12 IN 2002 IN QUARTERLY ELECTROFISHING SAMPLES. 7 AD-CLIPPED SH, 16-27", RECORDED PAST CAMERA TRAP AT GRANLEES DAM 6 DEC 2012-7 JAN 2013.

**Owner/Manager:** UNKNOWN



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<b><i>Branchinecta lynchi</i></b>		<b>Element Code:</b> ICBRA03030	
vernal pool fairy shrimp			
<b>Listing Status:</b>	<b>Federal:</b> Threatened	<b>CNDDDB Element Ranks:</b>	<b>Global:</b> G3
	<b>State:</b> None		<b>State:</b> S3
	<b>Other:</b> IUCN_VU-Vulnerable		
<b>Habitat:</b>	<b>General:</b> ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.		
	<b>Micro:</b> INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.		
<b>Occurrence No.</b>	168	<b>Map Index:</b> 33695	<b>EO Index:</b> 30607
<b>Occ. Rank:</b>	Unknown	<b>Presence:</b> Presumed Extant	<b>Element Last Seen:</b> 1993-03-25
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b> Unknown	<b>Site Last Seen:</b> 1993-03-25
			<b>Record Last Updated:</b> 1997-03-10
<b>Quad Summary:</b>	Clarksville (3812161)		
<b>County Summary:</b>	El Dorado, Sacramento		
<b>Lat/Long:</b>	38.69245 / -121.10569	<b>Accuracy:</b>	3/5 mile
<b>UTM:</b>	Zone-10 N4284351 E664746	<b>Elevation (ft):</b>	400
<b>PLSS:</b>	T10N, R08E, Sec. 28 (M)	<b>Acres:</b>	0.0
<b>Location:</b>	EAST OF BLUE RAVINE, SOUTHEAST OF MORMON ISLAND DAM.		
<b>Detailed Location:</b>	VERNAL POOLS LOCATED SOMEWHERE IN SECTION 28.		
<b>Ecological:</b>	NATURAL VERNAL POOLS AND MANMADE VERNAL POOLS.		
<b>General:</b>	B. LYNCHI OBSERVED IN 1 NATURAL VERNAL POOL AND 2 MANMADE VERNAL POOLS. SUGNET RECORD NUMBERS 83 & 84. NO LEPIDURUS PACKARDI OBSERVED.		
<b>Owner/Manager:</b>	UNKNOWN		



**Multiple Occurrences per Page**  
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<b><i>Desmocerus californicus dimorphus</i></b>		<b>Element Code:</b> IICOL48011	
valley elderberry longhorn beetle			
<b>Listing Status:</b>	<b>Federal:</b> Threatened	<b>CNDDB Element Ranks:</b>	<b>Global:</b> G3T2
	<b>State:</b> None		<b>State:</b> S2
<b>Other:</b>			
<b>Habitat:</b>	<b>General:</b> OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).		
	<b>Micro:</b> PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.		

<b>Occurrence No.</b>	82	<b>Map Index:</b>	33014	<b>EO Index:</b>	3784	<b>Element Last Seen:</b>	1991-06-11
<b>Occ. Rank:</b>	Poor	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		1991-06-11	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		1998-08-11	

**Quad Summary:** Pilot Hill (3812171)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.77641 / -121.09388	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4293690 E665579	<b>Elevation (ft):</b>	840
<b>PLSS:</b>	T11N, R08E, Sec. 28, NW (M)	<b>Acres:</b>	0.0

**Location:** ANDERSON CREEK, TRIBUTARY TO NORTH FORK AMERICAN RIVER/FOLSOM LAKE, ALONG RATTLESNAKE BAR ROAD, SSW OF PILOT HILL.  
**Detailed Location:** REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
**Ecological:** HABITAT CONSISTS OF ONE UNHEALTHY-LOOKING CLUMP (MORE DEAD THAN LIVE BRANCHES) OF ELDERBERRY, SURROUNDED BY OAK WOODLAND.  
**General:** MANY EXIT HOLES OBSERVED; SOME POSSIBLY RECENT.  
**Owner/Manager:** PVT

<b>Occurrence No.</b>	83	<b>Map Index:</b>	33015	<b>EO Index:</b>	3783	<b>Element Last Seen:</b>	1991-06-11
<b>Occ. Rank:</b>	Fair	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		1991-06-11	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		1998-08-11	

**Quad Summary:** Pilot Hill (3812171)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.77044 / -121.09753	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4293021 E665276	<b>Elevation (ft):</b>	760
<b>PLSS:</b>	T11N, R08E, Sec. 28, SW (M)	<b>Acres:</b>	0.0

**Location:** NE SHORE OF FOLSOM LAKE, ALONG RATTLESNAKE BAR ROAD, JUST NORTH OF PENINSULA CAMPGROUND ENTRANCE, FOLSOM LAKE SRA.  
**Detailed Location:** LOCATED WITHIN THE STATE PARK, BUT LOCATED JUST OUTSIDE THE ENTRANCE GATE. REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
**Ecological:** HABITAT CONSISTS OF 4 ELDERBERRY CLUMPS IN A WET DITCH ALONG THE ROADSIDE, SURROUNDED BY OAK WOODLAND.  
**General:** 4 ELDERBERRY CLUMPS CONTAINED MANY OLD AND NEW EXIT HOLES. PLANTS HAD BEEN SEVERELY TRIMMED AND PRUNED, WITH EVEN MAJOR TRUNKS CUT OUT, ALTHOUGH NOT RECENTLY.  
**Owner/Manager:** DPR-FOLSOM LAKE SRA

<b><i>Packera layneae</i></b>		<b>Element Code:</b> PDAST8H1V0	
Layne's ragwort			
<b>Listing Status:</b>	<b>Federal:</b> Threatened	<b>CNDDB Element Ranks:</b>	<b>Global:</b> G2
	<b>State:</b> Rare		<b>State:</b> S2



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<b>Habitat:</b>	<b>Other:</b> Rare Plant Rank - 1B.2, SB_RSABG-Rancho Santa Ana Botanic Garden
	<b>General:</b> CHAPARRAL, CISMONTANE WOODLAND.
	<b>Micro:</b> ULTRAMAFIC SOIL (SERPENTINE OR GABBRO); OCCASIONALLY ALONG STREAMS. 200-1085 M.

<b>Occurrence No.</b>	1	<b>Map Index:</b>	12249	<b>EO Index:</b>	17312	<b>Element Last Seen:</b>	2017-03-29
<b>Occ. Rank:</b>	Excellent	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2017-03-29	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2017-08-17	

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.71895 / -120.98923	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4287508 E674810	<b>Elevation (ft):</b>	2000
<b>PLSS:</b>	T10N, R09E, Sec. 16 (M)	<b>Acres:</b>	100.0

**Location:** PINE HILL, ABOUT 2 MILES WNW OF RESCUE, NORTHWEST OF SHINGLE SPRINGS.  
**Detailed Location:** MAPPED BY CNDDDB AS 16 POLYGONS FROM VARIOUS MAPS, AS WELL AS 2009 & 2017 DIGITAL DATA. SEVERAL POPS MAPPED ALONG ACCESS RD UP THE HILL AND AROUND THE LOOKOUT AND RELAY STATIONS.  
**Ecological:** GROWING ON RESCUE EXTREMELY STONY SANDY LOAM WITHIN NORTHERN MIXED CHAPARRAL. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPYLOS VISCIDA, CEANOTHUS RODERICKII, FREMONTODENDRON DECUMBENS, WYETHIA RETICULATA, & SANICULA SP.  
**General:** <1000 PLANTS SEEN IN 1978, <50 PLANTS IN 1984, UNKNOWN # IN 1986 & 1990, THOUSANDS IN 1998, >200 IN 2007, UNK # IN 2009, 43 IN 2013, UNK # IN 2016, 25+ IN 2017. COLLECTIONS FROM 1966, 1980 & 1990 ALSO ATTRIB HERE. INCL FORMER OCCS #10 & 35.  
**Owner/Manager:** DFG-PINE HILL ER, PVT

<b>Occurrence No.</b>	2	<b>Map Index:</b>	12239	<b>EO Index:</b>	13943	<b>Element Last Seen:</b>	2015-06-23
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2015-06-23	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2017-08-21	

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.66942 / -120.96605	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4282055 E676948	<b>Elevation (ft):</b>	1500
<b>PLSS:</b>	T09N, R09E, Sec. 2 (M)	<b>Acres:</b>	327.0

**Location:** JUST E OF CAMERON AIRPORT TO ~2.5 AIR MI SE OF AIRPORT; E OF CAMERON PARK DR, W OF PONDEROSA RD, AND MOSTLY N OF HWY 50.  
**Detailed Location:** MAPPED BY CNDDDB AS 34 POLYGONS ACCORDING TO MAP INFORMATION FROM 1980S-2009. WITHIN W 1/2 SECTION 1, SECTION 2, N 1/2 SECTION 3, SW 1/4 SECTION 35, SECTION 34, AND SE 1/4 SECTION 28. INCL FORMER OCCS 5-9, 23, 36, & 37.  
**Ecological:** GABBROIC MIXED CHAPARRAL. PACKERA IS IN BARREN AREAS AND ROAD CUTS. ASSOCIATED WITH ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, CEANOTHUS RODERICKII, HELIANTHEMUM SUFFRUTESCENS, WYETHIA RETICULATA, AND CHLOROGALUM GRANDIFLORUM, ETC.  
**General:** POP NUMBERS FOR PORTIONS OF OCCURRENCE: UNK # <1981 & IN 1982, <150 IN '84, UNK # IN '85, 1000 IN '87, 500-1000 IN '90, 3 IN '92, UNK # IN '93, 107 IN '94, <25 IN 2005, 600 IN '06, 1000 IN '07, 9 IN '08, 2 IN '15.  
**Owner/Manager:** PVT, EL DORADO IRR DIST, BLM



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<b>Occurrence No.</b>	3	<b>Map Index:</b> 12257	<b>EO Index:</b> 16868	<b>Element Last Seen:</b>	1980-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1980-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	1989-08-11

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.70156 / -120.98133	<b>Accuracy:</b>	1/5 mile
<b>UTM:</b>	Zone-10 N4285593 E675540	<b>Elevation (ft):</b>	1400
<b>PLSS:</b>	T10N, R09E, Sec. 22, SW (M)	<b>Acres:</b>	0.0

**Location:** W OF WHITE OAK FLATS ON S SIDE OF GREEN VALLEY RD.

**Detailed Location:**

**Ecological:**

**General:** ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1981 RAE MAP (BASED ON FIELD WORK FROM 1978-1980).

**Owner/Manager:** PVT

<b>Occurrence No.</b>	4	<b>Map Index:</b> 12217	<b>EO Index:</b> 16871	<b>Element Last Seen:</b>	2006-07-08
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2006-07-08
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2007-07-23

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.69761 / -120.96616	<b>Accuracy:</b>	1/10 mile
<b>UTM:</b>	Zone-10 N4285184 E676868	<b>Elevation (ft):</b>	1400
<b>PLSS:</b>	T10N, R09E, Sec. 27, NE (M)	<b>Acres:</b>	0.0

**Location:** SOUTH OF WHITE OAK FLAT.

**Detailed Location:** WEST OF OAK LANE. MAPPED IN NE1/4 OF NE1/4 SEC 27 AND ADJACENT SEC 26.

**Ecological:** CHAPARRAL ON GABBRO SOILS. ASSOCIATED WITH ADEONSTOMA FASCICULATUM, BACCHARIS PILULARIS, SALVIA SONOMENSIS. THE RARE WYETHIA RETICULATA AND GALIUM CALIFORNICUM SSP. SIERRAE ALSO OCCUR AT THIS SITE.

**General:** 80 PLANTS OBSERVED IN 2006 BY WILLSON.

**Owner/Manager:** PVT



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<b>Occurrence No.</b>	11	<b>Map Index:</b> 12376	<b>EO Index:</b> 11922	<b>Element Last Seen:</b>	2011-05-10
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2011-05-10
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2013-02-13
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.65267 / -120.93538		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4280257 E679657		<b>Elevation (ft):</b>	1450	
<b>PLSS:</b>	T09N, R09E, Sec. 12, NE (M)		<b>Acres:</b>	12.0	
<b>Location:</b>	NEAR JUNCTION OF RAILROAD TRACKS WITH S SHINGLE RD, APPROXIMATELY 0.8 MILE SOUTH OF US 50, SSW OF SHINGLE SPRINGS.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS 2 POLYGONS. WESTERN POLYGON BASED ON A 1981 RAE MAP. EASTERN POLYGON BASED ON 2011 BLACKBURN COORDINATES; PART OF POPULATION IS IN BACKYARD OF RESIDENCE ON MONARCH LANE.				
<b>Ecological:</b>	ASSOCIATED WITH PINUS SABINIANA, ARCTOSTAPHYLOS, CERCIS ORBICULATA, HETEROMELES ARBUTIFOLIA, CALOCHORTUS ALBUS, SALVIA SONOMENSIS, AND IRIS MACROSIPHON.				
<b>General:</b>	WESTERN POLYGON: BASED ON A 1981 RAE MAP (FROM 1978-1980 FIELD WORK), NO PLANTS OBSERVED IN A 2011 REVISIT. EASTERN POLYGON: 45 CLUMPS OBSERVED IN 2011 WITH "3 OTHER SMALL ISOLATED CLUMPS IDENTIFIED IN GENERAL AREA."				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	12	<b>Map Index:</b> 12390	<b>EO Index:</b> 11920	<b>Element Last Seen:</b>	1980-XX-XX
<b>Occ. Rank:</b>	Poor		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2011-04-29
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2013-02-19
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.65802 / -120.93639		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4280848 E679556		<b>Elevation (ft):</b>	1480	
<b>PLSS:</b>	T09N, R09E, Sec. 01, SE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	0.5 MILE SOUTH OF HWY 50 ON SOUTH SHINGLE ROAD, SW OF SHINGLE SPRINGS.				
<b>Detailed Location:</b>					
<b>Ecological:</b>					
<b>General:</b>	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1981 RAE MAP (BASED ON FIELD WORK FROM 1978-1980). NO PLANTS OBSERVED DURING A 2011 REVISIT. IS THIS SITE EXTIRPATED?				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	16	<b>Map Index:</b>	12131	<b>EO Index:</b>	16865	<b>Element Last Seen:</b>	1994-06-16
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		1994-06-16	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2007-07-10	

**Quad Summary:** Clarksville (3812161)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.73977 / -121.03785	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4289727 E670533	<b>Elevation (ft):</b>	880
<b>PLSS:</b>	T10N, R09E, Sec. 07, NW (M)	<b>Acres:</b>	4.0

**Location:** ALONG THE SOUTH-FACING SLOPE BELOW THE SOUTH END OF A HIGH RIDGE NORTH OF CROCKER CREEK.

**Detailed Location:** A 1907 BRANDEGEE COLLECTION FROM "SWEETWATER CREEK" AND A 1939 CONSTANCE COLLECTION FROM "ABOVE SANDBAR IN FORKS OF SWEETWATER CREEK, 2 MILES ABOVE ITS MOUTH, SIERRA FOOTHILLS" ALSO ATTRIBUTED TO THIS SITE.

**Ecological:** ON RESCUE STONY LOAM SOILS, GROWING ON A STEEP SOUTH-FACING SLOPE IN OPENINGS OF A MODERATELY DENSE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE: ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ETC.

**General:** 50 PLANTS OBSERVED IN 1994.

**Owner/Manager:** PVT

<b>Occurrence No.</b>	18	<b>Map Index:</b>	12197	<b>EO Index:</b>	7632	<b>Element Last Seen:</b>	2008-05-09
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2008-05-09	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2017-09-01	

**Quad Summary:** Shingle Springs (3812068), Clarksville (3812161)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.68606 / -121.00365	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4283831 E673635	<b>Elevation (ft):</b>	1340
<b>PLSS:</b>	T10N, R09E, Sec. 29, E (M)	<b>Acres:</b>	54.0

**Location:** JUST NE OF BASS LAKE, NEAR SHINGLE SPRINGS.

**Detailed Location:** MAPPED BY CNDDDB AS 7 POLYGONS TO ENCOMPASS A 1982 TYLER MAP, A 1986 WILSON MAP, AND A 2007 & 2008 HUGHES MAP. IN 1985, TYLER MENTIONS THAT NUMBERS ARE INCREASING IN ERODED AREAS.

**Ecological:** ON RESCUE HEAVILY ERODED SOIL ASSOCIATED WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS. WYETHIA RETICULATA ALSO AT THIS SITE. PACKERA LAYNEAE MORE DENSE IN CHAPARRAL OPENINGS. POPULATION BURNED IN FALL 1982 BUT RETURNED UNHARMED.

**General:** <50 PLANTS IN 1982, UNK # IN 1986. PORTION OF POLY AT JUNCTION OF SEC 28, 29, 32 & 33 WAS LIKELY EXTIRP BY RD IMPROV. ~3550 PLANTS IN 2007 IN W-MOST POLY, 1280 PLANTS IN 2008 IN OBLONG POLY IN E1/2 OF SEC 32. INCL FORMER OCC 19, 20, 21, 22.

**Owner/Manager:** PVT



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<b>Occurrence No.</b>	27	<b>Map Index:</b>	12415	<b>EO Index:</b>	16854	<b>Element Last Seen:</b>	1984-03-XX
<b>Occ. Rank:</b>	Unknown	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>	1984-03-XX	<b>Record Last Updated:</b>	2008-11-26
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown				
<b>Quad Summary:</b>	Shingle Springs (3812068), Coloma (3812078)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.74737 / -120.93223		<b>Accuracy:</b>	1/5 mile			
<b>UTM:</b>	Zone-10 N4290773 E679694		<b>Elevation (ft):</b>	1000			
<b>PLSS:</b>	T10N, R09E, Sec. 01, SE (M)		<b>Acres:</b>	0.0			
<b>Location:</b>	EAST SIDE OF LOTUS RD NORTH OF BRIDGE, APPROX 2.0 AIR MI W OF FUNNY BUG MINE.						
<b>Detailed Location:</b>	GROWING IN CUTBANK ON THE E SIDE OF LOTUS RD; "CROSS BRIDGE GOING N AND LOOK TO RIGHT." MAPPED BY CNDDDB AS BEST GUESS AT THE INTERSECTION OF LOTUS RD & CREEK IN THE SE1/4 OF SECTION 1.						
<b>Ecological:</b>	THIN SERPENTINE SOIL OVER SERPENTINE ROCK ON CUT ROAD BANK.						
<b>General:</b>	FEWER THAN 50 PLANTS SEEN IN 1984. NEEDS FIELDWORK.						
<b>Owner/Manager:</b>	PVT						
<b>Occurrence No.</b>	29	<b>Map Index:</b>	12208	<b>EO Index:</b>	8132	<b>Element Last Seen:</b>	1984-XX-XX
<b>Occ. Rank:</b>	Unknown	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>	1984-XX-XX	<b>Record Last Updated:</b>	1993-02-19
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown				
<b>Quad Summary:</b>	Pilot Hill (3812171)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.75679 / -121.00610		<b>Accuracy:</b>	specific area			
<b>UTM:</b>	Zone-10 N4291675 E673252		<b>Elevation (ft):</b>	960			
<b>PLSS:</b>	T11N, R09E, Sec. 32, SW (M)		<b>Acres:</b>	8.4			
<b>Location:</b>	SOUTH OF THE SOUTH FORK AMERICAN RIVER, NORTH OF WILDCAT CANYON, 0.4 AIR MI NORTH OF 1482 FT ELEVATION MARKER ON HILL.						
<b>Detailed Location:</b>							
<b>Ecological:</b>	ASSOCIATED WITH WYETHIA RETICULATA, HELIANTHEMUM SUFFRUTESCENS.						
<b>General:</b>	SEEN 1981-1984. LARGE POPULATION.						
<b>Owner/Manager:</b>	BLM-FOLSOM RA						
<b>Occurrence No.</b>	30	<b>Map Index:</b>	12172	<b>EO Index:</b>	8130	<b>Element Last Seen:</b>	1993-05-16
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>	1993-05-16	<b>Record Last Updated:</b>	2007-07-19
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown				
<b>Quad Summary:</b>	Pilot Hill (3812171)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.76712 / -121.02217		<b>Accuracy:</b>	80 meters			
<b>UTM:</b>	Zone-10 N4292791 E671831		<b>Elevation (ft):</b>	1120			
<b>PLSS:</b>	T11N, R09E, Sec. 31, NW (M)		<b>Acres:</b>	0.0			
<b>Location:</b>	SOUTH OF SOUTH FORK AMERICAN RIVER NEAR TOP OF RIDGE EAST OF SALMON FALLS ROAD CROSSING.						
<b>Detailed Location:</b>							
<b>Ecological:</b>	CHAPARRAL DOMINATED BY ARCTOSTAPHYLOS VISCIDA AND ADENOSTOMA FASCICULATUM. ASSOCIATED WITH CALYSTEGIA STEBBINSII. RESCUE SOIL SERIES.						
<b>General:</b>	LARGE POPULATION SEEN 1981-1984. POPULATION SIGHTED AGAIN IN 1987 DURING SURVEY FOR CALYSTEGIA STEBBINSII. SIZE AND SPECIFICS OF POPULATION ARE UNKNOWN. COLLECTED IN THIS VICINITY BY AYRES IN 1993.						
<b>Owner/Manager:</b>	PVT						



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<b>Occurrence No.</b>	31	<b>Map Index:</b> 12142	<b>EO Index:</b> 8115	<b>Element Last Seen:</b>	1984-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1984-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	1993-02-19
<b>Quad Summary:</b>	Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.75659 / -121.03253		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4291604 E670956		<b>Elevation (ft):</b>	1100	
<b>PLSS:</b>	T11N, R08E, Sec. 36, SE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	SOUTH OF SOUTH FORK AMERICAN RIVER, EAST OF SALMON FALLS RD.				
<b>Detailed Location:</b>	MAPPED 0.5 AIR MILE NE OF 1361 FT ELEVATION MARK ON HILL.				
<b>Ecological:</b>					
<b>General:</b>	SEEN 1981-1984.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	32	<b>Map Index:</b> 12119	<b>EO Index:</b> 8120	<b>Element Last Seen:</b>	1984-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1984-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	1993-02-19
<b>Quad Summary:</b>	Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76419 / -121.04430		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4292425 E669915		<b>Elevation (ft):</b>	680	
<b>PLSS:</b>	T11N, R08E, Sec. 35, NE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	JUST W OF SALMON FALLS RD, 0.75 MI S OF BRIDGE OVER SOUTH FORK AMERICAN RIVER.				
<b>Detailed Location:</b>	MAPPED ON KNOLL TO THE NORTH OF DIRT ROAD WEST OF SALMON FALLS ROAD.				
<b>Ecological:</b>	SEVERAL OTHER SENSITIVE PLANTS IN THE AREA INCLUDING CALYSTEGIA STEBBINSII AND CEANOTHUS RODERICKII.				
<b>General:</b>	SEEN 1981-1984.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	33	<b>Map Index:</b> 22726	<b>EO Index:</b> 13781	<b>Element Last Seen:</b>	1986-05-01
<b>Occ. Rank:</b>	None		<b>Presence:</b> Possibly Extirpated	<b>Site Last Seen:</b>	1986-05-01
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Decreasing	<b>Record Last Updated:</b>	2017-08-21
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.73698 / -120.93299		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4289618 E679655		<b>Elevation (ft):</b>	1000	
<b>PLSS:</b>	T10N, R09E, Sec. 12, NE (M)		<b>Acres:</b>	9.3	
<b>Location:</b>	3 KM (2 MI) NNE OF RESCUE, EAST OF ROAD TO LOTUS AND SOUTH OF WEBER CREEK.				
<b>Detailed Location:</b>	EAST AND ADJACENT TO LOTUS ROAD, FROM 300 TO 500 METERS SOUTH OF WEBER CREEK.				
<b>Ecological:</b>	GROWING WITHIN SPARSE QUERCUS KELLOGGII-PINUS PONDEROSA CANOPY WITH A DENSE SHRUB/HERB UNDERSTORY ON PROTECTED NW SLOPE. P. LAYNEAE GROWING ON SERPENTINE AND ADJACENT NON-SERPENTINE SOILS ALONG OLD ROADCUT AND ON UNDISTURBED UNGRAZED AREA.				
<b>General:</b>	APPROXIMATELY 200 PLANTS SEEN IN 1986 PRIOR TO DISTURBANCE. SOME HABITAT STILL REMAINS AT THE SITE. NEEDS FIELDWORK.				
<b>Owner/Manager:</b>	UNKNOWN				



