

# Biological Resources Assessment

±121-Acre Rancho Del Oro Site  
Granite Bay, Placer County, California

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## **1.0 EXECUTIVE SUMMARY**

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Foothill Associates' biologists conducted a biological resources assessment between the months of March and July of 2005 on the Rancho Del Oro site located in Granite Bay, Placer County, California. The purpose of this document is to summarize the general biological resources on the site, to assess the suitability of the site to support special-status species and sensitive habitat types, and to provide recommendations for regulatory permitting or further analysis that may be required prior to development activities occurring on the site.

The site consists of ±121 acres of land that is composed of mixed oak woodland, annual grassland, and wetland habitats. The site is currently and has historically been used for grazing. Low- and high-density residential developments surround the site on all sides. Known or potential biological constraints on the site include the following:

- Potential habitat for special-status plant species;
- Potential habitat for freshwater invertebrates;
- Potential habitat for valley elderberry longhorn beetle;
- Potential nesting habitat and foraging habitat for raptors;
- Potential nesting habitat for other bird species protected by the Migratory Bird Treaty Act (MBTA), including loggerhead shrike, and tricolored blackbird; and
- Sensitive habitats (waters of the U.S. and mixed oak woodland).

## **2.0 INTRODUCTION**

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This report summarizes the findings of the biological resources assessment completed for the ±121-acre site located in Granite Bay, Placer County, California. This document addresses the onsite physical features, as well as existing plant communities and the common plant and wildlife species occurring, or potentially occurring on the site. Furthermore, the suitability of habitats to support special-status species and sensitive habitats are analyzed and recommendations are provided for any regulatory permitting or further analysis that may be required prior to development activities occurring on the site.

### **3.0 REGULATORY FRAMEWORK**

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The following describes federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process. The CEQA significance criteria are also included in this section.

#### **3.1 Federal Endangered Species Act**

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). “Harassment” is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered or threatened species or results in the destruction or adverse modification of habitat of such species. The U.S. Army Corps of Engineers (Corps) must consult with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, FESA would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

#### **3.2 Migratory Bird Treaty Act**

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

### **3.3 California Endangered Species Act**

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Game (CDFG) when preparing CEQA documents. The purpose is to ensure that the lead agency's actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur and allows CDFG to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFG to authorize exceptions to the state's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code § 2081).

### **3.4 CDFG Species of Concern**

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFG and lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

### **3.5 California Native Plant Society**

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants presumed Extinct in California
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants about which we need more information – A Review List
- List 4: Plants of limited distribution – A Watch List

## 3.6 Jurisdictional Waters of the United States

### 3.6.1 Federal Jurisdiction

The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. “Discharges of fill material” are defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

### 3.6.2 State Jurisdiction

CDFG is a trustee agency that has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Section 1602, a private party must notify CDFG if a proposed project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds...except when the department has been notified pursuant to Section 1601.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFG identifying the approved activities and associated mitigation measures.

### 3.7 Wildlife Migration Corridors

Wildlife migration corridors are important for the movement of migratory wildlife populations. Corridors provide foraging opportunities and shelter during migration. Generally, wildlife migration corridors are established migration routes for many species of wildlife. In wooded areas, these corridors often occur in open meadow or riverine habitats and provide a clear route for migration in addition to supporting ample food and water sources during movement.

### 3.8 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that

although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

## 4.0 METHODS

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Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this assessment are listed in Section 7.0 of this document. Site-specific information was reviewed including the following:

- California Department of Fish and Game. 2005. *California Natural Diversity Data Base (CNDDDB): Rocklin Quadrangle*. Sacramento, CA.;
- Natural Resource Conservation Service (NRCS). 1980. *Soil Survey of Placer County, California Western Part*. U.S. Department of Agriculture;
- U.S. Fish and Wildlife Service. 2005. *Federal Endangered and Threatened Species that may be affected by Projects in the Rocklin 7.5 minute series quadrangle*. Sacramento, California; and
- U.S. Geological Survey. 1967 (photorevised 1981). *Rocklin, California. 7.5-minute series topographic quadrangle*. United States Department of Interior.

A Foothill Associates' biologist conducted field surveys on the site between the months of March and July of 2005. The site was systematically surveyed on foot to ensure total search coverage, with special attention given to identifying those portions of the site with the potential for supporting special-status species and sensitive habitats. During the site survey, plant and animal species observed were recorded and biological communities on the site were categorized.

As part of this assessment, Foothill Associates' biologists prepared a wetland delineation utilizing the Corps 1987 three-parameter methodology to delineate potentially jurisdictional waters of the U.S. This methodology requires the collection of hydric soils, hydrophytic vegetation, and hydrologic data at several locations to establish the jurisdictional edge of waters of the U.S. The complete results of this delineation are provided under separate cover; however the acreages and types of wetland features delineated on the site are summarized in this document.

## 5.0 RESULTS

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### 5.1 Site Location and Description

The site is located in Granite Bay, Placer County, California and occurs in Township 11 North, Range 7 East, and Section 32 of the USGS 7.5-minute series Rocklin quadrangle (**Figure 1**). The site is immediately north of Olive Ranch Road, approximately a quarter mile east of Cavitt Stallman Road. The site is bounded on the north by Miners Ravine, on the east and west by low-density residential development, and on the south by Olive Ranch Road and high-density residential development.

The ±121-acre site is composed of mixed oak woodland, annual grassland, and wetland habitats. The site is currently and has historically been used for grazing.

### 5.2 Physical Features

#### 5.2.1 Topography and Drainage

Topography on the site is flat to moderately sloped with elevations ranging from approximately 245 to 300 feet above mean sea level. Surface runoff appears to flow into onsite depressional seasonal wetlands, excavated pits and perennial and seasonal drainages. Two main drainages occur on the site and generally flow in a southeast to northwest direction. These features enter the site via culverts beneath Olive Ranch Road and along the eastern property line and are tributary to Miners Ravine.

#### 5.2.2 Soils

The Natural Resources Conservation Service (NRCS) has mapped five soils on the site (**Figure 2**). The soils that occur on the site include: **Andregg coarse sandy loam, 2 to 9 