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<b>Occurrence No.</b>	34	<b>Map Index:</b>	22719	<b>EO Index:</b>	8072	<b>Element Last Seen:</b>	2007-07-03
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2007-07-03	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2010-06-09	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.72150 / -120.95941			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4287848 E677396			<b>Elevation (ft):</b>	1520		
<b>PLSS:</b>	T10N, R09E, Sec. 14, W (M)			<b>Acres:</b>	6.0		
<b>Location:</b>	NNW OF RESCUE, ABOUT 0.8 AIR MI NNW OF DEER VALLEY ROAD/GREEN VALLEY ROAD JUNCTION.						
<b>Detailed Location:</b>	GROWING ALONG EDGE OF SMUD/PG&E MAINTENANCE ROAD OFF TIFFANY HILL DRIVE. 5 COLONIES MAPPED IN THE WEST HALF OF SECTION 14 ACCORDING TO 2009 GOGOL-PROKURAT DIGITAL DATA.						
<b>Ecological:</b>	OPEN AREAS ALONG ROAD, SANDY CLAY SOIL, 10 DEG SLOPE. ASSOC WITH ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, SALVIA SONOMENSIS, SANICULA BIPINNATIFIDA, RHAMNUS ILICIFOLIA, POLYGALA CORNUTA, LEPECHINIA CALYCINA, WYETHIA RETICULATA, ETC.						
<b>General:</b>	UNKNOWN NUMBER OF PLANTS OBSERVED IN 1989. 43 PLANTS OBSERVED IN 2007.						
<b>Owner/Manager:</b>	BLM, PVT						
<b>Occurrence No.</b>	38	<b>Map Index:</b>	22131	<b>EO Index:</b>	8138	<b>Element Last Seen:</b>	2007-07-03
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2007-07-03	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2010-07-29	
<b>Quad Summary:</b>	Clarksville (3812161)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.71971 / -121.02751			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4287520 E671480			<b>Elevation (ft):</b>	1180		
<b>PLSS:</b>	T10N, R09E, Sec. 18, E (M)			<b>Acres:</b>	45.0		
<b>Location:</b>	MARTEL CREEK DRAINAGE, MOSTLY ON HILL (EL. 1381) SOUTH OF MARTEL CREEK, 2.5 MI NORTH OF BASS LAKE, NNE OF CLARKSVILLE.						
<b>Detailed Location:</b>	SEVERAL COLONIES SCATTERED NORTH AND SOUTH (MOSTLY SOUTH) OF MARTEL CREEK FROM ABOUT 0.8 TO 1.5 MILES UPSTREAM FROM CONFLUENCE WITH SWEETWATER CREEK. MOSTLY WITHIN THE EAST HALF OF SECTION 18.						
<b>Ecological:</b>	NORTHERN GABBROIC MIXED CHAPARRAL. ASSOCIATES INCLUDE SALVIA SONOMENSIS, WYETHIA RETICULATA, W. BOLANDERI, STYRAX OFFICINALIS, POLYGALA CORNUTA, CEANOTHUS LEMMONII, SWERTIA ALBICAULIS, NAVARRETIA FILICAULIS, ERIODICTYON CALIFORNICUM, ETC.						
<b>General:</b>	UNKNOWN NUMBER OF PLANTS SEEN IN 1986. 564 PLANTS COUNTED IN A PARTIAL SURVEY BUT >2500 ESTIMATED TO OCCUR AT THIS SITE IN 1993. 80 PLANTS OBSERVED IN NORTHERN COLONY IN 2007.						
<b>Owner/Manager:</b>	BLM, PVT						



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<b>Occurrence No.</b>	39	<b>Map Index:</b> 22741	<b>EO Index:</b> 8306	<b>Element Last Seen:</b>	1986-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1986-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	1993-02-19
<b>Quad Summary:</b>	Coloma (3812078)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.81997 / -120.88014		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4298933 E684035		<b>Elevation (ft):</b>	1760	
<b>PLSS:</b>	T11N, R10E, Sec. 08, NE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	2 KM (1.5 MI) NORTH OF COLOMA, 1.3 KM (0.8 MI) NORTH OF MURPHY MOUNTAIN SUMMIT, JUST WEST OF ROAD.				
<b>Detailed Location:</b>					
<b>Ecological:</b>					
<b>General:</b>	MAP DETAIL IS ONLY SOURCE OF INFORMATION FOR THIS SITE; UNKNOWN NUMBER OF PLANTS SEEN IN 1986. NEEDS FIELDWORK.				
<b>Owner/Manager:</b>	UNKNOWN				
<b>Occurrence No.</b>	41	<b>Map Index:</b> 22764	<b>EO Index:</b> 8066	<b>Element Last Seen:</b>	2007-07-30
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-07-30
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-11-26
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.67813 / -120.95561		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4283042 E677834		<b>Elevation (ft):</b>	1450	
<b>PLSS:</b>	T10N, R09E, Sec. 35, SE (M)		<b>Acres:</b>	4.0	
<b>Location:</b>	ON BOTH SIDES OF MEDER RD BETWEEN CARLSON DR AND SIERRAMA DR, CAMERON PARK.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS 4 POLYGONS ACCORDING TO A 1992 BAAD MAP & A 2007 WILLSON MAP.				
<b>Ecological:</b>	CHAPARRAL PLANT COMMUNITY ON GABBRO SOILS. ASSOCIATED WITH CEANOTHUS CUNEATUS, QUERCUS WISLIZENI, ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, CEANOTHUS RODERICKII, CHLOROGALUM GRANDIFLORUM, & WYETHIA RETICULATA.				
<b>General:</b>	3 S POLYS: ~350 PLANTS SEEN IN 1992. N-MOST POLY: 100S OF PLANTS SEEN IN 2007.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	42	<b>Map Index:</b>	30123	<b>EO Index:</b>	5981	<b>Element Last Seen:</b>	2009-06-24
<b>Occ. Rank:</b>	Fair	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2009-06-24	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Decreasing	<b>Record Last Updated:</b>		2013-02-21	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.64871 / -120.94923			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4279790 E678462			<b>Elevation (ft):</b>	1400		
<b>PLSS:</b>	T09N, R09E, Sec. 11, E (M)			<b>Acres:</b>	13.0		
<b>Location:</b>	WEST SIDE OF LAKEVIEW DRIVE, SOUTH OF DUROCK ROAD AND NORTH OF RAILROAD TRACKS, SHINGLE SPRINGS.						
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS 3 POLYGONS TO ENCOMPASS INFORMATION FROM A 1993 WILLSON MAP, A 2006 WILLSON MAP, A 2008 WALKER MAP, AND A 2009 BOWER MAP.						
<b>Ecological:</b>	CHAPARRAL ON RESCUE SERIES SOILS. ASSOCIATED WITH ARCTOSTAPHYLOS VISCIDA, CEANOTHUS LEMMONII, ADENOSTOMA VISCIDA, A. FASCICULATUM, CERCIS OCCIDENTALIS, SALVIA SONOMENSIS, CHLOROGALUM GRANDIFLORUM, CALYSTEGIA STEBBINSII, CORDYLANTHUS, ETC.						
<b>General:</b>	NORTHERNMOST POLYGON: 8 COLONIES OBSERVED WITH 1-5 PLANTS AT EACH COLONY IN 1993. MIDDLE POLYGON: 125 PLANTS IN 1994, 75 PLANTS IN 2006. SOUTHERNMOST POLYGON: 43 PLANTS SEEN IN 2008, 36 PLANTS IN 2009.						
<b>Owner/Manager:</b>	PVT						
<b>Occurrence No.</b>	43	<b>Map Index:</b>	31483	<b>EO Index:</b>	4183	<b>Element Last Seen:</b>	2007-XX-XX
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2007-XX-XX	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2010-07-26	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.73001 / -120.99394			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4288727 E674373			<b>Elevation (ft):</b>	1600		
<b>PLSS:</b>	T10N, R09E, Sec. 09, S (M)			<b>Acres:</b>	13.0		
<b>Location:</b>	NORTH OF PINE HILL, 0.8 AIR MILE NNW OF LOOKOUT, BETWEEN SWEETWATER CREEK & MORMON RAVINE, NORTHWEST OF SHINGLE SPRINGS.						
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS 5 POLYGONS ACCORDING TO A 1989 BAAD MAP, A 2003 BAAD MAP, AND 2009 GOGOL-PROKURAT DIGITAL DATA.						
<b>Ecological:</b>	PINE HILL GABBRO COMPLEX; CHAPARRAL AND OAK WOODLAND ON RESCUE SERIES SOILS. PLANTS FOUND IN OPENINGS IN CHAPARRAL. CHLOROGALUM GRANDIFLORUM OCCURS NEARBY.						
<b>General:</b>	S COLONY HAD 10 PLANTS IN 1989; MORE OCCUR TO THE SOUTH ACCORDING TO BAAD (1989). 50 PLANTS IN PARCEL CONTAINING 2 NORTHERN COLONIES IN 2000. 25 PLANTS IN EASTERNMOST POLYGON IN 2003. FEWER THAN 800 PLANTS OBSERVED IN 3 NW COLONIES IN 2007.						
<b>Owner/Manager:</b>	PVT, BLM						



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<b>Occurrence No.</b>	44	<b>Map Index:</b>	30669	<b>EO Index:</b>	13802	<b>Element Last Seen:</b>	2017-06-07
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2017-06-07	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2017-08-17	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.67136 / -120.99372		<b>Accuracy:</b>	specific area			
<b>UTM:</b>	Zone-10 N4282218 E674536		<b>Elevation (ft):</b>	1400			
<b>PLSS:</b>	T10N, R09E, Sec. 33, S (M)		<b>Acres:</b>	21.0			
<b>Location:</b>	VICINITY OF THE INTERSECTION OF WOODLEIGH LANE AND SURRY LANE, CAMERON PARK.						
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS 5 POLYGONS IN THE SOUTH HALF OF SECTION 33, BASED ON FIELD SURVEYS AND 2009 GOGOL-PROKURAT DIGITAL DATA.						
<b>Ecological:</b>	GABBROIC MIXED CHAPARRAL, IN UNDERSTORY AND SMALL OPENINGS. IN ASSOCIATION WITH HELIANTHEMUM SUFRUTESCENS, SALVIA SONOMENSIS, AND POSSIBLY CHLOROGALUM GRANDIFLORUM. PHRYNOSOMA CORONATUM FRONTALE ALSO OCCURS IN WESTERN POLYGON.						
<b>General:</b>	WESTERN POLYGON: 262 PLANTS SEEN IN 2007, 345 IN 2015, 177 IN 2017. MIDDLE TWO POLYGONS: 400 PLANTS SEEN IN 1994, >500 PLANTS IN 2007, 75 IN 2015. EASTERN TWO POLYGONS: 308 PLANTS SEEN IN 2006, 449 IN 2015.						
<b>Owner/Manager:</b>	PVT, EL DORADO IRR DIST						
<b>Occurrence No.</b>	47	<b>Map Index:</b>	44952	<b>EO Index:</b>	44952	<b>Element Last Seen:</b>	2000-09-28
<b>Occ. Rank:</b>	Unknown	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2000-09-28	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2001-02-20	
<b>Quad Summary:</b>	Coloma (3812078)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.78723 / -120.98366		<b>Accuracy:</b>	specific area			
<b>UTM:</b>	Zone-10 N4295096 E675128		<b>Elevation (ft):</b>	780			
<b>PLSS:</b>	T11N, R09E, Sec. 21, SW (M)		<b>Acres:</b>	1.7			
<b>Location:</b>	WEST SIDE OF CANYON OF SOUTH FORK OF AMERICAN RIVER, 0.35 MILE SOUTH OF CONFLUENCE WITH NORTON RAVINE, WSW OF COLOMA.						
<b>Detailed Location:</b>	ON BOTH SIDES OF ROAD (NOT ON TOPO MAP) ALONG SOUTH FORK AMERICAN RIVER FROM EQUESTRIAN WAY NORTHWEST & NORTH (UPSTREAM) TO NORTON RAVINE, APPROX 0.5 MILE SOUTH OF WHERE ROAD REACHES NORTON RAVINE. MAPPED AT CENTER OF SW 1/4 OF SECTION 21.						
<b>Ecological:</b>	GROWING ON SURFACE & CUT SLOPE OF DIRT ROAD IN TRANSITION OF CHAPARRAL TO PONDEROSA PINE FOREST. ASSOCIATES: QUERCUS WISLIZENI, PINUS PONDEROSA, ARCTOSTAPHYLOS VISCIDA, LUPINUS ALBIFRONS, & ERIOPHYLLUM LANATUM. AUBURN ROCKY SILT LOAM.						
<b>General:</b>	APPROXIMATELY 120 PLANTS SEEN IN 2000, IN AN AREA OF LESS THAN 0.1 ACRE. SITE IS DISTURBED BUT PLANTS APPEAR TO BE DOING FINE. THIS LAND IS A RELATIVELY NEW ACQUISITION BY BLM; A PLANNING PROCESS FOR THE AREA IS CURRENTLY UNDERWAY.						
<b>Owner/Manager:</b>	BLM						



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<b>Occurrence No.</b>	48	<b>Map Index:</b> 44955	<b>EO Index:</b> 44955	<b>Element Last Seen:</b>	1962-05-30
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1962-05-30
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2001-02-20
<b>Quad Summary:</b>	Coloma (3812078)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76881 / -120.92544		<b>Accuracy:</b>	2/5 mile	
<b>UTM:</b>	Zone-10 N4293165 E680231		<b>Elevation (ft):</b>	1500	
<b>PLSS:</b>	T11N, R09E, Sec. 36 (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	2.8 MILES WEST OF GOLD HILL.				
<b>Detailed Location:</b>	EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB AT 2.8 MILES WEST OF GOLD HILL ALONG GOLD HILL ROAD IN VICINITY OF FOUR CORNERS. ELEVATION ON HERB LABEL GIVEN AS 1500'.				
<b>Ecological:</b>	HABITAT IN SERPENTINE.				
<b>General:</b>	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1962 COLLECTION BY BACIGALUPI & HECKARD. NEEDS FIELDWORK.				
<b>Owner/Manager:</b>	UNKNOWN				
<b>Occurrence No.</b>	51	<b>Map Index:</b> 69613	<b>EO Index:</b> 70386	<b>Element Last Seen:</b>	2007-XX-XX
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-08-30
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.73258 / -120.98011		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4289039 E675569		<b>Elevation (ft):</b>	1400	
<b>PLSS:</b>	T10N, R09E, Sec. 10, SW (M)		<b>Acres:</b>	5.0	
<b>Location:</b>	UPPER PINCHEM CREEK DRAINAGE, SOUTH OF DEAR VALLEY ROAD, NNE OF PINE HILL.				
<b>Detailed Location:</b>	8 SCATTERED SMALL CLUSTERS MAPPED BY CNDDDB AS 6 POLYGONS IN THE SW 1/4 OF SECTION 10.				
<b>Ecological:</b>	DISTURBED AREAS IN GABBRO CHAPARRAL AND WOODLAND. FAIRLY LEVEL AREAS IN CHAPARRAL AND EDGE OF OAK WOODLAND THAT HAS BEEN RECENTLY CLEARED; ALSO ALONG EPHEMERAL STREAM COURSES. THE RARE WYETHIA RETICULATA IS FOUND NEAR THIS SITE.				
<b>General:</b>	100 PLANTS TOTAL OBSERVED IN 5 NORTHERN POLYGONS IN 2006. FEWER THAN 200 PLANTS OBSERVED IN SOUTHERN POLYGON IN 2007.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	52	<b>Map Index:</b> 69621	<b>EO Index:</b> 70393	<b>Element Last Seen:</b>	1994-06-16
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1994-06-16
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2007-07-10
<b>Quad Summary:</b>	Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.74622 / -121.03790		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4290442 E670514		<b>Elevation (ft):</b>	1150	
<b>PLSS:</b>	T10N, R09E, Sec. 06, SW (M)		<b>Acres:</b>	2.0	
<b>Location:</b>	ALONG THE TOP THIRD OF A GENTLY SLOPING NORTH-TO-SOUTH DRAINAGE FLOWING INTO CROCKER CREEK, SWEETWATER CREEK DRAINAGE.				
<b>Detailed Location:</b>	MAPPED WITHIN THE SW 1/4 OF THE SW 1/4 OF SECTION 6.				
<b>Ecological:</b>	ON RESCUE STONY LOAM SOILS, GROWING AN A VERY GENTLY SLOPING SEASONAL DRAINAGE PASSING THROUGH A DENSE AREA OF GABRROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES: ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA.				
<b>General:</b>	200 PLANTS OBSERVED IN 1994.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	53	<b>Map Index:</b> 69622	<b>EO Index:</b> 70394	<b>Element Last Seen:</b>	1994-05-10
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1994-05-10
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2007-07-23
<b>Quad Summary:</b>	Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.74257 / -121.02156		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4290068 E671942		<b>Elevation (ft):</b>	1050	
<b>PLSS:</b>	T10N, R09E, Sec. 07, NE (M)		<b>Acres:</b>	1.0	
<b>Location:</b>	SOUTH OF CROCKER CREEK AND ADJACENT TO THE SOUTHERN END OF KANAKA VALLEY, SOUTHEAST OF MORMON HILL.				
<b>Detailed Location:</b>	AT THE WESTERN BASE OF A WEST FACING SLOPE. MAPPED WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 7.				
<b>Ecological:</b>	ON SPARSELY VEGETATED RESCUE STONY LOAM SOILS, GROWING AT THE BASE OF A STEEP WEST-FACING SLOPE AT THE INTERFACE BETWEEN A MODERATELY DENSE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY.				
<b>General:</b>	3 PLANTS OBSEVED BY CRAIG AND FRASER IN 1994.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	58	<b>Map Index:</b>	73020	<b>EO Index:</b>	73938	<b>Element Last Seen:</b>	2015-06-25
<b>Occ. Rank:</b>	Poor	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2015-06-25	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2017-08-17	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.66399 / -120.93739	<b>Accuracy:</b>	specific area				
<b>UTM:</b>	Zone-10 N4281508 E679454	<b>Elevation (ft):</b>	1520				
<b>PLSS:</b>	T09N, R09E, Sec. 01, E (M)	<b>Acres:</b>	7.0				
<b>Location:</b>	JUST EAST OF THE INTERSECTION OF PONDEROSA ROAD AND SHINGLE ROAD, SHINGLE SPRINGS.						
<b>Detailed Location:</b>	ALONG SHINGLE ROAD. MAPPED ACCORDING TO A 1981 RAE MAP AND A 2005 WILLSON MAP.						
<b>Ecological:</b>	FOUND IN AN OPENING IN CALIFORNIA ANNUAL GRASSLAND ON GABBRO SOIL (RESCUE VERY STONY SANDY LOAM) ON A S-FACING SLOPE. ASSOCIATED WITH YELLOW STAR THISTLE (CENTAUREA SOLSTITIALIS), BROMUS SP., & CYNOSURUS ECHINATUS.						
<b>General:</b>	UNKNOWN NUMBER OF PLANTS SEEN SOMETIME BETWEEN 1978 & 1980. 24 PLANTS SEEN IN 2005. ABOUT 10 PLANTS SEEN IN 2015; POPULATION IS SMALL AND ISOLATED.						
<b>Owner/Manager:</b>	PVT						
<b>Occurrence No.</b>	59	<b>Map Index:</b>	73021	<b>EO Index:</b>	73939	<b>Element Last Seen:</b>	2013-07-22
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2013-07-22	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2017-08-18	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.71296 / -120.95331	<b>Accuracy:</b>	specific area				
<b>UTM:</b>	Zone-10 N4286913 E677948	<b>Elevation (ft):</b>	1250				
<b>PLSS:</b>	T10N, R09E, Sec. 23, NE (M)	<b>Acres:</b>	17.0				
<b>Location:</b>	NORTH AND SOUTH OF GREEN VALLEY ROAD NEAR INTERSECTION WITH DEER VALLEY ROAD, RESCUE.						
<b>Detailed Location:</b>	ALONG ROADCUTS AND OPENINGS IN CHAPARRAL. MAPPED BY CNDDDB AS 3 POLYGONS ACCORDING TO 2013 WILLSON MAPS, IN THE NE 1/4 SECTION 23.						
<b>Ecological:</b>	GABBROIC NORTHERN MIXED CHAPARRAL AND CISMONTANE WOODLAND. ASSOCIATES INCLUDE ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, CEANOTHUS LEMMONII, QUERCUS WISLIZENI, WYETHIA RETICULATA & GALIUM CALIFORNICUM SSP. SIERRAE.						
<b>General:</b>	NORTH POLYGON: 100S OF PLANTS SEEN IN 2007. 1000S OF PLANTS SEEN ACROSS SITE IN 2013.						
<b>Owner/Manager:</b>	PVT						



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<b>Occurrence No.</b>	60	<b>Map Index:</b> 73022	<b>EO Index:</b> 73940	<b>Element Last Seen:</b>	2007-05-16
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-05-16
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Decreasing	<b>Record Last Updated:</b>	2008-12-03
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.68826 / -120.96255		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4284153 E677205		<b>Elevation (ft):</b>	1600	
<b>PLSS:</b>	T10N, R09E, Sec. 26, SW (M)		<b>Acres:</b>	4.0	
<b>Location:</b>	ALONG DOS VISTAS DR, ABOUT 0.3 RD MI S OF THE INTERSECTION OF DOS VISTAS DR WITH NOBLECREST LANE, S OF WHITE OAK FLAT.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB ACCORDING TO 2007 DURHAM GPS COORDINATES. PARCEL CLEARED PRIOR TO SURVEY.				
<b>Ecological:</b>	GABBROIC NORTHERN MIXED CHAPARRAL AND CISMONTANE WOODLAND. ASSOCIATES INCLUDE SALVIA SONOMENSIS, GRASSES, HYPOCHAERIS SP., GRINDELIA SP., RHAMNUS TOMENTELLA, CALYSTEGIA STEBBINSII, WYETHIA RETICULATA, & POSSIBLY CHLOROGALUM GRANDIFLORUM.				
<b>General:</b>	~12 PLANTS SEEN IN 2007.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	61	<b>Map Index:</b> 73023	<b>EO Index:</b> 73941	<b>Element Last Seen:</b>	2007-03-26
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-03-26
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-01
<b>Quad Summary:</b>	Coloma (3812078)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76025 / -120.93939		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4292188 E679040		<b>Elevation (ft):</b>	1115	
<b>PLSS:</b>	T11N, R09E, Sec. 35, SE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	E SIDE OF SPRINGVALE RD JUST N OF THE SPILLWAY, NNW OF SPRINGVALE SCHOOL.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB ACCORDING TO A 2007 WILLSON MAP IN THE NW1/4 OF THE SE1/4 SEC 35.				
<b>Ecological:</b>	CHAPARRAL WITHIN MIXED OAK WOODLAND. ASSOCIATED WITH CEANOTHUS CUNEATUS ON SERPENTINE SOIL, SW ASPECT. CHLOROGALUM GRANDIFLORUM ALSO OCCURS AT THIS SITE.				
<b>General:</b>	300 PLANTS SEEN IN 2007.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	62	<b>Map Index:</b> 79428	<b>EO Index:</b> 80405	<b>Element Last Seen:</b>	2007-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2010-07-20
<b>Quad Summary:</b>	Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72420 / -121.00401		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4288063 E673512		<b>Elevation (ft):</b>	1400	
<b>PLSS:</b>	T10N, R09E, Sec. 17, NE (M)		<b>Acres:</b>	1.0	
<b>Location:</b>	NEAR JUNCTION OF SEAN SHELLY LANE WITH STARBUCK ROAD, ABOUT 0.8 AIR MILE WNW OF PINE HILL LOOKOUT.				
<b>Detailed Location:</b>	MAPPED IN THE SE 1/4 OF THE NE 1/4 OF SECTION 17.				
<b>Ecological:</b>					
<b>General:</b>	FEWER THAN 10 PLANTS OBSERVED IN 2007.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	65	<b>Map Index:</b> A5998	<b>EO Index:</b> 107755	<b>Element Last Seen:</b>	2017-04-02
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2017-04-02
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-08-18
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72498 / -120.99756		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4288162 E674072		<b>Elevation (ft):</b>	1435	
<b>PLSS:</b>	T10N, R09E, Sec. 16, NW (M)		<b>Acres:</b>	2.0	
<b>Location:</b>	ALONG SWEETWATER CREEK ABOUT 0.55 AIR MILE NW OF PINE HILL.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB IN THE CENTER OF THE NW 1/4 SECTION 16, BASED ON 2017 DIGITAL DATA PROVIDED BY CNPS.				
<b>Ecological:</b>					
<b>General:</b>	UNKNOWN NUMBER OF PLANTS SEEN IN 2017.				
<b>Owner/Manager:</b>	DFG-PINE HILL ER				

<b>Occurrence No.</b>	66	<b>Map Index:</b> A6003	<b>EO Index:</b> 107761	<b>Element Last Seen:</b>	2015-06-04
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2015-06-04
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-08-18
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.73227 / -120.9693		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4289025 E676511		<b>Elevation (ft):</b>	1240	
<b>PLSS:</b>	T10N, R09E, Sec. 10, SE (M)		<b>Acres:</b>	2.0	
<b>Location:</b>	ABOUT 0.2 AIR MILE WNW OF INTERSECTION OF JAYHAWK DRIVE AND DEER VALLEY ROAD, NW OF RESCUE.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB BASED ON 2015 HUGHES MAP, IN THE SE 1/4 OF THE SE 1/4 OF SECTION 10.				
<b>Ecological:</b>	GABBROIC NORTHERN MIXED CHAPARRAL. THE RARE WYETHIA RETICULATA ALSO OCCURS IN AREA.				
<b>General:</b>	744 PLANTS OBSERVED IN 2015. SITE OF PROPOSED MITIGATION AREA.				
<b>Owner/Manager:</b>	PVT				

<b><i>Calystegia stebbinsii</i></b>		<b>Element Code:</b> PDCON040H0
Stebbins' morning-glory		
<b>Listing Status:</b>	<b>Federal:</b> Endangered	<b>CNDDDB Element Ranks:</b> <b>Global:</b> G1
	<b>State:</b> Endangered	<b>State:</b> S1
	<b>Other:</b> Rare Plant Rank - 1B.1, SB_RSABG-Rancho Santa Ana Botanic Garden	
<b>Habitat:</b>	<b>General:</b> CHAPARRAL, CISMONTANE WOODLAND.	
	<b>Micro:</b> ON RED CLAY SOILS OF THE PINE HILL FORMATION; GABBRO OR SERPENTINE; OPEN AREAS. 300-725 M.	



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<b>Occurrence No.</b>	1	<b>Map Index:</b> 12323	<b>EO Index:</b> 8146	<b>Element Last Seen:</b>	2016-05-03
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2016-05-03
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-12-19
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.6636 / -120.95993		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4281422 E677495		<b>Elevation (ft):</b>	1400	
<b>PLSS:</b>	T09N, R09E, Sec. 2 (M)		<b>Acres:</b>	192.0	
<b>Location:</b>	ON BOTH SIDES OF HIGHWAY 50 BETWEEN CAMERON PARK DRIVE AND MEDER ROAD, EAST OF SHINGLE SPRINGS.				
<b>Detailed Location:</b>	SEVERAL COLONIES MAPPED BY CNDDDB AS 15 POLYGONS IN SECTION 2, THE SW 1/4 OF SECTION 35, AND THE NE 1/4 OF SECTION 3. INCLUDES FORMER OCCURRENCE #S 3 & 8.				
<b>Ecological:</b>	IN CHAPARRAL IN DISTURBED AREA NEAR ROADCUT. ON RED CLAY GABBROIC SOIL. ASSOCIATED W/ ARCTOSTAPHYLOS VISCIDA, SALVIA SONOMENSIS, CERCIS OCCIDENTALIS, CHLOROGALUM GRANDIFLORUM, PACKERA LAYNEAE, WYETHIA RETICULATA, CEANOTHUS RODERICKII, ETC.				
<b>General:</b>	POP #S FOR PARTS OF OCC: <200 PLANTS SEEN IN 1982, <1100 IN 1984, UNK # IN 1986, 160+ IN 1987, UNK # IN 1990, 250 IN 1994, 100S IN 1998, 2700 IN 2005, 100 IN 2006, 1000+ IN 2007, 4000 IN 2010/2011, 57 IN 2015, 1 IN 2016.				
<b>Owner/Manager:</b>	PVT, BLM, CALTRANS				
<b>Occurrence No.</b>	2	<b>Map Index:</b> 54107	<b>EO Index:</b> 4344	<b>Element Last Seen:</b>	2013-06-10
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2013-06-10
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-12-08
<b>Quad Summary:</b>	Coloma (3812078), Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76347 / -121.02388		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4292383 E671691		<b>Elevation (ft):</b>	1000	
<b>PLSS:</b>	T11N, R09E, Sec. 31 (M)		<b>Acres:</b>	379.0	
<b>Location:</b>	SOUTH FORK AMERICAN RIVER, FROM SALMON FALLS ROAD EAST TO WEBER CREEK, NORTH OF MORMON HILL.				
<b>Detailed Location:</b>	SEVERAL COLONIES MAPPED BY CNDDDB AS 22 POLYGONS MOSTLY IN SECTIONS 30, 31, 36, WEST HALF OF SECTION 32, AND NW 1/4 OF SECTION 6.				
<b>Ecological:</b>	IN GABBRO, ASSOCIATED WITH ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, SALVIA SONOMENSIS, LEPECHINIA CALYCINA, RHAMNUS CALIFORNICA, CEANOTHUS RODERICKII, WYETHIA RETICULATA, CHLOROGALUM GRANDIFLORUM, HELIANTHEMUM SUFFRUCTESCENS, ETC.				
<b>General:</b>	<2000 PLANTS OBSERVED IN 1984, 300+ IN 1986, 1300+ IN 1987, UNKNOWN # IN 1989, 20-35 IN 1990, >>1000 IN 1992, <1.5 MILL IN 1993, ~600 IN 1994, UNKNOWN # IN 2005, >15,000 IN 2007, SEEN IN 2012 & 2013. INCLUDES FORMER OCCS 9-12, 14-17, & 23.				
<b>Owner/Manager:</b>	BLM, DFG, USBOR, PVT				



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<b>Occurrence No.</b>	4	<b>Map Index:</b> 12404	<b>EO Index:</b> 8206	<b>Element Last Seen:</b>	1997-05-05
<b>Occ. Rank:</b>	None		<b>Presence:</b> Extirpated	<b>Site Last Seen:</b>	2004-06-15
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Decreasing	<b>Record Last Updated:</b>	2017-12-08

**Quad Summary:** Shingle Springs (3812068)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.66606 / -120.93543	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4281742 E679620	<b>Elevation (ft):</b>	1400
<b>PLSS:</b>	T09N, R09E, Sec. 01, NE (M)	<b>Acres:</b>	16.6

**Location:** NORTH SIDE OF HIGHWAY 50 NORTHEAST OF COLOMA OFF-RAMP, ABOUT 0.5 MILE WEST OF SHINGLE SPRINGS, WEST OF PLACERVILLE.

**Detailed Location:** 3 COLONIES, NORTH OF FRONTAGE ROAD. 2 WESTERN COLONIES WITHIN THE SW1/4 NE1/4 SECTION 1; EASTERN COLONY WITHIN THE SE1/4 NE1/4 SECTION 1; BORDERED BY A COMMERCIAL LOT TO THE WEST, RESIDENTIAL LOT TO THE NORTH, AND A CHURCH TO THE SOUTH.

**Ecological:** IN CHAPARRAL WITH ARCTOSTAPHYLOS VISCIDA, BACCHARIS PILULARIS, CERCIS OCCIDENTALIS, SALVIA SONOMENSIS, HETEROMELES ARBUTIFOLIA, QUERCUS DOUGLASII, TOXICODENDRON DIVERSILOBUM, ADENOSTOMA FASCICULATUM, ET AL. ON GABBROIC SOILS.

**General:** UNKNOWN NUMBER OF PLANTS SEEN IN 1972. NONE SEEN AT WESTERN COLONIES IN 1987; 1 PLANT OBSERVED IN 1997 AT EASTERN COLONY. ORIGINAL SITE DESCRIPTION NOT PRECISE; SHOWERS STATES THAT MOST SURROUNDING LAND HAS BEEN ALTERED. NOT SEEN IN 2004.

**Owner/Manager:** PVT

<b>Occurrence No.</b>	6	<b>Map Index:</b> 12252	<b>EO Index:</b> 18820	<b>Element Last Seen:</b>	2007-06-19
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-06-19
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2010-05-20

**Quad Summary:** Shingle Springs (3812068)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.67619 / -120.97344	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4282793 E676287	<b>Elevation (ft):</b>	1500
<b>PLSS:</b>	T10N, R09E, Sec. 34 (M)	<b>Acres:</b>	15.0

**Location:** EAST OF CAMERON PARK DRIVE NEAR AIRPORT, NW SIDE OF MEDER ROAD TO 0.7 AIR MILE SW OF MEDER ROAD.

**Detailed Location:** PORTION OF POPULATION GROWING ALONG ROADCUT OF MEDER ROAD. 9 POLYGONS MAPPED BY CNDDDB IN THE SOUTH HALF AND THE NW 1/4 OF SECTION 34.

**Ecological:** GROWING IN CHAPARRAL WITH PATTERNS OF GABBRO NORTHERN MIXED CHAPARRAL. ASSOCIATED WITH ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, QUERCUS WISLIZENI, CERCIS OCCIDENTALIS, PINUS SABINIANA, QUERCUS DURATA, RHAMNUS TOMENTELLA, ETC.

**General:** EASTERN POLY: 2 CLUMPS IN 1981, LATER ELIMINATED BY COURTHOUSE. NORTHERN POLY: 100 PLANTS IN 1987, ~100 IN 1989, 200+ IN 2007. UNKNOWN # IN LARGE CENTRAL POLYGON IN 2005. AT LEAST 150 PLANTS TOTAL OBSERVED IN REMAINING POLYGONS IN 2007.

**Owner/Manager:** PVT, BLM



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<b>Occurrence No.</b>	7	<b>Map Index:</b> 12382	<b>EO Index:</b> 11918	<b>Element Last Seen:</b>	1971-06-20
<b>Occ. Rank:</b>	None		<b>Presence:</b> Possibly Extirpated	<b>Site Last Seen:</b>	2011-04-29
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-12-08
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.65813 / -120.93838		<b>Accuracy:</b>	1/10 mile	
<b>UTM:</b>	Zone-10 N4280857 E679384		<b>Elevation (ft):</b>	1470	
<b>PLSS:</b>	T09N, R09E, Sec. 1, S (M)		<b>Acres:</b>	18.0	
<b>Location:</b>	ABOUT 0.75 AIR MI WSW OF SHINGLE SPRINGS, SOUTH OF HWY 50 AND WEST OF ROAD TO LATROBE.				
<b>Detailed Location:</b>	MAPPED ACCORDING TO A 1983 STEBBINS MAP, PRESUMABLY MAPPED FROM MEMORY BASED ON HIS 1971 COLLECTION.				
<b>Ecological:</b>	IN OPEN CHAPARRAL, DRY SOIL OF GABBRO FORMATION.				
<b>General:</b>	SEEN IN THIS VICINITY ACCORDING TO A 1971 STEBBINS COLLECTION. NO PLANTS SEEN IN 1987 AND 2011 SURVEYS. SHOWERS BELIEVES C. STEBBINSII HAS BEEN EXTIRPATED FROM THIS SITE DUE TO LOSS OF HABITAT, THOUGH SOME HABITAT STILL PRESENT ON AERIALS.				
<b>Owner/Manager:</b>	PVT?				
<b>Occurrence No.</b>	13	<b>Map Index:</b> 14121	<b>EO Index:</b> 18533	<b>Element Last Seen:</b>	2007-05-16
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-05-16
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Decreasing	<b>Record Last Updated:</b>	2008-12-09
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.68811 / -120.96245		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4284137 E677214		<b>Elevation (ft):</b>	1500	
<b>PLSS:</b>	T10N, R09E, Sec. 26, SW (M)		<b>Acres:</b>	2.0	
<b>Location:</b>	BETWEEN DOS VISTAS DR & CARLSON DR, S OF GREEN VALLEY RD, S OF WHITE OAK FLAT, NORTHWEST OF SHINGLE SPRINGS.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS 2 POLYGONS IN THE SW1/4 OF SECTION 26. NE POLY: PLANTS ARE IN A BULLDOZED AREA ON ROAD IN OAK WOODLAND. SW POLY: PLANTS ALONG ROAD THAT BISECTS PROPERTY; PARCEL WAS CLEARED PRIOR TO SURVEY.				
<b>Ecological:</b>	GABBROIC NORTHERN MIXED CHAPARRAL, RESCUE SERIES SOILS. ASSOC INCL TOXICODENDRON DIVERSILOBUM, PRUNUS ILICIFOLIA, BERBERIS DICTYOTA, WYETHIA ANGUSTIFOLIA, W. RETICULATA, SENECIO ARONICOIDES, S. LAYNEAE, GALIUM SPP, SAVIA SONOMENSIS, ETC.				
<b>General:</b>	NE POLY: FEWER THAN 50 PLANTS SEEN IN 1984. SW POLY: UNKNOWN NUMBER OF PLANTS SEEN IN 2007.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	24	<b>Map Index:</b>	30116	<b>EO Index:</b>	17067	<b>Element Last Seen:</b>	2006-07-28
<b>Occ. Rank:</b>	Fair	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2006-07-28	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2007-08-03	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.65330 / -120.94750			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4280303 E678601			<b>Elevation (ft):</b>	1400		
<b>PLSS:</b>	T09N, R09E, Sec. 12, NW (M)			<b>Acres:</b>	1.0		
<b>Location:</b>	WEST SIDE OF LAKEVIEW DRIVE ABOUT 0.5 MILE SOUTH OF HIGHWAY 50, SHINGLE SPRINGS.						
<b>Detailed Location:</b>	WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 12 AND THE SE 1/4 OF THE NE 1/4 OF SECTION 11.						
<b>Ecological:</b>	CHAPARRAL ON RESCUE SERIES SOILS. ASSOCIATED WITH ARCTOSTAPHYLOS VISCIDA, CEANOTHUS LEMMONII, ADENOSTOMA FASCICULATUM, CERCIS OCCIDENTALIS, SALVIA SONOMENSIS, CHLOROGALUM GRANDIFLORUM, SENECIO LAYNEAE, ETC.						
<b>General:</b>	SOUTHWESTERN TWO POLYGONS: 25 PLANTS OBSERVED IN 1994 AND 60 OBSERVED IN 2006. NORTHEASTERN PORTION OF OCCURRENCE: 7 TINY COLONIES, EACH WITH 1-10 PLANTS EACH, OBSERVED IN 1993, MAPPED HERE AS TWO SMALL POLYGONS.						
<b>Owner/Manager:</b>	PVT						

<b>Occurrence No.</b>	26	<b>Map Index:</b>	42027	<b>EO Index:</b>	42027	<b>Element Last Seen:</b>	1997-04-20
<b>Occ. Rank:</b>	Fair	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		1997-04-20	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2008-12-09	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.68609 / -120.95344			<b>Accuracy:</b>	nonspecific area		
<b>UTM:</b>	Zone-10 N4283930 E678003			<b>Elevation (ft):</b>	1460		
<b>PLSS:</b>	T10N, R09E, Sec. 26, NE (M)			<b>Acres:</b>	5.0		
<b>Location:</b>	CARLSON LANE, ABOUT 3.2 AIR MILES SOUTHEAST OF PINE HILL, NORTHWEST OF SHINGLE SPRINGS.						
<b>Detailed Location:</b>	"E SIDE OF CARLSON LN BETWEEN ENTRANCE & EXIT DRIVEWAYS OF 3111 CARLSON LN." FROM HWY 50 TAKE PONDEROSA RD N, GO LEFT ON MEDER RD FOR 0.8 MI, RIGHT ON CARLSON LN FOR 0.5-0.6 MI. MAPPED AROUND PROPERTY; UNK WHERE PLANTS ARE WITHIN PROPERTY.						
<b>Ecological:</b>	ADENOSTOMA FASCICULATUM AND SALVIA SPP. CHAPARRAL WITH SPARSE GROUND VEGETATION. ON HEAVY RED CLAY SOILS. GRANITE ROCKS WITH SCATTERING OF SERPENTINE GRAVEL WHICH MAY OR MAY NOT BE FROM OLD ROAD SURFACING.						
<b>General:</b>	ABOUT 15 PLANTS OBSERVED IN 1997.						
<b>Owner/Manager:</b>	PVT						

<b><i>Ceanothus roderickii</i></b>			<b>Element Code:</b> PDRHA04190				
Pine Hill ceanothus							
<b>Listing Status:</b>	<b>Federal:</b>	Endangered	<b>CNDDB Element Ranks:</b>	<b>Global:</b>	G1		
	<b>State:</b>	Rare		<b>State:</b>	S1		
	<b>Other:</b>	Rare Plant Rank - 1B.1, SB_RSABG-Rancho Santa Ana Botanic Garden					
<b>Habitat:</b>	<b>General:</b>	CHAPARRAL, CISMONTANE WOODLAND.					
	<b>Micro:</b>	GABBROIC OR SERPENTINE SOILS; OFTEN IN "HISTORICALLY DISTURBED" AREAS WITH AN ENSEMBLE OF OTHER RARE PLANTS. 260-630 M.					



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<b>Occurrence No.</b>	1	<b>Map Index:</b>	12327	<b>EO Index:</b>	4182	<b>Element Last Seen:</b>	2011-06-08
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2011-06-08	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Decreasing	<b>Record Last Updated:</b>		2013-03-06	
<b>Quad Summary:</b>	Shingle Springs (3812068)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.66809 / -120.96940			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4281901 E676659			<b>Elevation (ft):</b>	1450		
<b>PLSS:</b>	T09N, R09E, Sec. 03, E (M)			<b>Acres:</b>	564.0		
<b>Location:</b>	ALONG BOTH SIDES OF HIGHWAY 50, BETWEEN SHINGLE SPRINGS AND CAMERON PARK.						
<b>Detailed Location:</b>	MANY OF THESE POLYGONS ARE FOR MULTIPLE RARE PLANTS AND C. RODERICKII MAY NOT BE PRESENT THROUGHOUT EACH POLYGON. SEVERAL POLYGONS MAPPED THROUGHOUT SECTIONS 1, 2, 3, 34, AND 35. VAGUE COLLECTIONS FROM NEAR SHINGLE SPRINGS ATTRIBUTED HERE.						
<b>Ecological:</b>	OPENINGS IN CHAPARRAL; GABBROIC SOILS, RESCUE SERIES. ASSOCIATED WITH CALYSTEGIA STEBBINSII, WYETHIA RETICULATA, SENECIO LAYNEAE, CHLOROGALUM GRANDIFLORUM, HELIANTHEMUM SUFFRUTESCENS, ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, ETC.						
<b>General:</b>	POP #S ARE FOR PARTS OF EO. 1050 IN '84, 50 IN '85, 200 IN '87, 200 IN '92, 300 IN '94, 100S IN '98, 1 IN '03, 3 IN '04, 1000S IN '05, 4000 IN '06, 100 IN '07, 100S IN '08, 700+ IN '09, 2300+ IN '11. INCL FRMR EOS 2, 6, 9, 11, 21 & 22.						
<b>Owner/Manager:</b>	PVT, CALTRANS, BLM						
<b>Occurrence No.</b>	4	<b>Map Index:</b>	12229	<b>EO Index:</b>	12224	<b>Element Last Seen:</b>	2011-03-14
<b>Occ. Rank:</b>	Good	<b>Presence:</b>	Presumed Extant	<b>Site Last Seen:</b>		2011-03-14	
<b>Occ. Type:</b>	Natural/Native occurrence	<b>Trend:</b>	Unknown	<b>Record Last Updated:</b>		2013-03-04	
<b>Quad Summary:</b>	Shingle Springs (3812068), Clarksville (3812161)						
<b>County Summary:</b>	El Dorado						
<b>Lat/Long:</b>	38.71923 / -120.99124			<b>Accuracy:</b>	specific area		
<b>UTM:</b>	Zone-10 N4287535 E674634			<b>Elevation (ft):</b>	2059		
<b>PLSS:</b>	T10N, R09E, Sec. 16 (M)			<b>Acres:</b>	112.0		
<b>Location:</b>	PINE HILL SUMMIT, ALONG ROAD BELOW PINE HILL LOOKOUT AND ABOUT 0.2 AIR MI E OF INTERSECTION OF STARBUCK RD & MERCY WAY.						
<b>Detailed Location:</b>	AREA BURNED IN 1983 AS PART OF RARE PLANT REGENERATION STUDY; GOOD REGENERATION AFTER BURN. MAJORITY OF PLANTS FOUND ON PINE HILL SUMMIT, PLANTS ALSO FOUND ON SURROUNDING SLOPES IN S 1/2 OF SEC 16. VAGUE OBS FROM PINE HILL ATTRIBUTED HERE.						
<b>Ecological:</b>	ROCKY LOAM OVER GABBRO; ASSOCIATED WITH FREMONTODENDRON DECUMBENS AND WYETHIA RETICULATA. OTHER ASSOCIATES INCLUDE SALVIA SONOMENSIS, CEANOTHUS LEMMONII, ADENOSTOMA, RHAMNUS CROCEA, R. CALIFORNICA, QUERCUS DURATA, ETC.						
<b>General:</b>	<10 PLANTS IN 1978, <50 IN 1982 & 1984, SCATTERED AROUND SUMMIT IN 1983, <1000 IN 1985, ~2000 IN 1986, 1000S OF PLANTS IN 1998, UNK # IN 2005, ~1000 IN 2007, 200+ IN 2009, UNK # IN 2010 & 2011. INCLUDES FORMER EO #S 3, 16, 17, & 18.						
<b>Owner/Manager:</b>	DFG-PINE HILL ER, CDF						



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<b>Occurrence No.</b>	5	<b>Map Index:</b> 12162	<b>EO Index:</b> 4345	<b>Element Last Seen:</b>	2011-05-14
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2011-05-14
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2013-03-06
<b>Quad Summary:</b>	Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76355 / -121.02545		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4292389 E671554		<b>Elevation (ft):</b>	950	
<b>PLSS:</b>	T11N, R09E, Sec. 31 (M)		<b>Acres:</b>	464.0	
<b>Location:</b>	N & S OF SOUTH FORK AMERICAN RIVER, MOSTLY BETWEEN SALMON FALLS ROAD & WEBER CREEK, EAST OF FOLSOM LAKE.				
<b>Detailed Location:</b>	SOME INFORMATION USED FOR MAPPING WAS FOR MULTIPLE RARE PLANTS AND C. RODERICKII MAY NOT BE PRESENT THROUGHOUT EACH POLYGON.				
<b>Ecological:</b>	ON RESCUE GABBROIC SOILS IN CHAPARRAL. ASSOCIATED WITH WYETHIA RETICULATA, CALYSTEGIA STEBBINSII, CHLOROGALUM GRANDIFLORUM AND HELIANTHEMUM SUFFRUTESCENS. OTHER ASSOCIATES INCLUDE ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, ETC.				
<b>General:</b>	POP #S FOR PARTS OF EO: <2000 PLANTS IN 1984; 500+ IN 1986; UNKNOWN # IN 1987, 1989, 1990; >1000 IN 1993; 12,000 IN 1994; UNK # IN 2005; SEVERAL 1000S IN 2007; 600+ IN 2009; 200+ IN 2010, 7 IN 2011. INCLUDES FORMER EO#S 7, 8, 12, 13, & 15.				
<b>Owner/Manager:</b>	BLM, DFG, PVT				
<b>Occurrence No.</b>	10	<b>Map Index:</b> 12313	<b>EO Index:</b> 18657	<b>Element Last Seen:</b>	2009-04-24
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2009-04-24
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2010-05-24
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.68810 / -120.96047		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4284139 E677386		<b>Elevation (ft):</b>	1440	
<b>PLSS:</b>	T10N, R09E, Sec. 26, SW (M)		<b>Acres:</b>	10.0	
<b>Location:</b>	SOUTH OF WHITE OAK FLAT, ABOUT 2.4 AIR MILES NORTHWEST OF SHINGLE SPRINGS.				
<b>Detailed Location:</b>	NORTH COLONY: AT END OF DEAD-END ROAD (CARLSON CT) OFF OF N-S TENDING ROAD IN NE 1/4 OF SW 1/4 OF SEC 26. SOUTH COLONY: SMALL POPULATION FOUND ON A STRIP OF INTACT HABITAT NEAR A PUBLIC URBAN ROAD IN THE SE 1/4 OF SW 1/4 OF SEC 26.				
<b>Ecological:</b>	BULLDOZED AREA IN OAK WOODLAND. ASSOCIATED WITH BERBERIS SP., WYETHIA RETICULATA, CALYSTEGIA STEBBINSII, ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, FRANGULA SP., CERCIS OCCIDENTALIS, CEANOTHUS LEMMONII, SALVIA SONOMENSIS, ETC.				
<b>General:</b>	1-5 PLANTS OBSERVED IN NORTHERN COLONY IN 1984. ~10 PLANTS OBSERVED IN SOUTHERN COLONY IN 2009.				
<b>Owner/Manager:</b>	UNKNOWN				



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<b>Occurrence No.</b>	14	<b>Map Index:</b> 22727	<b>EO Index:</b> 27224	<b>Element Last Seen:</b>	1992-05-20
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1992-05-20
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-11-18

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.69441 / -120.94870	<b>Accuracy:</b>	nonspecific area
<b>UTM:</b>	Zone-10 N4284863 E678394	<b>Elevation (ft):</b>	1350
<b>PLSS:</b>	T10N, R09E, Sec. 26, NE (M)	<b>Acres:</b>	28.0

**Location:** 1 KM (0.7 MI) SOUTH OF RESCUE.  
**Detailed Location:** 2701 CARLSON DRIVE, SHINGLE SPRINGS. LOCATED IN THE EAST 1/2 OF THE NE 1/4 OF SECTION 26. MAPPED BY CNNDDB AROUND PROPERTY BOUNDARY; UNKNOWN WHERE PLANTS OCCUR WITHIN THIS AREA BUT MOST WERE FOUND ON THE SOUTH HALF OF THE PROPERTY.  
**Ecological:** GROWING IN RESCUE VERY STONY SANDY LOAM SOILS ALONG AN ECOTONE BETWEEN OAK WOODLAND AND CHAPARRAL. OTHER RARE PLANTS AT SITE INCLUDE GALIUM CALIFORNICUM SSP. SIERRAE AND WYETHIA RETICULATA.  
**General:** UNKNOWN NUMBER OF PLANTS SEEN IN 1992. RARE FLORA MAY BE PROTECTED ON SITE BY AGREEMENTS WITH PROPERTY OWNERS REGARDING LAND USE.  
**Owner/Manager:** PVT

<b>Occurrence No.</b>	19	<b>Map Index:</b> 22723	<b>EO Index:</b> 20651	<b>Element Last Seen:</b>	2009-04-08
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2009-04-08
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2013-03-04

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.71091 / -120.99044	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4286613 E674724	<b>Elevation (ft):</b>	1500
<b>PLSS:</b>	T10N, R09E, Sec. 21, N (M)	<b>Acres:</b>	10.0

**Location:** SOUTH OF PINE HILL, ABOUT 0.8 AIR MILE NORTH OF SKINNERS.  
**Detailed Location:** 2 COLONIES MAPPED UNDER TRANSMISSION LINES NEAR DIRT ROAD IN THE NORTH 1/2 OF SECTION 21.  
**Ecological:** CHAPARRAL WITH ROCKY SOIL DERIVED FROM GABBRO PARENT MATERIAL. ASSOCIATED WITH PINUS SABINIANA, ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, RHAMNUS ILICIFOLIA, SALVIA SONOMENSIS, CERCIS OCCIDENTALIS, QUERCUS WISLIZENI, ETC.  
**General:** EASTERN COLONY: "ABUNDANT" IN 2007, GREATER THAN 500 PLANTS OBSERVED IN 2009. 1986 MAP DETAIL IS THE ONLY SOURCE OF INFORMATION FOR THE WESTERN COLONY.  
**Owner/Manager:** UNKNOWN



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<b>Occurrence No.</b>	20	<b>Map Index:</b> 22145	<b>EO Index:</b> 16646	<b>Element Last Seen:</b> 1986-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b> 1986-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b> 1993-01-25

**Quad Summary:** Clarksville (3812161)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.73531 / -121.05130	<b>Accuracy:</b>	80 meters
<b>UTM:</b>	Zone-10 N4289207 E669375	<b>Elevation (ft):</b>	860
<b>PLSS:</b>	T10N, R08E, Sec. 12, SW (M)	<b>Acres:</b>	0.0

**Location:** WEST OF SWEETWATER CREEK, 0.5 KM (0.25 MI) NW OF LANDING STRIP AND 2.5 KM (1.5 MI) NNE OF LIVE OAK SCHOOL.

**Detailed Location:** LOCATED IN THE NE 1/4 OF THE SW 1/4 OF SECTION 12.

**Ecological:**

**General:** MAP DETAIL IS ONLY SOURCE OF INFORMATION FOR THIS SITE.

**Owner/Manager:** UNKNOWN

<b>Occurrence No.</b>	23	<b>Map Index:</b> 72765	<b>EO Index:</b> 73600	<b>Element Last Seen:</b> 1993-04-10
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b> 1993-04-10
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b> 2008-10-31

**Quad Summary:** Clarksville (3812161)

**County Summary:** El Dorado

<b>Lat/Long:</b>	38.72974 / -121.00500	<b>Accuracy:</b>	1/5 mile
<b>UTM:</b>	Zone-10 N4288675 E673412	<b>Elevation (ft):</b>	1380
<b>PLSS:</b>	T10N, R09E, Sec. 08, SE (M)	<b>Acres:</b>	0.0

**Location:** PRAYER MTN, 0.2 MILE FROM THE INTERSECTION OF STARBUCK OFF OF DEER VALLEY RD, CAMERON PARK.

**Detailed Location:** EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS 0.2 ROAD MI S OF THE INTERSECTION OF STARBUCK RD & DEER VALLEY RD.

**Ecological:** GROWING IN A SMALL OPEN AREA IN A CHAPARRAL COMMUNITY. SOIL WITH SOME SMALL ROCKS AND PEBBLES. NEARBY ASSOCIATES INCLUDE: ARCTOSTAPHYLOS SP., ADENOSTOMA FASCICULATUM, CEANOTHUS CUNEATUS, AND PINUS SP.

**General:** ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1993 SCHNEIDER & WAAYERS COLLECTION. NEEDS FIELDWORK.

**Owner/Manager:** UNKNOWN

***Galium californicum ssp. sierrae*** **Element Code:** PDRUB0N0E7

El Dorado bedstraw

**Listing Status:** **Federal:** Endangered **CNDDDB Element Ranks:** **Global:** G5T1

**State:** Rare **State:** S1

**Other:** Rare Plant Rank - 1B.2, SB\_RSABG-Rancho Santa Ana Botanic Garden

**Habitat:** **General:** CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.

**Micro:** IN PINE-OAK WOODLAND OR CHAPARRAL. RESTRICTED TO GABBROIC OR SERPENTINE SOILS. 130-585 M.



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<b>Occurrence No.</b>	1	<b>Map Index:</b> 12104	<b>EO Index:</b> 17316	<b>Element Last Seen:</b>	XXXX-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	XXXX-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2007-04-25
<b>Quad Summary:</b>	Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.75434 / -121.05799		<b>Accuracy:</b>	1/5 mile	
<b>UTM:</b>	Zone-10 N4291306 E668748		<b>Elevation (ft):</b>	440	
<b>PLSS:</b>	T10N, R08E, Sec. 01, NW (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	NEAR CONFLUENCE OF SWEETWATER CREEK SOUTH FORK AMERICAN RIVER AT FOLSOM LAKE.				
<b>Detailed Location:</b>					
<b>Ecological:</b>					
<b>General:</b>	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1980 CNPS MAP; UNKNOWN WHEN PLANTS WERE SEEN. NEEDS FIELDWORK.				
<b>Owner/Manager:</b>	UNKNOWN				
<b>Occurrence No.</b>	2	<b>Map Index:</b> 12237	<b>EO Index:</b> 22465	<b>Element Last Seen:</b>	2005-07-05
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2005-07-05
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2010-07-19
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72144 / -120.98790		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4287787 E674919		<b>Elevation (ft):</b>	1920	
<b>PLSS:</b>	T10N, R09E, Sec. 16, E (M)		<b>Acres:</b>	42.0	
<b>Location:</b>	PINE HILL AREA AROUND SUMMIT LOOKOUT; WEST RIDGE, NORTHEAST RIDGE, AND ALONG ULENKAMP ROAD.				
<b>Detailed Location:</b>	SEVERAL COLONIES MAPPED BY CNDDDB AS 3 POLYGONS IN THE N 1/2 OF THE SE 1/4 OF SECTION 16 AND THE NW 1/4 OF THE SW 1/4 OF SECTION 15.				
<b>Ecological:</b>	IN CHAPARRAL AND FOOTHILL WOODLAND. ELEVATION RANGE: 1800-2059 FEET. ASSOCIATED WITH FREMONTODENDRON DECUMBENS, HETEROMELES ARBUTIFOLIA, QUERCUS KELLOGGII, ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, TOXICODENDRON DIVERSILOBUM, ETC.				
<b>General:</b>	FEWER THAN 1000 PLANTS SEEN IN 1978. 11-50 PLANTS SEEN IN 1982 IN >1 HECTARE AREA. 1% AND 0.2% COVER OF THIS PLANT IN TWO SEPARATE LOCATIONS IN MIDDLE POLY IN 2005. 1966 STEBBINS COLLECTION FROM PINE HILL ALSO ATTRIBUTED TO THIS OCCURRENCE.				
<b>Owner/Manager:</b>	CDF, DFG				



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<b>Occurrence No.</b>	3	<b>Map Index:</b> 12264	<b>EO Index:</b> 18661	<b>Element Last Seen:</b>	2006-05-24
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2006-05-24
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2007-04-25
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72832 / -120.97528		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4288575 E676000		<b>Elevation (ft):</b>	1600	
<b>PLSS:</b>	T10N, R09E, Sec. 15, NW (M)		<b>Acres:</b>	6.0	
<b>Location:</b>	FIRST RIDGE TO NE OF PINE HILL ABOUT 1 MILE NORTHEAST OF PINE HILL LOOKOUT.				
<b>Detailed Location:</b>	MAPPED AS TWO COLONIES; ONE IN NE1/4 OF NW1/4 SEC 15 AND THE OTHER IN SE1/4 OF SW1/4 SEC 10.				
<b>Ecological:</b>	ASSOCIATED WITH FREMONTODENDRON DECUMBENS. WELL DEVELOPED OAK WOODLAND ON NORTH FACING SLOPE NEAR TOP OF RIDGE.				
<b>General:</b>	200-300 PLANTS OBSERVED IN 2006 BY BAAD. LARGE POPULATION OF PLANTS SCATTERED THROUGH FOREST.				
<b>Owner/Manager:</b>	UNKNOWN				
<b>Occurrence No.</b>	4	<b>Map Index:</b> 12130	<b>EO Index:</b> 17311	<b>Element Last Seen:</b>	1958-05-29
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1958-05-29
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-05
<b>Quad Summary:</b>	Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76794 / -121.03883		<b>Accuracy:</b>	1/5 mile	
<b>UTM:</b>	Zone-10 N4292851 E670381		<b>Elevation (ft):</b>	800	
<b>PLSS:</b>	T11N, R08E, Sec. 36, NW (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	APPROX 0.5 MILE SOUTH OF NEW SALMON FALLS BRIDGE, SOUTH FORK AMERICAN RIVER, ABOUT 10 MILES NORTHEAST OF FOLSOM.				
<b>Detailed Location:</b>					
<b>Ecological:</b>					
<b>General:</b>	SITE BASED ON AN UNDATED CRAMPTON COLLECTION & A 1958 SMITH OBSERVATION. NEEDS FIELDWORK.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	5	<b>Map Index:</b> 16272	<b>EO Index:</b> 8129	<b>Element Last Seen:</b>	1994-06-15
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1994-06-15
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2002-10-23
<b>Quad Summary:</b>	Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.76259 / -121.01869		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4292295 E672144		<b>Elevation (ft):</b>	900	
<b>PLSS:</b>	T11N, R09E, Sec. 31, NW (M)		<b>Acres:</b>	33.4	
<b>Location:</b>	RAVINE OPENING INTO SOUTH FORK AMERICAN RIVER, 2 MILES EAST OF SALMON FALLS BRIDGE, EAST OF FOLSOM LAKE.				
<b>Detailed Location:</b>	3 COLONIES MAPPED BY CNDDDB. EASTERN COLONY ALONG NORTH-FACING SLOPE WITHIN THE PROPOSED PLANT PRESERVE AREA. FOUND IN SOMEWHAT SHELTERED AREAS SOUTH OF THE DRAINAGE UP TO THE MIDDLE OF THE SLOPE.				
<b>Ecological:</b>	WESTERN COLONIES ON STEEP NORTH-FACING SLOPE, IN SMALL GROVE OF PINUS PONDEROSA. RESCUE SOILS. SOME SCOTCH BROOM PRESENT. E COLONY ON RESCUE STONY LOAM SOILS, IN A MODERATELY DENSE STAND OF GABBROIC NORTHERN MIXED CHAPARRAL.				
<b>General:</b>	TWO WESTERN COLONIES BASED ON 1976 COLLECTIONS BY STEBBINS. 1000 PLANTS SEEN AT EASTERN COLONY BY FRASER AND CRAIG IN 1994. INCLUDES FORMER OCCURRENCE #6.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	7	<b>Map Index:</b> 12230	<b>EO Index:</b> 18660	<b>Element Last Seen:</b>	2000-05-25
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2000-05-25
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-05
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.73194 / -120.98886		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4288950 E674811		<b>Elevation (ft):</b>	1600	
<b>PLSS:</b>	T10N, R09E, Sec. 09, S (M)		<b>Acres:</b>	12.9	
<b>Location:</b>	1 MILE NORTH TO NNW OF PINE HILL LOOKOUT, NORTH OF SWEETWATER CREEK, NORTHWEST OF SHINGLE SPRINGS.				
<b>Detailed Location:</b>	TWO COLONIES: WESTERN COLONY ON THE NORTH SIDE OF FARVIEW COURT, MAPPED WITHIN THE SE 1/4 OF THE SW 1/4 OF SECTION 9. EASTERN COLONY MAPPED WITHIN THE SE 1/4 OF SE 1/4 OF SECTION 9.				
<b>Ecological:</b>	EASTERN COLONY ON OLIVINE SCHIST IN OPEN FOREST OF PINUS PONDEROSA AND QUERCUS KELLOGGII. WESTERN COLONY IS WITHIN THE PINE HILL GABBRO COMPLEX, IN CHAPARRAL AND OAK WOODLAND.				
<b>General:</b>	EAST COLONY IS TYPE LOCALITY, UNKNOWN NUMBER OF PLANTS SEEN BY STEBBINS IN 1966 & WILSON IN 1986. UNKNOWN NUMBER OF PLANTS SEEN BY HORENSTEIN IN 1991 AT WEST COLONY WEST OF POWERLINE. 20,000 PLANTS SEEN BY WILLSON IN 2000 AT WEST COLONY.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	8	<b>Map Index:</b> 22732	<b>EO Index:</b> 28744	<b>Element Last Seen:</b> 1990-08-07
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b> 1990-08-07
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b> 1993-02-04

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.67887 / -120.97065	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4283095 E676524	<b>Elevation (ft):</b>	1500
<b>PLSS:</b>	T10N, R09E, Sec. 34, NE (M)	<b>Acres:</b>	10.8

**Location:** SOUTHEAST OF CAMERON PARK AIRPORT, 2.1 KM (1.3 MI) DUE NORTH OF HWY 50 AT CAMERON PARK DRIVE.  
**Detailed Location:** 1/4 MILE SOUTH OF MEDER DRIVE, 1/2 MILE EAST OF CAMERON PARK DRIVE. WEST EDGE IS A FEW FEET SOUTH OF A FENCELINE. TRAIL ALONG FENCELINE STARTS FROM A TURNOUT ON SOUTH SIDE OF MEDER DRIVE. EAST EDGE IS NEAR TOP OF EAST BANK OF DRAINAGE.  
**Ecological:** GROWING IN WOODLAND DOMINATED BY QUERCUS KELLOGGII WITH PINUS SABINIANA AND CHAPARRAL SHRUBS. UNDERSTORY IS MOSTLY OPEN.  
**General:** APPROXIMATELY 50 PLANTS SEEN IN 1990. AREA COULD BE INCORPORATED INTO A PRESERVE. ADJACENT PARCEL CONTAINS SEVERAL RARE GABBRO ENDEMICS INCLUDING CALYSTEGIA STEBBINSII.  
**Owner/Manager:** PVT

<b>Occurrence No.</b>	9	<b>Map Index:</b> 22727	<b>EO Index:</b> 27228	<b>Element Last Seen:</b> 1992-05-20
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b> 1992-05-20
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b> 2008-11-18

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.69441 / -120.94870	<b>Accuracy:</b>	nonspecific area
<b>UTM:</b>	Zone-10 N4284863 E678394	<b>Elevation (ft):</b>	1350
<b>PLSS:</b>	T10N, R09E, Sec. 26, NE (M)	<b>Acres:</b>	28.0

**Location:** 1 KM (0.7 MI) SOUTH OF RESCUE.  
**Detailed Location:** 2701 CARLSON DRIVE, SHINGLE SPRINGS. LOCATED IN THE EAST 1/2 OF THE NE 1/4 OF SECTION 26. MAPPED BY CNNDDB AROUND PROPERTY BOUNDARY; UNKNOWN WHERE PLANTS OCCUR WITHIN THIS AREA BUT MOST WERE FOUND ON THE SOUTH HALF OF THE PROPERTY.  
**Ecological:** GROWING IN RESCUE VERY STONY SANDY LOAM SOILS ALONG AN ECOTONE BETWEEN AN OAK WOODLAND AND CHAPARRAL. OTHER RARE PLANTS AT THIS SITE INCLUDE CEANOTHUS RODERICKII AND WYETHIA RETICULATA.  
**General:** UNKNOWN NUMBER OF PLANTS SEEN IN 1992. RARE FLORA MAY BE PROTECTED ON SITE BY AGREEMENTS WITH PROPERTY OWNERS REGARDING LAND USE.  
**Owner/Manager:** PVT



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<b>Occurrence No.</b>	10	<b>Map Index:</b> 30663	<b>EO Index:</b> 15603	<b>Element Last Seen:</b>	2008-06-24
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2008-06-24
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2010-04-26

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.66776 / -120.94362	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4281915 E678903	<b>Elevation (ft):</b>	1500
<b>PLSS:</b>	T09N, R09E, Sec. 01, NW (M)	<b>Acres:</b>	1.0

**Location:** NORTHEAST OF TRAILER PARK AT THE END OF WHISPERING PINES DRIVE, SHINGLE SPRINGS.  
**Detailed Location:** MAPPED NEAR THE CENTER OF THE NW 1/4 OF SECTION 1.  
**Ecological:** CHAPARRAL AND OAK WOODLAND DOMINATED BY QUERCUS WISLIZENI, ARCTOSTAPHYLOS VISCIDA, AND ADENOSTOMA FASCICULATUM ON GABBRO SOILS. OTHER ASSOCIATES INCLUDE SENECIO LAYNEAE, WYETHIA RETICULATA, CERCIS, SALVIA SONOMENSIS, ANNUAL GRASSES, ETC.  
**General:** THREE COLONIES OBSERVED IN 1993. 81 PLANTS SEEN IN 2008.  
**Owner/Manager:** PVT

<b>Occurrence No.</b>	11	<b>Map Index:</b> 49113	<b>EO Index:</b> 49113	<b>Element Last Seen:</b>	2003-04-15
<b>Occ. Rank:</b>	Poor		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2010-06-25
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Decreasing	<b>Record Last Updated:</b>	2010-07-20

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.66335 / -120.97256	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4281370 E676395	<b>Elevation (ft):</b>	1350
<b>PLSS:</b>	T09N, R09E, Sec. 03, SE (M)	<b>Acres:</b>	1.0

**Location:** BETWEEN CAMERON PARK DRIVE AND SABANA DRIVE IN CAMERON PARK, NORTH OF HIGHWAY 50, WEST OF SHINGLE SPRINGS.  
**Detailed Location:** PLANTS ON THE NORTH SIDE OF OAK TREES AND SOUTH OF INTERMITTENT CREEK. MAPPED WITHIN THE NW 1/4 OF THE SE 1/4 OF SECTION 3.  
**Ecological:** IN OAK WOODLAND COMMUNITY WITH CHAPARRAL/GRASS UNDERSTORY. ON GABBRO SOIL (RESCUE SANDY LOAM). SOUTHWESTERLY EXPOSURE. THE RARE CEANOTHUS RODERICKII AND CALYSTEGIA STEBBINSII ALSO OCCUR AT THIS SITE.  
**General:** 50 SQUARE FEET OF PLANTS OBSERVED IN 1997 BY WILLSON. 6 PLANTS OBSERVED IN 2003, NONE FOUND IN 2010. RARE TAXA ARE DISAPPEARING AT THIS SITE.  
**Owner/Manager:** PVT



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<b>Occurrence No.</b>	12	<b>Map Index:</b> 49114	<b>EO Index:</b> 49114	<b>Element Last Seen:</b>	1994-06-16
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1994-06-16
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2002-10-23
<b>Quad Summary:</b>	Clarksville (3812161), Pilot Hill (3812171)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.74609 / -121.03649		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4290431 E670636		<b>Elevation (ft):</b>	1050	
<b>PLSS:</b>	T10N, R09E, Sec. 06, W (M)		<b>Acres:</b>	12.8	
<b>Location:</b>	RIDGE BETWEEN SWEETWATER & CRACKER CREEKS, NORTH OF CLARKSVILLE, EAST OF FOLSOM LAKE.				
<b>Detailed Location:</b>	5 COLONIES MAPPED AS 4 POLYGONS FROM TOP OF 1361' PEAK & ALONG THE E EDGE OF RIDGE, EXTENDING DOWN A SEASONAL DRAINAGE FOR 1000 FT TO ABOUT 100 FT ABOVE CRACKER CRK. MAPPED WITHIN THE W 1/2 OF SEC 6 & THE NE 1/4 OF THE NW 1/4 OF SEC 7.				
<b>Ecological:</b>	ON OPEN RESCUE STONY LOAM SOILS, GROWING AMONGST ROCKS AND BOULDERS IN THE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ERIODICTYON CALIFORNICUM, ET AL.				
<b>General:</b>	5 COLONIES OBSERVED BY WOOD AND FRASER IN 1994. FROM NORTH TO SOUTH, NUMBER OF PLANTS AT EACH COLONY: 100, 1, 3, 30, AND 1. SITE SHOULD BE PRESERVED AS OPEN SPACE.				
<b>Owner/Manager:</b>	PVT-KANAKA VALLEY RANCH				
<b>Occurrence No.</b>	13	<b>Map Index:</b> 69070	<b>EO Index:</b> 69840	<b>Element Last Seen:</b>	2006-07-08
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2006-07-08
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2007-05-08
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.69734 / -120.96486		<b>Accuracy:</b>	nonspecific area	
<b>UTM:</b>	Zone-10 N4285157 E676982		<b>Elevation (ft):</b>	1400	
<b>PLSS:</b>	T10N, R09E, Sec. 26, NW (M)		<b>Acres:</b>	4.0	
<b>Location:</b>	SOUTH OF WHITE OAK FLAT.				
<b>Detailed Location:</b>	PROJECT AREA OCCURS WITHIN THE NW 1/4 OF SECTION 26.				
<b>Ecological:</b>	OAK WOODLAND ON GABBRO SOILS, ASSOCIATED WITH QUERCUS SP.				
<b>General:</b>	HUNDREDS OF PLANTS OBSERVED IN 2006. THE RARE PACKERA LAYNEAE AND WYETHIA RETICULATA ALSO OCCUR AT THIS SITE. OAK PRESERVATION STATUES IN EL DORADO COUNTY WILL PROBABLY AID THE SURVIVAL OF THE SPECIES, WHICH IS FOUND BENEATH THE OAK CANOPY.				
<b>Owner/Manager:</b>	PVT				



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<b>Occurrence No.</b>	14	<b>Map Index:</b> 73095	<b>EO Index:</b> 74026	<b>Element Last Seen:</b>	2005-06-14
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2005-06-14
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-09

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.67334 / -120.95041	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4282521 E678299	<b>Elevation (ft):</b>	1480
<b>PLSS:</b>	T10N, R09E, Sec. 35, SE (M)	<b>Acres:</b>	27.0

**Location:** BETWEEN MEDER RD AND MINE SHAFT LANE, E OF HILTON WAY, NW OF SHINGLE SPRINGS.  
**Detailed Location:** MAPPED BY CNDDDB ACCORDING TO TWO 2005 HUGHES MAPS.  
**Ecological:** W POLY: NORTHERN GABBROIC MIXED CHAPARRAL ON RESCUE SERIES SOILS; CEANOTHUS RODERICKII ALSO OCCURS AT THIS SITE. E POLY: OAK WOODLAND ON LARGE RESIDENTIAL PARCEL.  
**General:** W POLY HAD 2,000 PLANTS IN 2005. E POLY HAD 221 PLANTS IN 2005.  
**Owner/Manager:** PVT

<b>Occurrence No.</b>	15	<b>Map Index:</b> 73096	<b>EO Index:</b> 74027	<b>Element Last Seen:</b>	2007-08-06
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-08-06
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-05

**Quad Summary:** Shingle Springs (3812068)  
**County Summary:** El Dorado

<b>Lat/Long:</b>	38.67766 / -120.96216	<b>Accuracy:</b>	specific area
<b>UTM:</b>	Zone-10 N4282978 E677265	<b>Elevation (ft):</b>	1600
<b>PLSS:</b>	T10N, R09E, Sec. 35, SW (M)	<b>Acres:</b>	3.0

**Location:** ALONG ROSEBUD DRIVE BETWEEN ITS INTERSECTION WITH MEDER RD & SKY LANE, NW OF SHINGLE SPRINGS.  
**Detailed Location:** MAPPED BY CNDDDB ACCORDING TO A 2007 WILLSON MAP. N1/2 OF SW1/4 SEC 35.  
**Ecological:** OAK WOODLAND ON NORTH SLOPE, GABBRO SOILS ASSOCIATED WITH QUERCUS KELLOGGII, TOXICODENDRON DIVERSILOBUM, HETEROMELES ARBUTIFOLIA. CEANOTHUS RODERICKII AND WYETHIA RETICULATA ARE ALSO AT THIS SITE.  
**General:** ~134 PLANTS SEEN IN 2007.  
**Owner/Manager:** PVT



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<b>Occurrence No.</b>	16	<b>Map Index:</b> 73097	<b>EO Index:</b> 74028	<b>Element Last Seen:</b>	2007-07-01
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2007-07-01
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-05
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.71388 / -120.95419		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4287013 E677869		<b>Elevation (ft):</b>	1200	
<b>PLSS:</b>	T10N, R09E, Sec. 23, NE (M)		<b>Acres:</b>	3.0	
<b>Location:</b>	JUST SW OF THE INTERSECTION OF PENNY LANE AND DEER VALLEY RD, N OF RESCUE.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB ACCORDING TO A 2007 DURHAM MAP.				
<b>Ecological:</b>	GABBROIC NORTHERN MIXED CHAPARRAL AND CISMONTANE WOODLAND. ASSOCIATES INCLUDE ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, CERCIS OCCIDENTALIS, CEANOTHUS LEMMONII, WYETHIA RETICULATA, PACKERA LAYNEAE, & HELIANTHEMUM SUFFRUTESCENS.				
<b>General:</b>	~50 PLANTS SEEN IN 2007.				
<b>Owner/Manager:</b>	PVT				

<b>Occurrence No.</b>	17	<b>Map Index:</b> 79424	<b>EO Index:</b> 80400	<b>Element Last Seen:</b>	2005-07-06
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2005-07-06
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2010-07-19
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72087 / -120.96111		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4287776 E677250		<b>Elevation (ft):</b>	1470	
<b>PLSS:</b>	T10N, R09E, Sec. 14, SW (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	ABOUT 0.8 AIR MILE NORTHWEST OF RESCUE, WEST OF DEER VALLEY ROAD AND EAST OF PINE HILL.				
<b>Detailed Location:</b>	IN SHALLOW DRAINAGE LEADING NORTH FROM UNNAMED RIDGE ROAD. MAPPED IN THE N 1/2 OF THE SW 1/4 OF SECTION 14. BLM PINE HILL PRESERVE, PENNY LANE UNIT.				
<b>Ecological:</b>	QUERCUS WISLIZENI WOODLAND, QUERCUS IS MULTI-TRUNKED WITH SMALL DBH. SHURB AND HERB UNDERSTORY IS DENSE. SOIL IS MEDIUM TO FINE SANDY LOAM. ASSOC W/ TOXICODENDRON DIVERSILOBUM, Q. KELLOGGII, HETEROMELES ARBUTIFOLIA, WYETHIA RETICULATA, ETC.				
<b>General:</b>	0.2% COVER OF THIS PLANT IN 2005.				
<b>Owner/Manager:</b>	BLM				

<b><i>Fremontodendron decumbens</i></b>			<b>Element Code:</b> PDSTE03030		
Pine Hill flannelbush					
<b>Listing Status:</b>	<b>Federal:</b>	Endangered	<b>CNDDB Element Ranks:</b>	<b>Global:</b>	G1
	<b>State:</b>	Rare		<b>State:</b>	S1
	<b>Other:</b>	Rare Plant Rank - 1B.2, SB_RSABG-Rancho Santa Ana Botanic Garden, SB_UCBBG-UC Berkeley Botanical Garden			
<b>Habitat:</b>	<b>General:</b>	CHAPARRAL, CISMONTANE WOODLAND.			
	<b>Micro:</b>	ROCKY RIDGES; GABBRO OR SERPENTINE ENDEMIC; OFTEN AMONG ROCKS AND BOULDERS. 425-770 M.			



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<b>Occurrence No.</b>	1	<b>Map Index:</b> 12226	<b>EO Index:</b> 14146	<b>Element Last Seen:</b>	2017-05-25
<b>Occ. Rank:</b>	Excellent		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2017-05-25
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-07-05
<b>Quad Summary:</b>	Shingle Springs (3812068), Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.7181 / -120.98996		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4287412 E674750		<b>Elevation (ft):</b>	1800	
<b>PLSS:</b>	T10N, R09E, Sec. 16 (M)		<b>Acres:</b>	116.0	
<b>Location:</b>	PINE HILL, ABOUT 2 MILES WNW OF RESCUE.				
<b>Detailed Location:</b>	MAPPED BY CNDDDB AS MANY POLYGONS ACCORDING TO MAPS FROM THE 1980S AND 2013, COORDINATES FROM 2011, 2013 & 2015, AND DIGITAL DATA FROM 2009 AND 2017.				
<b>Ecological:</b>	ON RED-BROWN CLAY & GABBRO WITH GRANITE BOULDERS IN CHAPARRAL. ASSOCIATED WITH PINUS SABINIANA, ARCTOSTAPHYLOS VISCIDA, CERCIS OCCIDENTALIS, RHAMNUS ILICIFOLIA, AND THE RARE CEANOTHUS RODERICKII, WYETHIA RETICULATA, & PACKERA LAYNEAE.				
<b>General:</b>	W SUMMIT RIDGE BURNED 1983, MANY NEW SEEDLINGS/RESPROUTS PRESENT. POP #S FOR PORTIONS OF SITE: <100 PLANTS IN 1978, 4-5 NEAR SUMMIT IN 1982, <50 IN 1984, ~50 IN 1998, <200 IN 2007, 16 IN 2011, 40+ IN 2017. INCLUDES FORMER OCC #3.				
<b>Owner/Manager:</b>	CDF, DFG, PVT				
<b>Occurrence No.</b>	2	<b>Map Index:</b> 12270	<b>EO Index:</b> 3917	<b>Element Last Seen:</b>	2011-09-21
<b>Occ. Rank:</b>	Good		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2011-09-21
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-06-22
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72967 / -120.98327		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4288709 E675302		<b>Elevation (ft):</b>	1600	
<b>PLSS:</b>	T10N, R09E, Sec. 10, SW (M)		<b>Acres:</b>	29.0	
<b>Location:</b>	RIDGELINE ABOUT 1 MILE NORTHEAST OF PINE HILL LOOKOUT, NORTHWEST OF RESCUE.				
<b>Detailed Location:</b>	IN CREVICES OF GABBRO BOULDERS AT TOP OF RIDGE. WITHIN RESERVE OFF LAZY KNOLL ROAD. 3 COLONIES MAPPED IN THE SE 1/4 SE 1/4 OF SECTION 9, THE S 1/2 SW 1/4 OF SECTION 10, AND THE N 1/2 NW 1/4 OF SECTION 15.				
<b>Ecological:</b>	ALONG RIDGETOP AND TO SOUTH MOSTLY AMONG ROCKS IN YELLOW PINE FOREST/OAK WOODLAND/CHAPARRAL ECOTONE ON GABBROIC SOILS. ASSOCIATED WITH ARCTOSTAPHYLOS VISCIDA, QUERCUS KELLOGGII, HETEROMELES, PINUS PONDEROSA, AND ADENOSTOMA FASCICULATUM.				
<b>General:</b>	E-MOST POLY: UNK # OF PLANTS IN 1979 & 1981; 35 PLANTS IN 1984; UNK # OF PLANTS IN 1986; 40-50 SEEN IN 2006 IN A WELL-DEVELOPED BUT HIGHLY LOCALIZED POPULATION; 31 PLANTS IN 2007; 22 PLANTS IN 2011. TWO W-MOST POLYGONS: 5 PLANTS IN 2003.				
<b>Owner/Manager:</b>	PVT, BLM				



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<b>Occurrence No.</b>	4	<b>Map Index:</b> 17145	<b>EO Index:</b> 3918	<b>Element Last Seen:</b>	2015-04-01
<b>Occ. Rank:</b>	Fair		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	2015-04-01
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2017-06-19
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72923 / -120.99603		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4288636 E674195		<b>Elevation (ft):</b>	1600	
<b>PLSS:</b>	T10N, R09E, Sec. 9, SW (M)		<b>Acres:</b>	10.0	
<b>Location:</b>	ALONG FAIRVIEW DRIVE, APPROXIMATELY 0.8 AIR MILE NNW OF PINE HILL LOOKOUT.				
<b>Detailed Location:</b>	MAPPED AS 3 POLYGONS BY CNDDb IN THE SW 1/4 OF SECTION 9 INTO THE NW 1/4 OF SECTION 16 BASED ON MAP INFO/COORDINATES FROM 1989, 2005, 2007, AND 2015.				
<b>Ecological:</b>	ON ROCKY OUTCROP ON TOP OF RIDGE IN GABBRO SOIL. ASSOC WITH QUERCUS, ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, STYRAX OFFICINALIS, LEPECHINIA CALYCINA, & SALVIA SONOMENSIS. WYETHIA RETICULATA & CHLOROGALUM GRANDIFLORUM ALSO AT SITE.				
<b>General:</b>	2 PLANTS SEEN IN THE AREA IN 1983, UNKNOWN NUMBER SEEN IN 1986. SE POLYGON: 1 PLANT SEEN IN 1989, 4 PLANTS SEEN IN 2005. SW-MOST POLYGON: FEWER THAN 10 PLANTS SEEN IN 2007. NW POLYGON: 6 PLANTS OBSERVED IN 2015.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	5	<b>Map Index:</b> 12203	<b>EO Index:</b> 3845	<b>Element Last Seen:</b>	1986-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1986-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-11
<b>Quad Summary:</b>	Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72885 / -121.00682		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4288573 E673257		<b>Elevation (ft):</b>	1500	
<b>PLSS:</b>	T10N, R09E, Sec. 17, NE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	SOUTHEAST OF DEER VALLEY ROAD AND WEST OF STARBUCK ROAD, WEST OF PINE HILL.				
<b>Detailed Location:</b>	MAPPED ABOUT 200 M SOUTH OF DEER VALLY ROAD AND 200 M WEST OF STARBUCK ROAD. WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 17.				
<b>Ecological:</b>	IN GABBRO SOIL ON A ROCKY OUTCROP ON THE CREST OF A SMALL RIDGE. GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS AND ADENOSTOMA.				
<b>General:</b>	54 PLANTS SEEN IN 1983. UNKNOWN NUMBER SEEN IN 1986.				
<b>Owner/Manager:</b>	PVT				



**Multiple Occurrences per Page**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



<b>Occurrence No.</b>	6	<b>Map Index:</b> 12207	<b>EO Index:</b> 3844	<b>Element Last Seen:</b>	1986-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1986-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-11
<b>Quad Summary:</b>	Clarksville (3812161)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.72341 / -121.00556		<b>Accuracy:</b>	specific area	
<b>UTM:</b>	Zone-10 N4287972 E673379		<b>Elevation (ft):</b>	1410	
<b>PLSS:</b>	T10N, R09E, Sec. 17, NE (M)		<b>Acres:</b>	8.3	
<b>Location:</b>	EAST OF DEER VALLEY ROAD AND WEST OF STARBUCK ROAD, WEST OF PINE HILL.				
<b>Detailed Location:</b>	TWO COLONIES MAPPED; 12 PLANTS AT THE 1476' SUMMIT OF HILL, 1 PLANT EAST OF SUMMIT ALONG STARBUCK ROAD. WITHIN THE SE 1/4 OF THE NE 1/4 OF SECTION 17.				
<b>Ecological:</b>	IN GABBRO SOIL ON A ROCKY OUTCROP ON THE CREST OF A SMALL RIDGE. GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS AND ADENOSTOMA.				
<b>General:</b>	13 PLANTS SEEN IN 2 COLONIES IN 1983. UNKNOWN NUMBER SEEN IN 1986.				
<b>Owner/Manager:</b>	PVT				
<b>Occurrence No.</b>	11	<b>Map Index:</b> 12281	<b>EO Index:</b> 3919	<b>Element Last Seen:</b>	1986-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1986-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	2008-12-11
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.73516 / -120.97406		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4289336 E676089		<b>Elevation (ft):</b>	1400	
<b>PLSS:</b>	T10N, R09E, Sec. 10, SE (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	ABOUT 0.6 AIR MILE NORTHWEST OF JAYHAWK CEMETERY, ON NORTH SIDE OF HILL NEAR SUMMIT, NORTHEAST OF PINE HILL.				
<b>Detailed Location:</b>	NW1/4 OF SE1/4 SEC 10.				
<b>Ecological:</b>					
<b>General:</b>	MAP DETAIL IS THE ONLY SOURCE OF INFORMATION FOR THIS SITE. UNKNOWN NUMBER OF PLANTS SEEN IN 1979 & 1986. NEEDS FIELDWORK.				
<b>Owner/Manager:</b>	UNKNOWN				
<b>Occurrence No.</b>	12	<b>Map Index:</b> 32042	<b>EO Index:</b> 3953	<b>Element Last Seen:</b>	1986-XX-XX
<b>Occ. Rank:</b>	Unknown		<b>Presence:</b> Presumed Extant	<b>Site Last Seen:</b>	1986-XX-XX
<b>Occ. Type:</b>	Natural/Native occurrence		<b>Trend:</b> Unknown	<b>Record Last Updated:</b>	1995-01-26
<b>Quad Summary:</b>	Shingle Springs (3812068)				
<b>County Summary:</b>	El Dorado				
<b>Lat/Long:</b>	38.70830 / -120.99583		<b>Accuracy:</b>	80 meters	
<b>UTM:</b>	Zone-10 N4286313 E674263		<b>Elevation (ft):</b>	1420	
<b>PLSS:</b>	T10N, R09E, Sec. 21, NW (M)		<b>Acres:</b>	0.0	
<b>Location:</b>	ABOUT 0.8 AIR MILE SSW OF PINE HILL LOOKOUT ALONG AN INTERMITTENT STREAM.				
<b>Detailed Location:</b>	MAPPED IN THE SE 1/4 OF THE NW 1/4 OF SECTION 21.				
<b>Ecological:</b>					
<b>General:</b>	A1986 REPORT BY WILSON IS THE ONLY SOURCE OF INFORMATION FOR THIS SITE.				
<b>Owner/Manager:</b>	UNKNOWN				

## ATTACHMENT C – iPAC Report

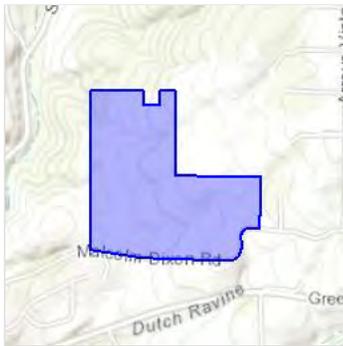
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

El Dorado County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

## Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4482">https://ecos.fws.gov/ecp/species/4482</a>	Threatened

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/7850">https://ecos.fws.gov/ecp/species/7850</a>	Threatened

## Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a>	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered

## Flowering Plants

NAME	STATUS
El Dorado Bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5209">https://ecos.fws.gov/ecp/species/5209</a>	Endangered
Layne's Butterweed <i>Senecio layneae</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4062">https://ecos.fws.gov/ecp/species/4062</a>	Threatened
Pine Hill Ceanothus <i>Ceanothus roderickii</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/3293">https://ecos.fws.gov/ecp/species/3293</a>	Endangered
Pine Hill Flannelbush <i>Fremontodendron californicum</i> ssp. <i>decumbens</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4818">https://ecos.fws.gov/ecp/species/4818</a>	Endangered
Stebbins' Morning-glory <i>Calystegia stebbinsii</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/3991">https://ecos.fws.gov/ecp/species/3991</a>	Endangered

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-

bird tools such as the [E-bird data mapping tool](#) (search for the name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain timeframe) and the [E-bird Explore Data Tool](#) (perform a query to see a list of all birds sighted in your county or region and within a certain timeframe). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
<b>Allen's Hummingbird</b> <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a>	Breeds Feb 1 to Jul 15
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Jan 1 to Aug 31
<b>Black Swift</b> <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8878">https://ecos.fws.gov/ecp/species/8878</a>	Breeds Jun 15 to Sep 10
<b>Black-chinned Sparrow</b> <i>Spizella atrogularis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9447">https://ecos.fws.gov/ecp/species/9447</a>	Breeds Apr 15 to Jul 31
<b>Burrowing Owl</b> <i>Athene cucularia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9737">https://ecos.fws.gov/ecp/species/9737</a>	Breeds Mar 15 to Aug 31
<b>California Thrasher</b> <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
<b>Clark's Grebe</b> <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
<b>Golden Eagle</b> <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
<b>Lawrence's Goldfinch</b> <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9464">https://ecos.fws.gov/ecp/species/9464</a>	Breeds Mar 20 to Sep 20
<b>Lewis's Woodpecker</b> <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9408">https://ecos.fws.gov/ecp/species/9408</a>	Breeds Apr 20 to Sep 30
<b>Long-billed Curlew</b> <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/5511">https://ecos.fws.gov/ecp/species/5511</a>	Breeds elsewhere

<p><b>Marbled Godwit</b> <i>Limosa fedoa</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	Breeds elsewhere
<p><b>Nuttall's Woodpecker</b> <i>Picoides nuttallii</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a></p>	Breeds Apr 1 to Jul 20
<p><b>Oak Titmouse</b> <i>Baeolophus inornatus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>	Breeds Mar 15 to Jul 15
<p><b>Rufous Hummingbird</b> <i>selasphorus rufus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a></p>	Breeds elsewhere
<p><b>Short-billed Dowitcher</b> <i>Limnodromus griseus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a></p>	Breeds elsewhere
<p><b>Tricolored Blackbird</b> <i>Agelaius tricolor</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3910">https://ecos.fws.gov/ecp/species/3910</a></p>	Breeds Mar 15 to Aug 10
<p><b>Whimbrel</b> <i>Numenius phaeopus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9483">https://ecos.fws.gov/ecp/species/9483</a></p>	Breeds elsewhere
<p><b>White Headed Woodpecker</b> <i>Picoides albolarvatus</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9411">https://ecos.fws.gov/ecp/species/9411</a></p>	Breeds May 1 to Aug 15
<p><b>Willet</b> <i>Tringa semipalmata</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p><b>Wrentit</b> <i>Chamaea fasciata</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 10
<p><b>Yellow-billed Magpie</b> <i>Pica nuttalli</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9726">https://ecos.fws.gov/ecp/species/9726</a></p>	Breeds Apr 1 to Jul 31

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in your project's counties during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season (■)**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the counties of your project area. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

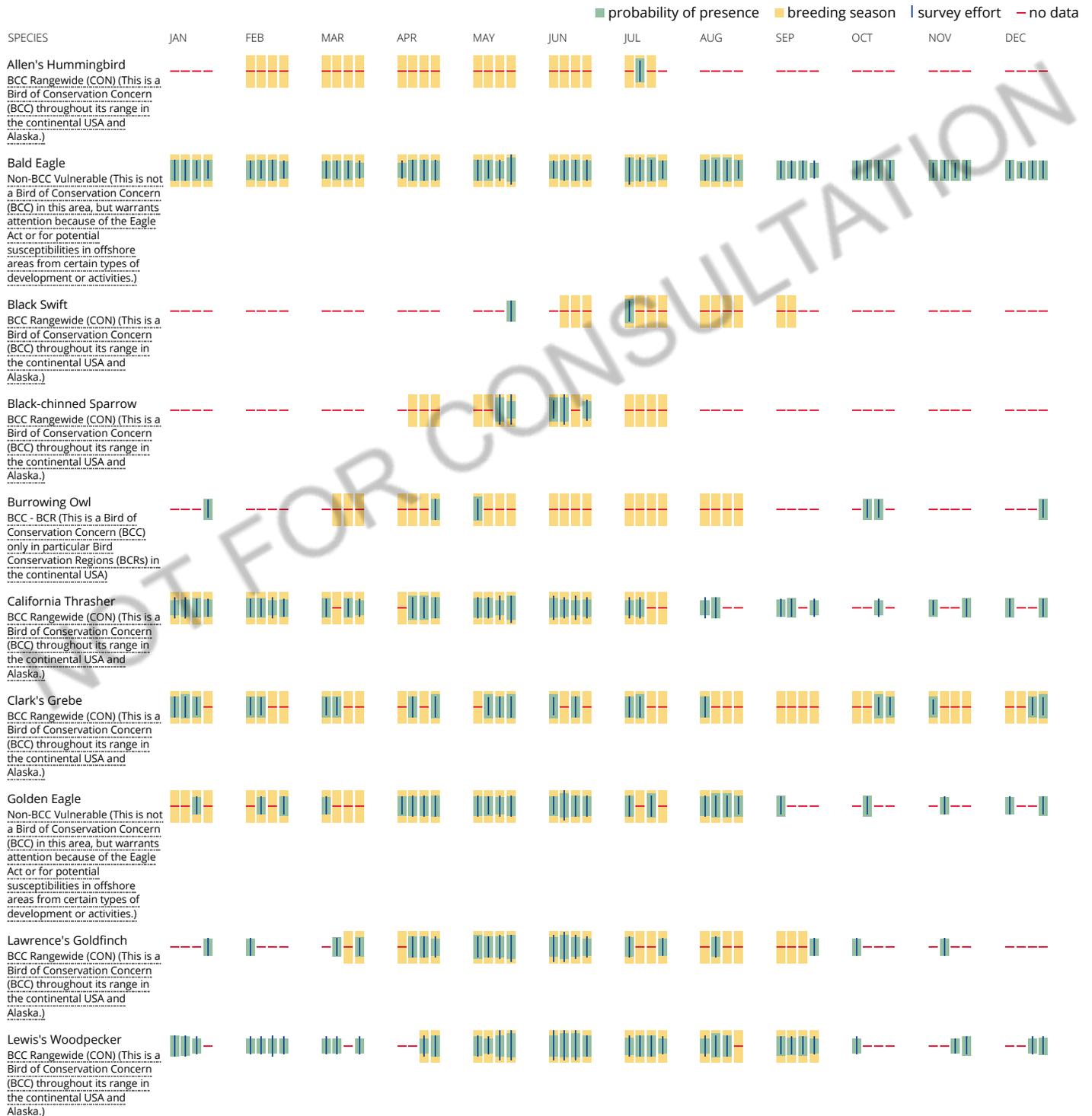
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

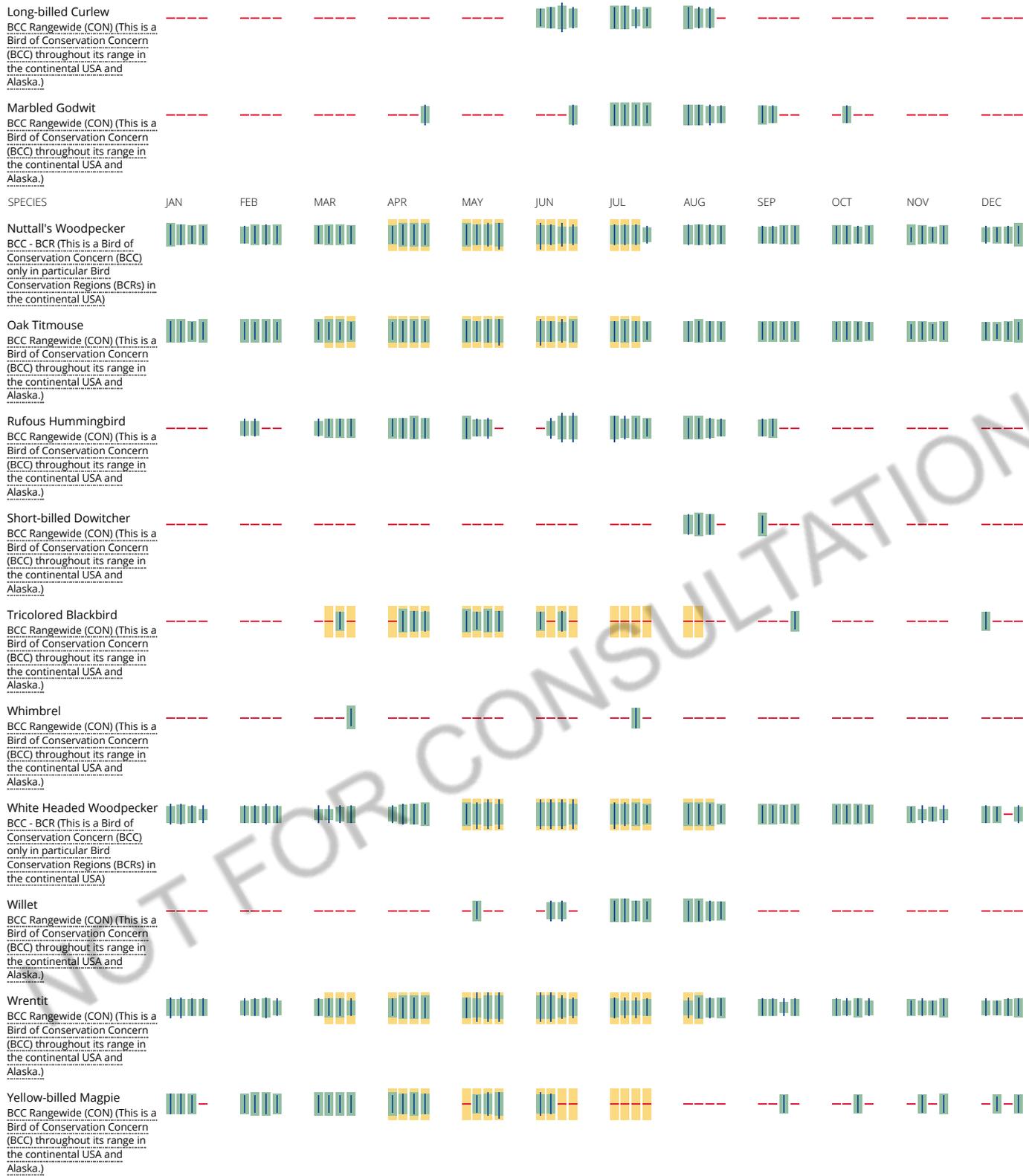
**No Data (—)**

A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the counties which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

#### What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

#### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird entry on your migratory bird species list indicates a breeding season, it is probable that the bird breeds in your project's counties at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

#### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the BGEPA should such impacts occur.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location overlaps the following wetlands:

FRESHWATER POND

[PUBHh](#)

A full description for each wetland code can be found at the National Wetlands Inventory website: <https://ecos.fws.gov/ipac/wetlands/decoder>

#### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

## ATTACHMENT D – CNPS Results

## Plant List

### Inventory of Rare and Endangered Plants

7 matches found. Click on scientific name for details

#### Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], FESA is one of [Endangered, Threatened], CESA is one of [Endangered, Threatened, Rare], Found in Quads 3812172, 3812171, 3812078, 3812162, 3812161, 3812068, 3812152 3812151 and 3812058;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Calystegia stebbinsii</a>	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	1B.1	S1	G1
<a href="#">Ceanothus roderickii</a>	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	1B.1	S1	G1
<a href="#">Fremontodendron decumbens</a>	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	1B.2	S1	G1
<a href="#">Galium californicum ssp. sierrae</a>	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	1B.2	S1	G5T1
<a href="#">Orcuttia tenuis</a>	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
<a href="#">Orcuttia viscida</a>	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	1B.1	S1	G1
<a href="#">Packera layneae</a>	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2

#### Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 01 February 2018].

#### Search the Inventory

[Simple Search](#)  
[Advanced Search](#)  
[Glossary](#)

#### Information

[About the Inventory](#)  
[About the Rare Plant Program](#)  
[CNPS Home Page](#)  
[About CNPS](#)  
[Join CNPS](#)

#### Contributors

[The Calflora Database](#)  
[The California Lichen Society](#)  
[California Natural Diversity Database](#)  
[The Jepson Flora Project](#)  
[The Consortium of California Herbaria](#)  
[CalPhotos](#)

#### Questions and Comments

[rareplants@cnps.org](mailto:rareplants@cnps.org)

## ATTACHMENT E – Plant Species Observed

List of Plant Species Observed on the Vineyard property and Their Status as Wetland Indicator Species

Scientific Name	Common Name	Wetland Indicator Status*
<i>Aegilops triuncialis</i>	Goat grass	
<i>Aesculus californica</i>	California buckeye	
<i>Aira caryophylla</i>	Silver hair grass	FACU
<i>Aristolochia californica</i>	Pipevine	
<i>Avena barbata</i>	Wild oat	
<i>Baccharis pilularis</i>	Coyote Bush	
<i>Briza minor</i>	Little quaking grass	FAC
<i>Bromus diandrus</i>	ripgut brome	
<i>Bromus hordeaceus</i>	soft chess	FACU
<i>Carduus pycnocephalus</i>	Italian thistle	
<i>Carex praegracilis</i>	Creeping field segde	FACW
<i>Centaurea solstitialis</i>	yellow star-thistle	
<i>Chlorogalum pomeridianum</i>	soaproot	
<i>Chondrilla juncea</i>	Skeleton weed	
<i>Croton setigera</i>	Dove weed	
<i>Cynosurus echinatus</i>	hedgehog dogtail-grass	
<i>Cyperus eragrostis</i>	Tall flatsedge	FACW
<i>Dichelostemma laxa</i>	Blue Dicks	
<i>Echinochloa crus-galli</i>	Barn grass	FACW
<i>Eleocharis palustris</i>	Spikerush	OBL
<i>Elymus glaucus</i>	Blue Wild rye	FACU
<i>Epilobium ciliatum</i>	Fringed Willowherb	FACW
<i>Erodium botrys</i>	long-beaked filaree	FACU
<i>Erodium cicutarium</i>	red-stemmed filaree	
<i>Galium aparine</i>	Sticky-willy	FACU
<i>Geranium dissectum</i>	cut-leaved geranium	
<i>Holcus lanatus</i>	common velvetgrass	FAC
<i>Hordeum marinum</i>	Seaside barley	FAC
<i>Hordeum murinum</i>	Wall barley	FACU
<i>Hypericum perforatum</i>	Klamath weed	FACU
<i>Holocarpha virgata</i>	Tarweed	
<i>Juncus xiphiodes</i>	Iris-leaf rush	OBL
<i>Juncus bufonius</i>	Toad Rush	FACW
<i>Juglans hindsii</i>	California black walnut	
<i>Lactuca serriola</i>	prickly lettuce	FACU
<i>Leersia oryzoides</i>	Rice cut grass	OBL
<i>Lolium perenne</i>	English rye-grass	FAC
<i>Mimulus guttatus</i>	Yellow Monkey flower	OBL

Scientific Name	Common Name	Wetland Indicator Status*
<i>Paspalum dilatatum</i>	Dallis grass	FAC
<i>Persicaria hydropiperoides</i>	False Water-pepper	OBL
<i>Polypogon monspeliensis</i>	Annual rabbit's-foot grass	FACW
<i>Populus deltoides</i>	Fremont (Eastern) cottonwood	FAC
<i>Quercus douglasii</i>	blue oak	
<i>Quercus wislizenii</i>	interior live oak	
<i>Rubus armeniaca</i>	Himalaya berry	FACU
<i>Rumex crispus</i>	Curly Dock	FAC
<i>Rumex pulcher</i>	fiddle dock	FAC
<i>Salix babylonica</i>	Weeping willow	FACW
<i>Salix exigua</i>	Narrow-leaf Willow	FACW
<i>Salix gooddingii</i>	Gooddings Valley Willow	FACW
<i>Salix laevigata</i>	Smooth willow	
<i>Sambucus nigra</i>	Black Elderberry	FAC
<i>Silybum marianum</i>	milk thistle	
<i>Taeniatherum caput-medusae</i>	Medusa-head	
<i>Toxicodendron diversilobum</i>	poison oak	
<i>Trifolium hirtum</i>	rose clover	
<i>Typha latifolia</i>	Broad-leaf Cat-tail	OBL
<i>Vicia sativa</i>	vetch	FACU
<i>Vitis californica</i>	California wild grape	FACU
<i>Vulpia myuros</i>	rattail fescue	FACU

\*Wetland Indicator Status Codes (Lichvar 2012)

Code	Wetland Indicator Status	Comment
(Blank)	Upland	Plants not listed in the FWS wetland plant list are assumed to be upland species.
OBL	Obligate Wetland	Occurs almost always (estimated probability 99%) under natural conditions in wetlands.
FACW	Facultative Wetland	Usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.

FAC	Facultative	Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
FACU	Facultative Upland	Usually occurs in non-wetlands (estimated probability 67%-99%), but occasionally found on wetlands (estimated probability 1%-33%).
UPL	Obligate Upland	Occurs in wetlands in another region, but occurs almost always (estimated probability 99%) under natural conditions in non-wetlands in the regions specified. If a species does not occur in wetlands in any region, it is not on the National List.

## ATTACHMENT F – Sierra Nevada Arborist 2006 Report

**DIAMONTE DEVELOPMENT, LLC**

**MALCOLM-DIXON 113 PROJECT SITE**  
**[Assessor's Parcel No. 067-051-014]**  
**County of El Dorado, California**

***INITIAL* ARBORIST REPORT  
AND INVENTORY SUMMARY**

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PLANNING DEPARTMENT

Prepared by:

Edwin E. Stirtz, Consulting Arborist  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists  
SIERRA NEVADA ARBORISTS

Wayne R. McKee, Consulting Arborist  
ISA Certified Arborist WE-0959A

May 23, 2006

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**COPYRIGHT STATEMENT**

This consultant's report, dated May 23, 2006, is for the exclusive and confidential use of Diamonte Development, LLC concerning development of the Malcolm-Dixon 113 property [Assessor's Parcel No. 067-051-014] located in the County of El Dorado, California exclusively. Any use of this report, the accompanying Inventory Summary, or portions thereof other than for project review and approval by appropriate governmental authorities shall be subject to and require the written permission of Sierra Nevada Arborists. Unauthorized modification, distribution and/or use of this report, including the accompanying Inventory Summary or portions thereof, is strictly prohibited.

## QUALIFICATION STATEMENT

Sierra Nevada Arborists is a fully insured, Loomis-based arboriculture consulting firm founded in January of 1998 by its Principal, Edwin E. Stirtz. Mr. Stirtz is an ISA Certified Arborist, and a member of the American Society of Consulting Arborists and International Society of Arboriculture. Mr. Stirtz possess in excess of 25 years experience in horticulture and arboriculture, both maintenance and construction, and has spent the last 14 years as a consulting and preservation specialist in the Sacramento region.

Wayne R. McKee is a consulting arborist with 15 years experience in forestry, surveying and arboriculture. Mr. McKee received a B.S. degree in Forestry from Humbolt State University and worked as a Forestry and Surveying Technician for Hunt Surveying and Forestry prior to becoming an ISA Certified Arborist in 1992. Since that time Mr. McKee has been providing consulting arboriculture services in the Sacramento region.

May 23, 2006

Mr. Daniel Chartraw/Mr. Chris LaBarbera  
DIAMONTE DEVELOPMENT, LLC  
18700 Cox Avenue  
Saratoga, California 95070

Re: ***Initial Arborist Report and Inventory Summary:  
Malcolm-Dixon 113 Project Site – County of El Dorado, California***

Dear Mr. Chartraw and Mr. LaBarbera:

During the period May 15-19, 2006, Sierra Nevada Arborists visited the Malcolm-Dixon 113 project site [Assessor's Parcel No. 067-051-014] located in the County of El Dorado, California. The purpose of these site visits was to conduct field inspections to identify, inventory and evaluate the trees located within and overhanging the project boundaries (*excluding the westerly 2/3 of Lot 13, the westerly 1/3 of Lot 16 and the westerly 1/3 of Lot 17*) which met the criteria of the Conservation and Open Space Element of the newly adopted El Dorado County General Plan dated July 19, 2004, a copy of which is enclosed for reference. As you may know, General Plan Policy Objective 7.4.5: Native Vegetation and Landmark Trees includes Policy Subsections 7.4.5.2(A)&(B) which requires an inventory and field identification of any "native oak tree with a single main trunk of at least 6 inches diameter at breast height ("DBH"), or a multiple trunk with an aggregate of at least 10 inches DBH." In conjunction with this task, Sierra Nevada Arborists was asked to prepare an Initial Arborist Report and Inventory Summary suitable for submission to the County of El Dorado as a part of Diamonte Development's development application for the proposed project site.

### **METHODOLOGY**

#### **Visual Inspection Method**

During the period May 15-19, 2006, Sierra Nevada Arborists conducted a visual review from ground level of the trees within and/or overhanging the depicted project boundaries (*excluding the westerly 2/3 of Lot 13, the westerly 1/3 of Lot 16 and the westerly 1/3 of Lot 17*) as referenced on the enclosed Tentative Subdivision Map dated November 30, 2005, which was provided to our office by G.C. Wallace of California for field reference. The trees which met the defined criteria were identified in the field with a round, pre-stamped metal numbering tag backed by blue flagging bearing tag numbers 1-362 which was affixed to the tree's trunk. The numbers utilized in this report and accompanying Inventory Summary correspond to the tree tag which has been affixed to the tree in the field, and those numbers have been rough-plotted on the enclosed copy of the Tentative Subdivision Map for field reference so that the precise location of the trees may be surveyed in the field by a licensed land surveyor for proper depiction on future development plans.

Mr. Daniel Chartraw/Mr. Chris LaBarbera  
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 County of El Dorado, California  
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During our field identification and inventory effort specific data was gathered for each tagged tree including the tree's species, diameter measured at breast height ("DBH"), the tree's dripline radius ("DLR"), and an assessment was made of the tree's root crown, trunk, limbs and foliage. Utilizing this data, the tree's overall structural condition and vigor were assessed ranging from "poor" to "good".<sup>1</sup> In addition, notable characteristics were documented and pre-construction recommendations on a tree-by-tree basis were made which logically followed the observed characteristics noted within the trees at the time of our site visits.

**INVENTORY SUMMARY**

As you will see from the accompanying Inventory Summary, 362 trees totaling 8,029 aggregate diameter inches have been documented within this Initial Report and accompanying Inventory Summary. Composition of the 362 inventoried trees include the following species and accompanying aggregate diameter inches:

SPECIES DIVERSIFICATION			
Interior Live Oak	=	19 trees	(492 aggregate diameter inches)
Blue Oak	=	343 trees	(7,537 aggregate diameter inches)

**Recommended Removals**

At this time 20 trees have been recommended for removal from the project area due to defects, compromised health and/or structural instability noted at the time of our initial site visits. For reference, the trees which have been recommended for removal due to noted defects, compromised health and/or structural instability are highlighted in green within the accompanying Inventory Summary and are identified in the field as follows:

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)
37	Blue Oak	<i>(Quercus douglasii)</i>		6	7
46	Blue Oak	<i>(Quercus douglasii)</i>		28	30
49	Blue Oak	<i>(Quercus douglasii)</i>		23	24
80	Blue Oak	<i>(Quercus douglasii)</i>		29	30
92	Blue Oak	<i>(Quercus douglasii)</i>		24	28
106	Blue Oak	<i>(Quercus douglasii)</i>	9, 10	19	15
112	Blue Oak	<i>(Quercus douglasii)</i>		9	18
118	Interior Live Oak	<i>(Quercus wislizenii)</i>		27	30
119	Interior Live Oak	<i>(Quercus wislizenii)</i>		34	33
121	Interior Live Oak	<i>(Quercus wislizenii)</i>		23	31

<sup>1</sup> It should be noted that there were no trees observed within the project boundaries which fell within the criteria of a "good" rating. A complete description of the terms and ratings utilized in this Report and accompanying Inventory Summary are found on pages 20-21. 19-1524 G 271 of 314

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123	Blue Oak	<i>(Quercus douglasii)</i>		17	20
138	Blue Oak	<i>(Quercus douglasii)</i>		26	31
163	Blue Oak	<i>(Quercus douglasii)</i>		16	24
185	Blue Oak	<i>(Quercus douglasii)</i>		18	23
198	Blue Oak	<i>(Quercus douglasii)</i>		15	16
231	Blue Oak	<i>(Quercus douglasii)</i>		41	29
252	Blue Oak	<i>(Quercus douglasii)</i>		29	29
253	Blue Oak	<i>(Quercus douglasii)</i>		25	27
264	Blue Oak	<i>(Quercus douglasii)</i>		35	48
300	Interior Live Oak	<i>(Quercus wislizenii)</i>		8	9

In addition, many trees within the proposed project boundaries currently exhibit characteristics which either warrant further evaluation (i.e. root collar excavation and analysis, trunk cavity inspection and analysis, aerial inspection and/or evaluation for installation of cable systems and/or through bolts to help support weak primary crotches) and/or a recommendation for periodic monitoring to assess the trees' ongoing structural integrity as further identified within the accompanying Inventory Summary. In addition, several trees within the proposed project area may create a hazard depending upon their proximity to planned development. For ease of reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this time we have not recommended the removal of these trees since development plans have not yet been finalized. It is strongly recommended, however, that further analysis and/or evaluation of these trees be performed by an ISA Certified Arborist prior to making final development decisions, especially if these trees are planned for retention and development, residential and/or pedestrian activities will occur within their fall zone. At this time we recommend that these trees be periodically monitored and thoroughly inspected by an ISA Certified Arborist to keep abreast of the trees' changing conditions and to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

**Construction Impact Assessment**

Please note that while this is a detailed, pre-construction review of the trees within the proposed project boundaries specific canopy and root system impacts cannot be definitively determined until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time; therefore, a complete assessment of construction impacts and specific recommendations to help mitigate for the adverse impacts which may be sustained by contemplated construction activities cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated site development activities. This will be particularly important if homes, residential and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "Fair". The review should also include an assessment of impacts which will be sustained by

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those trees which will be retained within the project boundaries, along with recommendations to help reduce adverse impacts of construction on the retained trees, where possible, to a less than significant level. In the meantime, this report provides pre-construction recommendations which logically follow the observed characteristics noted in the trees at the time of our initial field inventory effort, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be retained within the development area.

### **GENERAL COMMENTS AND ARBORIST'S DISCLAIMER**

As you know, a tree permit and/or authorization to develop should be obtained from the County of El Dorado approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the retained trees on the site. Sierra Nevada Arborists will not provide written Certification of Compliance unless we have been provided with a copy of the *approved* site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada Arborists well in advance (at least 72-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, we believe implementation of the general preservation recommendations provided within this report will attempt to reduce adverse impacts of construction on the retained trees, where possible, to a less than significant level. However, implementation of these recommendations should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and *attempt to reduce the risk of living near trees*. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms conditions are often hidden within the tree and below ground and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. *An entity who develops land and/or builds homes and homeowner(s) who purchase a home with a tree in the vicinity should be aware and advised of this Arborists' Disclaimer and be further advised that the developer and the future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or*

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**property damage.** Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a seemingly healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,



Edwin E. Stirtz  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists

EES:ks

Enclosures

cc: Ms. Andrea Mayer, G.C. Wallace of California (w/enclosure)

DIAMONTE DEVELOPMENT, LLC  
Malcom-Dixon 113 Project Site  
County of El Dorado, California  
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (Inches)	TOTAL DBH (Inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED REMOVALS (feet)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1	Interior Live Oak	<i>(Quercus wislizeni)</i>		23	29	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations, with minor decay; slightly above average amount of deadwood; additional callusing wounds in upper canopy; no obvious decay at this time	Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection
2	Blue Oak	<i>(Quercus douglasii)</i>		26	41	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
3	Blue Oak	<i>(Quercus douglasii)</i>		35	38	Poor to fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Suspicious deformities around root collar in various locations; leans west, above average amount of deadwood; girdling chain on 9-inch scaffold, west side	Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection
4	Blue Oak	<i>(Quercus douglasii)</i>		25	30	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Root crown partially buried on east side from fill for adjacent dam; exfoliating bark on lower trunk, various locations; possible vascular disease; leans west; above average amount of deadwood	Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection
5	Blue Oak	<i>(Quercus douglasii)</i>		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
6	Blue Oak	<i>(Quercus douglasii)</i>		31	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
7	Blue Oak	<i>(Quercus douglasii)</i>		32	40	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
8	Blue Oak	<i>(Quercus douglasii)</i>		27	34	Poor	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wound, east side, to 1' above grade; minor decay; one-sided west; above average amount of deadwood	Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation
9	Blue Oak	<i>(Quercus douglasii)</i>		24	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
10	Blue Oak	<i>(Quercus douglasii)</i>		22	28	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
11	Blue Oak	<i>(Quercus douglasii)</i>		20	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
12	Blue Oak	<i>(Quercus douglasii)</i>		27	31	Fair	Fair	Fair	Fair	Fair	Fair		One-sided southeast; slightly above average amount of deadwood	Clean out crown
13	Blue Oak	<i>(Quercus douglasii)</i>		29	30	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Several failures and excessive amount of deadwood throughout upper canopy; one-sided west	Perform aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following aerial inspection
14	Blue Oak	<i>(Quercus douglasii)</i>		27	31	Fair	Fair	Fair	Fair	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
15	Blue Oak	<i>(Quercus douglasii)</i>		23	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
16	Blue Oak	<i>(Quercus douglasii)</i>		20	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
17	Blue Oak	<i>(Quercus douglasii)</i>		19	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
18	Blue Oak	<i>(Quercus douglasii)</i>		18	27	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		At least two failures with remaining stubs and some nesting cavities in larger limbs; above average amount of deadwood	Clean out crown
19	Blue Oak	<i>(Quercus douglasii)</i>		21	29	Fair	Fair	Fair	Fair	Fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
20	Blue Oak	<i>(Quercus douglasii)</i>		23	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
21	Blue Oak	<i>(Quercus douglasii)</i>		26	31	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
22	Blue Oak	<i>(Quercus douglasii)</i>		26	37	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
23	Blue Oak	<i>(Quercus douglasii)</i>		18	24	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
24	Blue Oak	<i>(Quercus douglasii)</i>		18	18	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
25	Blue Oak	<i>(Quercus douglasii)</i>		12	13	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
26	Blue Oak	<i>(Quercus douglasii)</i>		35	36	Fair	Fair	Poor to fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
27	Interior Live Oak	<i>(Quercus wislizenii)</i>		27	39	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
28	Interior Live Oak	<i>(Quercus wislizenii)</i>	12, 16	28	27	Fair	Fair	Fair	Fair	Fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
29	Interior Live Oak	<i>(Quercus wislizenii)</i>		16	40	Poor	Poor	Poor to fair	Fair	Poor	Fair		Callusing basal/lower trunk wound/cavity, south side, where secondary main stem failed toward south, remaining stem is one-sided north; above average amount of deadwood	None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT

DIAMONTE DEVELOPMENT, LLC  
Malcom-Dixon 113 Project Site  
County of El Dorado, California  
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ADDITIONAL RECOMMENDED REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
30	Interior Live Oak	( <i>Quercus wislizenii</i> )		14	26	Fair	Fair	Fair	Fair	Fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
31	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
32	Blue Oak	( <i>Quercus douglasii</i> )		14	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
33	Interior Live Oak	( <i>Quercus wislizenii</i> )	21, 23	44	32	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds with minor defects, various locations; fungal fruiting body present just below primary crotch, northeast side; slightly above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
34	Blue Oak	( <i>Quercus douglasii</i> )		12	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
35	Blue Oak	( <i>Quercus douglasii</i> )		19	36	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
36	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
37	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Poor	Poor	Poor	Poor	Poor	6	Tree is 90% dead	Recommend removal due to noted defects
38	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Fair	Fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
39	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
40	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
41	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
42	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Fair	Fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
43	Blue Oak	( <i>Quercus douglasii</i> )		27	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
44	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
45	Blue Oak	( <i>Quercus douglasii</i> )		31	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
46	Blue Oak	( <i>Quercus douglasii</i> )		28	30	Poor	Poor	Poor	Fair	Poor	Fair	28	Callusing basal/lower trunk wound, west side, to 2' above grade; minor to moderate interior decay suspected; approximately one-half of tree failed at old primary crotch 9' above grade with remaining portion of stem being compromised; one-sided east	Recommend removal due to noted defects
47	Blue Oak	( <i>Quercus douglasii</i> )		25	28	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
48	Blue Oak	( <i>Quercus douglasii</i> )		30	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
49	Blue Oak	( <i>Quercus douglasii</i> )		23	24	Fair	Poor	Poor to fair	Fair	Poor	Fair	23	Callusing lower trunk cavity, west side, 1' to 3' above grade; moderate interior decay; additional callusing cavity through primary crotch with moderate decay; above average amount of deadwood	Recommend removal due to noted defects
50	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, south side; minor interior decay suspected; slightly above average amount of deadwood	Clean out crown
51	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Failure of large lateral, northwest side, 13' above grade; no obvious decay at this time	Perform aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following aerial inspection
52	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
53	Blue Oak	( <i>Quercus douglasii</i> )		27	39	Fair	Fair	Fair	Fair	Fair	Fair		Two or three nesting cavities in upper scaffolds; slightly above average amount of deadwood	Clean out crown
54	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
55	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
56	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
57	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
58	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing/callused lower trunk wounds, east side; possible interior decay; leans west; above average amount of deadwood	None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT
59	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
60	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Excessive amount of deadwood; slightly sparse foliage	Clean out crown
61	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
62	Blue Oak	( <i>Quercus douglasii</i> )		26	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
63	Blue Oak	( <i>Quercus douglasii</i> )		25	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

DIAMONTE DEVELOPMENT, LLC  
Malcom-Dixon 113 Project Site  
County of El Dorado, California  
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						AGROBOTY-RECOMMENDED REMOVALS (0=none)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
64	Blue Oak	(Quercus douglasii)		23	30	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
65	Blue Oak	(Quercus douglasii)		20	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; slightly above average amount of deadwood	Clean out crown
66	Blue Oak	(Quercus douglasii)		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
67	Blue Oak	(Quercus douglasii)		26	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
68	Blue Oak	(Quercus douglasii)		28	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
69	Blue Oak	(Quercus douglasii)		15	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
70	Blue Oak	(Quercus douglasii)		21	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
71	Blue Oak	(Quercus douglasii)		20	30	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
72	Blue Oak	(Quercus douglasii)		24	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; slightly above average amount of deadwood	Clean out crown
73	Blue Oak	(Quercus douglasii)		24	34	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
74	Blue Oak	(Quercus douglasii)		26	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
75	Blue Oak	(Quercus douglasii)		19	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
76	Blue Oak	(Quercus douglasii)		14	20	Fair	Fair	Fair	Fair	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
77	Blue Oak	(Quercus douglasii)		18	27	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
78	Blue Oak	(Quercus douglasii)		27	31	Fair	Poor	Poor to fair	Fair	Poor	Fair		Callusing split through primary crotch beginning 8' above grade with obvious callus roll down to 3' above grade; above average amount of deadwood	Clean out crown; install through bolts and cable system to help support primary crotch
79	Blue Oak	(Quercus douglasii)		18	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
80	Blue Oak	(Quercus douglasii)		29	30	Poor	Poor	Poor	Fair	Poor	Fair	29	Callusing basal/lower trunk wounds/cavities to 12' above grade with significant decay, south side; above average amount of deadwood; one-sided north	Recommend removal due to noted defects
81	Blue Oak	(Quercus douglasii)		22	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
82	Blue Oak	(Quercus douglasii)		22	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
83	Blue Oak	(Quercus douglasii)		28	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
84	Blue Oak	(Quercus douglasii)		28	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
85	Blue Oak	(Quercus douglasii)		21	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
86	Blue Oak	(Quercus douglasii)		29	40	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
87	Blue Oak	(Quercus douglasii)		27	32	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Several failures in upper canopy; slightly above average amount of deadwood; slightly sparse foliage	Clean out crown
88	Blue Oak	(Quercus douglasii)		29	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
89	Blue Oak	(Quercus douglasii)		19	24	Fair	Fair	Fair	Fair	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
90	Blue Oak	(Quercus douglasii)		22	29	Fair	Fair	Fair	Fair	Fair	Fair		Embedded wire in lower trunk; slightly above average amount of deadwood	Cut wire at trunk; clean out crown
91	Blue Oak	(Quercus douglasii)		20	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
92	Blue Oak	(Quercus douglasii)		24	28	Poor	Poor	Poor	Fair	Poor	Fair	24	Callusing basal/lower trunk wound/cavity to 4' above grade with significant decay; severe sap sucker damage and exfoliating bark on lower trunk; above average amount of deadwood; profuse sprout growth on large wood	Recommend removal due to noted defects
93	Blue Oak	(Quercus douglasii)		22	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
94	Blue Oak	(Quercus douglasii)		18	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
95	Blue Oak	(Quercus douglasii)		33	40	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suspicious bark deformation and exfoliation in various areas on lower trunk; sounding indicates potential hollowing; several defects in upper scaffolds	Perform trunk cavity and aerial inspections to further assess structural stability and potential hazard; provide further recommendations following trunk cavity and aerial inspections
96	Blue Oak	(Quercus douglasii)		20	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
97	Blue Oak	(Quercus douglasii)		20	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
98	Blue Oak	(Quercus douglasii)		19	32	Fair	Fair	Fair	Fair	Fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
99	Blue Oak	(Quercus douglasii)		13	18	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
100	Blue Oak	(Quercus douglasii)		12	19	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
101	Blue Oak	(Quercus douglasii)		20	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
102	Blue Oak	(Quercus douglasii)		23	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
103	Blue Oak	(Quercus douglasii)		19	26	Fair	Fair	Fair	Fair	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown

DIAMONTE DEVELOPMENT, LLC  
Malcom-Dixon 113 Project Site  
County of El Dorado, California  
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ABSCISSY-RECOMMENDED REMOVALS (feet)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
104	Blue Oak	<i>(Quercus douglasii)</i>		21	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
105	Blue Oak	<i>(Quercus douglasii)</i>		15	22	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
106	Blue Oak	<i>(Quercus douglasii)</i>	9, 10	19	15	Poor	Poor	Poor to fair	Fair	Poor	Fair	19	Callusing basal/lower trunk cavities, south side; moderate decay; above average amount of deadwood	Recommend removal due to noted defects
107	Blue Oak	<i>(Quercus douglasii)</i>		26	32	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
108	Blue Oak	<i>(Quercus douglasii)</i>		9	11	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
109	Blue Oak	<i>(Quercus douglasii)</i>		19	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
110	Blue Oak	<i>(Quercus douglasii)</i>		6	7	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
111	Blue Oak	<i>(Quercus douglasii)</i>		9	17	Fair	Fair	Fair	Fair	Fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
112	Blue Oak	<i>(Quercus douglasii)</i>		9	18	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair	9	Callusing basal/lower trunk cavity to 1' above grade, south side; moderate decay; leans south; above average amount of deadwood	Recommend removal due to noted defects
113	Blue Oak	<i>(Quercus douglasii)</i>		23	35	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
114	Blue Oak	<i>(Quercus douglasii)</i>		26	30	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing/callused basal/lower trunk wounds, primary on the north side; possible interior decay suspected, slightly above average amount of deadwood	Perform trunk cavity inspection to further assess structural stability and potential for hazard; provide further recommendations following trunk cavity inspection
115	Blue Oak	<i>(Quercus douglasii)</i>		28	38	Fair	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Two to three failures of large scaffolds in upper canopy; excessive amount of small deadwood throughout upper canopy; slightly sparse foliage; some minor sprout growth on larger wood; minor mistletoe infestation	Clean out crown; recommend annual inspection by an ISA Certified Arborist
116	Blue Oak	<i>(Quercus douglasii)</i>		39	42	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
117	Interior Live Oak	<i>(Quercus wislizenii)</i>	4, 6	10	8	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
118	Interior Live Oak	<i>(Quercus wislizenii)</i>		27	30	Poor	Poor	Poor to fair	Fair	Poor	Fair	27	Callusing basal/lower trunk cavity to 8' above grade with significant decay; in excessive of 35% of trunk is absent on north side	Recommend removal due to noted defects
119	Interior Live Oak	<i>(Quercus wislizenii)</i>		34	33	Poor	Poor	Poor	Poor	Poor	Poor	34	Basal/lower trunk cavity to 6' above grade, southeast side, with significant decay; leans north; excessive amount of large deadwood; significant twig dieback; sparse foliage	Recommend removal due to noted defects
120	Blue Oak	<i>(Quercus douglasii)</i>		23	29	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; minor interior decay suspected, leans southwest, above average amount of deadwood	Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation
121	Interior Live Oak	<i>(Quercus wislizenii)</i>		23	31	Poor	Poor	Poor	Fair	Poor	Fair	23	Callusing basal/lower trunk wounds with moderate decay, various locations; several large failures of scaffolds throughout upper canopy; above average amount of deadwood; slightly sparse foliage	Recommend removal due to noted defects
122	Blue Oak	<i>(Quercus douglasii)</i>		27	33	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
123	Blue Oak	<i>(Quercus douglasii)</i>		17	20	Poor	Poor	Poor to fair	Fair	Poor	Fair	17	Callusing basal/lower trunk wound; southwest side, to 10' above grade with significant decay; one-sided northeast	Recommend removal due to noted defects
124	Blue Oak	<i>(Quercus douglasii)</i>		20	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
125	Blue Oak	<i>(Quercus douglasii)</i>		24	35	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
126	Blue Oak	<i>(Quercus douglasii)</i>		23	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
127	Interior Live Oak	<i>(Quercus wislizenii)</i>	19, 23	42	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
128	Interior Live Oak	<i>(Quercus wislizenii)</i>	8, 11, 12	31	32	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
129	Blue Oak	<i>(Quercus douglasii)</i>		12	16	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
130	Interior Live Oak	<i>(Quercus wislizenii)</i>	12, 13	25	24	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
131	Interior Live Oak	<i>(Quercus wislizenii)</i>	10, 12, 21	43	32	Fair	Fair	Fair	Fair	Fair	Fair		Forks slightly above grade; above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ABNORMAL-RECOMMENDED REMOVALS (Inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
132	Blue Oak	<i>(Quercus douglasii)</i>		27	35	Fair	Fair	Fair	Fair	Fair	Fair		TREE IS LOCATED APPROXIMATELY 14' OF THE NORTH PROPERTY LINE; slightly above average amount of deadwood	Clean out crown
133	Blue Oak	<i>(Quercus douglasii)</i>		26	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
134	Blue Oak	<i>(Quercus douglasii)</i>		23	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
135	Blue Oak	<i>(Quercus douglasii)</i>		19	22	Fair	Fair	Poor to fair	Fair	Fair	Fair		Moderate mistletoe infestation; above average amount of deadwood	Clean out crown
136	Blue Oak	<i>(Quercus douglasii)</i>		24	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
137	Blue Oak	<i>(Quercus douglasii)</i>		24	29	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
138	Blue Oak	<i>(Quercus douglasii)</i>		26	31	Poor	Poor	Poor to fair	Fair	Poor	Fair	26	Callusing basal cavity, north side; moderate interior decay; callusing trunk wound/cavity, northeast side, through center of primary crotch from 6' to 12' above grade with significant interior decay; large laterals on either side of split	Recommend removal due to noted defects
139	Blue Oak	<i>(Quercus douglasii)</i>		26	35	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
140	Blue Oak	<i>(Quercus douglasii)</i>		18	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callused bulge, south side, 3' above grade where it appears that a secondary stem died/failed some time in the past; leans north; above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
141	Blue Oak	<i>(Quercus douglasii)</i>		17	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
142	Blue Oak	<i>(Quercus douglasii)</i>		22	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
143	Blue Oak	<i>(Quercus douglasii)</i>		21	28	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
144	Blue Oak	<i>(Quercus douglasii)</i>		14	22	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
145	Blue Oak	<i>(Quercus douglasii)</i>		17	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
146	Blue Oak	<i>(Quercus douglasii)</i>		15	26	Fair	Fair	Poor to fair	Fair	Poor to fair	Poor to fair		Sparse foliage; above average amount of deadwood	Clean out crown
147	Blue Oak	<i>(Quercus douglasii)</i>		13	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
148	Blue Oak	<i>(Quercus douglasii)</i>		14	27	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Leans northwest; above average amount of deadwood; slightly sparse foliage	Clean out crown
149	Blue Oak	<i>(Quercus douglasii)</i>		11	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
150	Blue Oak	<i>(Quercus douglasii)</i>		22	30	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
151	Blue Oak	<i>(Quercus douglasii)</i>		24	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
152	Blue Oak	<i>(Quercus douglasii)</i>		15	19	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
153	Blue Oak	<i>(Quercus douglasii)</i>		15	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
154	Blue Oak	<i>(Quercus douglasii)</i>		15	21	Fair	Fair	Fair	Fair	Fair	Fair		Callused bulge, north side, to 18-inches above grade at point of previous limb failure/die back; slightly above average amount of deadwood	Clean out crown
155	Blue Oak	<i>(Quercus douglasii)</i>		32	43	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk gun shot wounds, various locations, some minor decay, several large dead/failed limbs in upper canopy; some smaller deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
156	Blue Oak	<i>(Quercus douglasii)</i>		16	17	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
157	Blue Oak	<i>(Quercus douglasii)</i>		19	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
158	Blue Oak	<i>(Quercus douglasii)</i>		21	29	Fair	Fair	Fair	Fair	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
159	Blue Oak	<i>(Quercus douglasii)</i>		32	36	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
160	Blue Oak	<i>(Quercus douglasii)</i>		18	21	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
161	Blue Oak	<i>(Quercus douglasii)</i>		17	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
162	Blue Oak	<i>(Quercus douglasii)</i>		19	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
163	Blue Oak	<i>(Quercus douglasii)</i>		16	24	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	16	Leans north; moderate to significant callusing wounds on upper trunk and scaffold limbs with nesting cavities	Recommend removal due to noted defects
164	Blue Oak	<i>(Quercus douglasii)</i>		9	15	Fair	Fair	Fair	Fair	Fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
165	Blue Oak	<i>(Quercus douglasii)</i>		16	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
166	Blue Oak	<i>(Quercus douglasii)</i>		10	12	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
167	Blue Oak	<i>(Quercus douglasii)</i>		12	19	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
168	Blue Oak	<i>(Quercus douglasii)</i>		19	23	Fair	Fair	Fair	Fair	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
169	Blue Oak	<i>(Quercus douglasii)</i>		13	24	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (Inches)	TOTAL DBH (Inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ABSTRACT-RECOMMENDED REMOVALS (Inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
170	Blue Oak	(Quercus douglasii)		11	23	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided north; above average amount of deadwood	Clean out crown
171	Blue Oak	(Quercus douglasii)		13	25	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided northwest; above average amount of deadwood	Clean out crown
172	Blue Oak	(Quercus douglasii)		28	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
173	Blue Oak	(Quercus douglasii)		10	14	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided southwest; above average amount of deadwood	Clean out crown
174	Blue Oak	(Quercus douglasii)		16	29	Fair	Fair	Fair	Fair	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
175	Blue Oak	(Quercus douglasii)		8	7	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
176	Blue Oak	(Quercus douglasii)		10	14	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
177	Blue Oak	(Quercus douglasii)		14	26	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
178	Blue Oak	(Quercus douglasii)		25	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
179	Blue Oak	(Quercus douglasii)		13	21	Fair	Fair	Fair	Fair	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
180	Blue Oak	(Quercus douglasii)		16	21	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
181	Blue Oak	(Quercus douglasii)		17	22	Fair	Fair	Fair	Fair	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
182	Blue Oak	(Quercus douglasii)		17	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
183	Blue Oak	(Quercus douglasii)		19	30	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
184	Blue Oak	(Quercus douglasii)		22	41	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans east; callusing bullet wounds to lower trunk, north side; minor decay; slightly above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
185	Blue Oak	(Quercus douglasii)		18	23	Fair	Poor	Poor	Fair	Poor	Fair	18	Callusing trunk wound, north side, where approximately 1/3 of upper canopy failed compromising 1/3 of lower trunk; leans south	Recommend removal due to noted defects
186	Blue Oak	(Quercus douglasii)		22	32	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
187	Blue Oak	(Quercus douglasii)		16	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
188	Blue Oak	(Quercus douglasii)		12	21	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
189	Blue Oak	(Quercus douglasii)		16	25	Fair	Fair	Poor to fair	Fair	Fair	Fair		Minor to moderate mistletoe infestation; above average amount of deadwood	Clean out crown
190	Blue Oak	(Quercus douglasii)		20	26	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
191	Blue Oak	(Quercus douglasii)		9	8	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
192	Blue Oak	(Quercus douglasii)		12	10	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
193	Blue Oak	(Quercus douglasii)		14	13	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
194	Blue Oak	(Quercus douglasii)		22	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
195	Blue Oak	(Quercus douglasii)		11	16	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
196	Blue Oak	(Quercus douglasii)		16	17	Fair	Fair	Fair	Fair	Fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
197	Blue Oak	(Quercus douglasii)		14	24	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
198	Blue Oak	(Quercus douglasii)		15	16	Fair	Poor	Poor to fair	Fair	Poor	Fair	15	Callusing trunk wound/cavity 5' to 8' above grade with significant interior decay; one-sided northwest; above average amount of deadwood	Recommend removal due to noted defects
199	Blue Oak	(Quercus douglasii)		22	24	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
200	Blue Oak	(Quercus douglasii)		26	31	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
201	Blue Oak	(Quercus douglasii)		19	28	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
202	Blue Oak	(Quercus douglasii)		22	27	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
203	Blue Oak	(Quercus douglasii)		7	12	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
204	Blue Oak	(Quercus douglasii)		17	22	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
205	Blue Oak	(Quercus douglasii)		12	21	Fair	Fair	Fair	Fair	Fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
206	Blue Oak	(Quercus douglasii)		10	19	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
207	Blue Oak	(Quercus douglasii)		20	23	Fair	Fair	Poor to fair	Poor to fair	Fair	Poor to fair		Moderate sprout growth on large wood; moderate to significant mistletoe infestation; above average amount of deadwood	Clean out crown
208	Blue Oak	(Quercus douglasii)		16	21	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT					ARBORIST-RECOMMENDED REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE			
209	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Fair	Fair	Fair	Fair	Leans south; slightly above average amount of deadwood	Clean out crown
210	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
211	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Fair	Fair	Fair	Above average amount of deadwood	Clean out crown
212	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
213	Blue Oak	( <i>Quercus douglasii</i> )		15	18	Fair	Fair	Poor	Poor to fair	Fair	Poor to fair	Sparse foliage; above average amount of deadwood	Clean out crown
214	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
215	Blue Oak	( <i>Quercus douglasii</i> )		12	14	Fair	Fair	Fair	Fair	Fair	Fair	Leans west; slightly above average amount of deadwood	Clean out crown
216	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
217	Blue Oak	( <i>Quercus douglasii</i> )		17	30	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
218	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Poor to fair	Fair	Fair	Fair	Above average amount of deadwood	Clean out crown
219	Blue Oak	( <i>Quercus douglasii</i> )		23	31	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
220	Blue Oak	( <i>Quercus douglasii</i> )		19	33	Fair	Fair	Fair	Fair	Fair	Fair	Minor mistletoe infestation; slightly above average amount of deadwood	Clean out crown
221	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
222	Blue Oak	( <i>Quercus douglasii</i> )		19	19	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
223	Blue Oak	( <i>Quercus douglasii</i> )		20	23	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
224	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
225	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Poor to fair	Fair	Fair	Fair	Minor mistletoe infestation	Clean out crown
226	Blue Oak	( <i>Quercus douglasii</i> )		29	33	Fair	Fair	Fair	Fair	Fair	Fair	Some sprout growth on large wood; slightly above average amount of deadwood	Clean out crown
227	Blue Oak	( <i>Quercus douglasii</i> )		29	45	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
228	Blue Oak	( <i>Quercus douglasii</i> )		27	40	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
229	Blue Oak	( <i>Quercus douglasii</i> )		32	42	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
230	Blue Oak	( <i>Quercus douglasii</i> )		33	42	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
231	Blue Oak	( <i>Quercus douglasii</i> )		41	29	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair	41 Approximately one-half of the tree failed at 8' above grade in the past; entire center of trunk is hollow to 7' above grade; remaining portion of tree leans toward south	Recommend removal due to noted defects
232	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Fair	Fair	Fair	Leans southwest; slightly above average amount of deadwood	Clean out crown
233	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Fair	Fair	Fair	Leans west; slightly above average amount of deadwood	Clean out crown
234	Blue Oak	( <i>Quercus douglasii</i> )		25	29	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
235	Blue Oak	( <i>Quercus douglasii</i> )		28	34	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
236	Blue Oak	( <i>Quercus douglasii</i> )		23	32	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
237	Blue Oak	( <i>Quercus douglasii</i> )		27	39	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
238	Blue Oak	( <i>Quercus douglasii</i> )		31	46	Fair	Fair	Poor to fair	Fair	Fair	Fair	Two limb failures, north side – one leaving 4' stub and the other leaving a small callusing wound on northerly primary; no obvious decay at this time	Clean out crown; recommend annual inspection by an ISA Certified Arborist
239	Blue Oak	( <i>Quercus douglasii</i> )		30	32	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Inherently weak primary crotch with minor embedded bark; above average amount of deadwood	Clean out crown; recommend annual inspection by an ISA Certified Arborist
240	Blue Oak	( <i>Quercus douglasii</i> )		38	40	Fair	Fair	Poor to fair	Fair	Fair	Fair	Excessive amount of deadwood	Clean out crown
241	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Large callusing cavity, northwest primary, 7' to 10' above grade with interior hollowing likely extending into lower trunk; above average amount of deadwood	None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT
242	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	One-sided west; slightly above average amount of deadwood	Clean out crown
243	Blue Oak	( <i>Quercus douglasii</i> )		25	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Secondary stem and large scaffold failures, west side; leans north and east; above average amount of deadwood	None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT
244	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Fair	Fair	Fair	Leans east; slightly above average amount of deadwood	Clean out crown
245	Blue Oak	( <i>Quercus douglasii</i> )		31	35	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
246	Blue Oak	( <i>Quercus douglasii</i> )		23	40	Fair	Fair	Fair	Fair	Fair	Fair	Leans southeast; slightly above average amount of deadwood	Clean out crown
247	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
248	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown
249	Blue Oak	( <i>Quercus douglasii</i> )		26	35	Fair	Fair	Fair	Fair	Fair	Fair	Slightly above average amount of deadwood	Clean out crown

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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST-RECOMMENDED REMOVALS (check)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
360	Blue Oak	<i>(Quercus douglasii)</i>		39	45	Fair	Fair	Fair	Fair	Fair	Fair		DIAMETER AND DRIPLINE MEASUREMENTS ARE ESTIMATED. TREE INACCESSIBLE DUE TO YARD FENCE WITH DOGS; ASSESSMENTS ARE FOR PORTIONS OF TREE WHICH WERE VISIBLE FROM THE EAST SIDE INCLUDING 2/3 OF LOWER TRUNK AND UPPER CANOPY; large tree fort in canopy which may be obscuring potential cavities and/or other defects	If planned for retention, perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection
361	Blue Oak	<i>(Quercus douglasii)</i>		34	40	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans southwest; minor mistletoe infestation; slightly above average amount of deadwood	Clean out crown
362	Blue Oak	<i>(Quercus douglasii)</i>		22	25	Fair	Poor	Fair	Fair	Poor	Fair		Callusing lower trunk wound, southeast side, 1' to 2' above grade, no obvious decay at this time; callused trunk wound, northeast side, 3' above grade; some fluxing noted at point of old limb shed/removal; interior decay suspected; slightly above average amount of deadwood	<b><i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i></b>

TOTAL INVENTORIED TREES = 362 Trees (8,029 aggregate diameter inches)
TOTAL DEFECT REMOVALS = 20 Trees (452 diameter inches)
PRECAUTIONARY TREES HIGHLIGHTED FOR REFERENCE

## **GENERAL PRESERVATION RECOMMENDATIONS**

The following information is provided in an effort to protect those trees which may be impacted by construction within the project site. It should be noted that these recommendations are generic in nature. As plans are developed and refined, a more detailed evaluation of tree impacts and/or removals should be made by an ISA Certified Arborist. At that time specific preservation recommendations may be made for individual trees within the project site.

### **MITIGATIVE OVERVIEW**

In order to afford the greatest potential for tree preservation during construction, there are general guidelines to provide this protection. The critical root zone area for a tree should include the dripline radius measurement taken from the tree trunk to the tip of the farthest reaching branch plus one foot. In some circumstances, such as with a one-sided tree, this measurement could be somewhat skewed. In these situations, the Project Arborist should determine the critical root zone area. Generally, encroachments should be held to no more than 20% of the critical root zone area where potential root damage could be moderate or significant. In limited situations, encroachment exceeding 20% of the critical root zone area may be possible provided that potential root damage is not severe. The critical root zone area should be fenced prior to any activities on the site and should remain in place throughout construction.

Canopy impacts can also pose a detriment to preserved trees. Frequently overlooked are conflicts between low-hanging tree branches and necessary clearance beneath a tree for construction equipment or home building purposes. Canopy impacts should also be maintained at 20% or less.

### **PAD GRADING MITIGATIVE MEASURES**

#### **Grade Cuts.**

Cuts within a dripline of a tree should be maintained at less than 20% of the critical root zone area. Grade cuts should be supervised by the Project Arborist and any damaged roots encountered should be root pruned and properly treated as soon as possible after excavation. Cut faces which will be exposed for more than 2-3 days during cool temperatures or 1 day during warm weather should be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months) or as directed by the Project Arborist.

#### **Grade Fills.**

Fill materials less than 1 foot in depth and encroaching less than 20% into the critical root zone area should not require special mitigative measures. Should fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems installed as directed by the Project Arborist may serve to mitigate the presence of the fill materials.

Should it be necessary to build fill materials on two or three sides of a tree the use of retaining walls may reduce encroachment and the degree of fill beneath the tree. It is critical to provide for drainage away from the critical root zone area of the tree -- particularly when considering heavy winter rainfalls. Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two possible options.

### **Structure Encroachment.**

In some cases it may be necessary for a proposed structure to encroach into the critical root zone area. Again, this encroachment should be maintained at less than 20%. In this situation, a slab foundation with an aeration system installed beneath the slab and footings excavated by hand may provide adequate root protection. Where tree roots tend to be shallow, even a hand-excavated footing can be detrimental. In this situation, a "post-tension" type slab may minimize root damage. If it is necessary for encroachment to exceed 20%, raised floor construction with a grade-beam type foundation footing may be a viable option.

When evaluating encroachment from a proposed structure the structure height and tree branch conflicts are critical to evaluate in order to ensure that no more than 20% of the tree's canopy requires removal.

## **STREET AND UTILITY MITIGATIVE MEASURES**

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

### **Dry Utilities.**

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

### **Wet Utilities.**

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require that trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

### **Streets/Hardscape.**

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

### **CONCLUSION**

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives prior to construction and following staking may result in preservation of trees which may have previously appeared to require removal on the plans.

## DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR")	Measurement of the tree's dripline from the trunk to the farthest most branch tip.
Protected Zone ("PZR")	An irregular circle around a protected tree equal to the protected tree's dripline plus 1 foot.
Root Crown:	Assessment of the root crown area located at the base of the trunk of the tree at soil level.
Trunk:	Assessment of the tree's main trunk from ground level generally to the point of the primary crotch structure.
Limbs:	Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.
Foliage:	Tree's leaves.
Overall Condition:	Describes overall condition of the tree in terms of structure and vigor.
Recommendation:	Specific maintenance requirements.
(?):	Occasionally some portion of the tree may be obscured from visual inspection due to the presence of dense climbing vines such as ivy, etc. which, during the course of inspection for the preliminary arborist report, prevented an evaluation with certainty. In these cases, should a tree with an (?) be significant and in a location where it may be preserved on site, it would be prudent to remove any obstructions and perform further evaluation.

**GOOD** - A tree in this category has no trunk or root crown cavities or injuries; there is no indication of hollowness; no foreign objects are embedded in its structure; the root crown is above grade; there is no decay present except for small stubs; the structure is strong; the trunk is tapers; the bark thickness is normal; there is no fluxing; no fungus is evident; there is a below average amount of dead limbs and twigs present which is normal for the size and age of the species; there is no co-dominant branching present; there are no large callused areas and any small callusing present is vigorous and intact; there are no abnormally heavy insect infestations; the growth rate is and has been average or above; limb weight is not excessive; buds are normal size and viable; the leaf size, color, and density is normal or better; and barring any unforeseen negative effects, the life expectancy should exceed thirty years.

**FAIR** - There is no decay or indications of large hollow areas in the large limbs, root crown, or trunk; a few small callused-over foreign objects, e.g., nails, may be present, the structure is strong; no fungus is evident other than small saprophytes on exposed wood; some small, callusing injuries may be present, some small limbs may be dead and decaying but callus is forming at their base; some excessive limb weight may exist; there may be some minor fluxing; the amount of dead limbs and twigs present is within the normal range; some large callused areas may be present; some small cavities and areas of decay may be present; the growth rate is average or slightly below average; and some leaf size, color, and density may vary.

**POOR** - Significant cavities, dead areas, and decay may be present; the tree is actually defective; fungus fruiting bodies may be present; the amount of dead limbs and twigs is far above normal; major co-dominant branching with embedded bark may be present; buds are small and some may not be viable; leaves may be below average size and may be abnormal in color; significant pest damage may be present; and the predicted structural life and/or viability is less than ten years.

The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both.

**CROWN CLEAN OUT:** This shall consist of the removal of all dead, dying, diseased, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance.

**SUBSURFACE LIQUID SOIL INJECTION/DEEP ROOT FERTILIZATION (D.R.F.):** A method employed to induce vigor and stimulate new root growth. This is used as a means of feeding a large tree, as well as deep watering at the same time. Water soluble fertilizers are mixed in water and hydraulically pumped with a probe into the ground, delivering water and nutrients directly to the root zone, allowing for uptake from the tree. In this way, vigor can be improved and new root growth stimulated.

**ATTACHMENT G – Wetland Delineation Data Sheets**

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp1  
 Investigator(s): Virginia Dains - Robert Hollak Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): Alluvial Fan Terrace Local relief (concave, convex, none): Convex Slope (%): <5%  
 Subregion (LRR): C Lat: 38.716230 Long: -121.059749 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (if no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <i>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</i>	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____)				
1.				
2.				
3.				
4.				
				= Total Cover
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
				= Total Cover
<b>Herb Stratum</b> (Plot size: <u>2m</u> )				
1.	<u>35</u>	<u>X</u>	<u>UPL</u>	
2.	<u>20</u>	<u>X</u>	<u>UPL</u>	
3.	<u>20</u>	<u>X</u>	<u>FACU</u>	
4.				
5.				
6.				
7.				
8.				
				<u>75</u> = Total Cover
<b>Woody Vine Stratum</b> (Plot size: _____)				
1.				
2.				
				= Total Cover
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ Dominance Test is >50%

\_\_\_ Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

Remarks:  
*Lots of thatch 50/20 = 38/15*

**SOIL**

Sampling Point: dpl

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/3	100						gravels
5-10+	10YR 2/3	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A8) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	Hydric Soil Present?    Yes _____    No <input checked="" type="checkbox"/>
--	---

Remarks:  
*Could be recent streamwash. Gravels present, disturbed placer mined area.*

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

<b>Field Observations:</b>	
Surface Water Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present?    Yes _____    No <input checked="" type="checkbox"/>
Water Table Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____ <i>(includes capillary fringe)</i>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
*Side of mound above basin.*

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: Sp 2  
 Investigator(s): Virginia Dains - Robert Hollak Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): Concave Slope (%): <5%  
 Subregion (LRR): C Lat: 38.716222 Long: -121.059788 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NMI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (if no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (if needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
--	---	---	--

Remarks:  
*Four years of drought may effect seasonal wetlands and springs especially annual vegetation.  
 Soils and topography taken into account if annual plants are dominant*

**VEGETATION – Use scientific names of plants.**

Stratum	Plot size	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<del>Tree Stratum</del>	<del>(Plot size: _____)</del>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
1.					Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
2.					Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33</u> (A/B)
3.					<b>Prevalence Index worksheet:</b>	
4.					Total % Cover of:	Multiply by:
				= Total Cover	OBL species <u>0</u> x 1 = _____	
					FACW species <u>0</u> x 2 = _____	
					FAC species <u>15</u> x 3 = <u>45</u>	
					FACU species <u>20</u> x 4 = <u>80</u>	
					UPL species <u>15</u> x 5 = <u>75</u>	
					Column Totals: <u>50</u> (A) <u>200</u> (B)	
					Prevalence Index = B/A = <u>4.0</u>	
					<b>Hydrophytic Vegetation Indicators:</b>	
					___ Dominance Test is >50%	
					___ Prevalence Index is ≤3.0'	
					___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
					___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
<b>Herb Stratum</b> (Plot size: <u>2m</u> )						
1.	<u>Arduus pinocephalus</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>UPL</u>		
2.	<u>Bromus hordeaceus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3.	<u>Lolium perenne</u>	<u>5</u>		<u>FAC</u>		
4.	<u>Hordeum marinum</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
				<u>50</u> = Total Cover		
<b>Woody Vine Stratum</b> (Plot size: _____)						
1.						
2.						
				= Total Cover		
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust <u>0</u>				

Remarks: 50/20 = 25/10  
*Annual species could be impacted by the drought. Lolium tends to lay down when dry and is less evident than Bromus.*

**SOIL**

Sampling Point: dp 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6	10YR 3/2	95	10YR 4/6	5	C	PL <sub>1</sub> M	Clay loam	
6-8	10YR 4/2	90	10YR 4/6	10	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

Restrictive Layer (if present):  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_  
 Hydric Soil Present? Yes  No

Remarks:  
 Saturation to the surface evident. Lower soil more depleted.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1) *	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)  
 Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 This is a shallow well-defined basin. \* No living roots in annuals in July. Root pores did have oxidized lining.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: Sp 3  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): C Lat: 38.716667 Long: -121.059802 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:  
*Four years of drought may effect seasonal wetlands and springs especially annual vegetation.*

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u>	(A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
= Total Cover				Total % Cover of:	Multiply by:
= Total Cover				OBL species _____	x 1 = _____
= Total Cover				FACW species _____	x 2 = _____
= Total Cover				FAC species _____	x 3 = _____
= Total Cover				FACU species _____	x 4 = _____
= Total Cover				UPL species _____	x 5 = _____
= Total Cover				Column Totals: _____	(A) _____ (B)
= Total Cover				Prevalence Index = B/A = _____	
= Total Cover				Hydrophytic Vegetation Indicators:	
= Total Cover				___ Dominance Test is >50%	
= Total Cover				___ Prevalence Index is ≤3.0 <sup>1</sup>	
= Total Cover				___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
= Total Cover				___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
= Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
= Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Remarks:  
*Thick thatch. 50/20 = 30/12*

**SOIL**

Sampling Point: dp3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR <sup>2/3</sup>	100						Cobbles
								Very cobbly matrix, placer mine debris?

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?    Yes \_\_\_\_\_    No

Remarks:

*No evidence for saturation or ponding, disturbed soil.*

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oddized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?    Yes \_\_\_\_\_    No     Depth (inches): \_\_\_\_\_

Water Table Present?    Yes \_\_\_\_\_    No     Depth (inches): \_\_\_\_\_

Saturation Present?    Yes \_\_\_\_\_    No     Depth (inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present?    Yes \_\_\_\_\_    No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

*Side slope above basin.*



**SOIL**

Sampling Point: dp4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					clay loam	
2-8	10YR 4/2	95	10YR 4/6	5	C	M <sub>1</sub> pl	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Vernal Pools (F9)</p>	<p>Indicators for Problematic Hydric Soils<sup>3</sup>:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>		<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Biotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input checked="" type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Basin topography with hydric soils. NO Living roots in July. Pore linings O<sub>2</sub> likely around spring roots.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 5  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 8  
 Subregion (LRR): C Lat: 38.716947 Long: -121.06114 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <i>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</i>	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<del>Tree Stratum</del>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
1. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
2. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<del>Sending/Shrub Stratum</del>				<b>Prevalence Index worksheet:</b>
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
6. _____	_____	_____	_____	UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
<b>Herb Stratum</b> (Plot size: <u>2m</u> )				Prevalence Index = B/A = _____
1. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0' _____ Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation' (Explain)
2. <u>Avena barbata</u>	<u>5</u>		<u>UPL</u>	
3. <u>Bromus diandrus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>45</u> = Total Cover				
<del>Woody Vine Stratum</del>				'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>

Remarks: 50/20 = 23/9 Thatch < 50% FAC, FACW, OBL

**SOIL**

Sampling Point: dp 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 4/2		10YR 4/6				loam	
4-12	7.5YR 4/6	20	10YR 4/2	2			Clay loam	
	7.5YR 3/4	80						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

**Remarks:**

Soil ~~data~~ shows saturation at the surface only.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Soaked Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Tables (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (Inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (Inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (Inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Side slope on gentle hillside - no evidence for seepage.

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Vineyards City/County: El Dorado Hills, EL Dorado State: CA Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: dp 6

Investigator(s): Virginia Dains - Robert Hollard Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Slight Concave Slope (%): 8

Subregion (LRR): C Lot: 38.716912 Long: -121.061164 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? Yes \_\_\_\_\_ No   
 (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</u>	

**VEGETATION - Use scientific names of plants.**

Type Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Total % Cover of:</td> <td style="width:40%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>2m</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0' _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Juncus xiphioides</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>															
2. <u>Bromus diandrus</u>	<u>10</u>	_____	<u>UPL</u>															
3. <u>Bromus hordeaceus</u>	<u>10</u>	_____	<u>FACU</u>															
4. <u>Lolium perenne</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
_____ = Total Cover																		
% Bare Ground in Herb Stratum <u>20</u>	% Cover of Biotic Crust <u>0</u>																	
Remarks: <u>50/20 = 30/12</u>																		

**SOIL**

Sampling Point: dp6

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/2	95	10YR 4/6	5	C	M, PL		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Redox (S6) <input type="checkbox"/> Stripped Matrix (S8) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	Hydric Soil Present?    Yes <input checked="" type="checkbox"/> No _____
--	--

Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?    Yes _____ No _____    Depth (inches): _____ Saturation Present?    Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present?    Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Perennial Juncus with oxidized Rhizospheres

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 7  
 Investigator(s): Virginia Dains - Robert Hollak Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): Alluvial terrace/road Local relief (concave, convex, none): ± flat Slope (%): 0  
 Subregion (LRR): C Lat: 38.716 489 Long: -121.062 419 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky silt loam NWM classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <i>Four years of drought may effect seasonal wetlands and springs especially annual vegetation. a flat area near the channel with some Lolium.</i>	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____)				
1.				
2.				
3.				
4.				
				_____ = Total Cover
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
				_____ = Total Cover
<b>Herb Stratum</b> (Plot size: <u>2m</u> )				
1.	<u>10</u>		<u>FAC</u>	
2.	<u>5</u>		<u>UPL</u>	
3.	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4.				
5.				
6.				
7.				
8.				
				<u>40</u> = Total Cover
<b>Woody Vine Stratum</b> (Plot size: _____)				
1.				
2.				
				_____ = Total Cover
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ Dominance Test is >50%

\_\_\_ Prevalence Index is <3.0<sup>1</sup>

\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

Remarks: 50/20 = 20/6

**SOIL**

Sampling Point: dp 7

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/3	100					loam	
2-4	10YR 4/2	95	10YR 4/6	5	C	M	clay loam	
4-+	(5YR 3/3) (5YR 3/4)		10YR 4/3	5	<del>W</del> D	M		mg. nodules?

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:  
Soil shows saturation near the surface - not in a basin - not saturation to the surface or ponding.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (Inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No X Depth (Inches): \_\_\_\_\_

Saturation Present? Yes \_\_\_\_\_ No X Depth (Inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This is a flat area on the hillside not a basin.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 8  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R0E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Slight concave Slope (%): 8  
 Subregion (LRR): C Lat: 38.716 535 Long: -121.062 190 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky Silt loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <u>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)														
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)														
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
= Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
= Total Cover																		
<b>Herb Stratum (Plot size: <u>2m</u>)</b>																		
1. <u>Bromus diandrus</u>	<u>20</u>	<u>X</u>	<u>UPL</u>															
2. <u>Bromus hordeaceus</u>	<u>20</u>	<u>X</u>	<u>FACU</u>															
3. <u>Taeniathrum Caput-medusae</u>	<u>10</u>	<u>X</u>	<u>UPL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
= Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>																

Remarks: 50/20 = 25/10  
thatch

**SOIL**

Sampling Point: dp8

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	10YR 3/3	100					loam	
3-8	10YR 4/2	95	10YR 4/6	5	C	M	clay loam	
4-8	{5YR 3/3}	95	10YR 4/3	5	D	M		
	{5YR 3/4}							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

**Remarks:**

Soil shows some reduced conditions in the soil surface but does not indicate saturation to the surface - not a basin - not ponded

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply)**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

this is a hillslope, no evidence for saturation, not a basin



**SOIL**

Sampling Point: dp 9

**Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)**

Depth (Inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-6	10YR4/2	95	10YR4/6	5	C	M/PL	clay/loam

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 \* No Living Roots in Annual plants in July. This is the edge beyond perennial Juncus that shows hydromorphic soil.



**SOIL**

Sampling Point: dp10

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/2						loam	
3-12	10YR 4/2	95	10YR 4/6 M	5	C	M	clay loam	
12+	10YR 4/6	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
depleted matrix near surface

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary indicators (minimum of one required; check all that apply)	Secondary indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C6)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
no evidence for ponding or saturation - This is in a channel - ill defined - not a basin.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado State: CA Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: Sp 11

Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R8E

Landform (hillslope, terrace, etc.): alluvial terrace Local relief (concave, convex, none): none Slope (%): ≤5  
 Subregion (LRR): C Lat: 38.715 785 Long: -121.064 903 Datum: NAD 83

Soil Map Unit Name: Auburn very Rocky silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks:  
Four years of drought may effect seasonal wetlands and springs especially annual vegetation.  
Summer annuals not indicative of Spring/Wet season

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
_____ = Total Cover				Total % Cover of:	Multiply by:
OBL species _____				x 1 = _____	
FACW species _____				x 2 = _____	
FAC species _____				x 3 = _____	
FACU species _____				x 4 = _____	
UPL species _____				x 5 = _____	
Column Totals:				(A) _____	(B) _____
Prevalence Index = B/A = _____					
<b>Hydrophytic Vegetation Indicators:</b>					
___ Dominance Test is >50%					
___ Prevalence Index is ≤3.0 <sup>1</sup>					
___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)					
___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)					
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>					
Herb Stratum (Plot size: <u>2 M</u> ) 1. <u>Lolium perenne</u> <u>5</u> <u>X</u> <u>FAC</u> 2. <u>Juncus arcticus</u> <u>15</u> <u>X</u> <u>FACW</u> 3. <u>Croton setigerus*</u> <u>10</u> <u>X</u> <u>UPL</u> 4. <u>Bromus diandrus</u> <u>20</u> <u>X</u> <u>UPL</u> 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover <u>50</u>					
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover _____					
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust <u>0</u>					

Remarks: 50/20 . 25/10  
\* Summer annual  
Croton is a summer annual that colonizes open ground. – not a good indicator for the early growing season when soils are saturated.

**SOIL**

Sampling Point: dp11

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 3/3	100						
2-8	10YR 4/2	95	10YR 4/6	5	C	M, PL	claystone	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

Soil indicates saturation to the rootzone during the growing season

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply)**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Alluvial bench above Reservoir - LATE SEASON IS NOT saturated  
 bench adjacent to stream above Reservoir suggest high water table during the growing season

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: Sp 12  
 Investigator(s): Virginia Dains - Robert Holland Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): < 5  
 Subregion (LRR): C Lat: 38.715 662 Long: -121.065 230 Datum: NAD 83  
 Soil Map Unit Name: Auburn very Rocky silt loam NMI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>2m</u>)</b>				Prevalence Index = B/A = _____  <b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rubus armeniaca</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Juncus arcticus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Bromus diandrus</u>	<u>10</u>		<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>80</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust <u>0</u>		

Remarks: 50/20 = 40/16  
Presence of FACW Juncus above the stream probably not wetland Related.

**SOIL**

Sampling Point: dp12

**Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 3/3	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

No Evidence for saturation.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

no evidence for saturation - hillslope with FACw plant (perennial)  
Investigated. ;)

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Vineyards City/County: Eldorado Hills, EL Dorado Sampling Date: July 9, 2015  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: dp 13  
 Investigator(s): Virginia Dains - Robert Hollan Section, Township, Range: Sec 14 T10N R8E  
 Landform (hillslope, terrace, etc.): Alluvial deposit Local relief (concave, convex, none): FLAT/<sup>Slight</sup>Concave Slope (%): 0  
 Subregion (LRR): C Lat: 38.715738 Long: -121.067685 Datum: NAD 83  
 Soil Map Unit Name: Auburn Very Rocky Silt loam NWI classification: A None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <i>Four years of drought may effect seasonal wetlands and springs especially annual vegetation.</i>	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<del>Tree Stratum</del>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (AB)
3. _____				
4. _____				
_____ = Total Cover				
<del>Seedling/Shrub Stratum</del>				<b>Prevalence Index worksheet:</b>
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
<b>Herb Stratum</b> (Plot size: <u>2m</u> )				Column Totals: _____ (A) _____ (B)
1. <u>Lolium perenne</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Rumex (Saxifolius?) crispus</u>	<u>5</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>85</u> = Total Cover				
<del>Woody Vine Stratum</del>				<b>Hydrophytic Vegetation Indicators:</b>
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				_____ Prevalence Index is ≤3.0 <sup>1</sup>
				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
				_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks: 50/20 = 40/16

**SOIL**

Sampling Point: dp 13

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					clay loam	
2-10	10YR 4/1	95	10YR 4/6	5	C	M, PL	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply)**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Bloated Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (Inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (Inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (Inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

depression with all FAC plants in dry year. was historic streambed and has silted in.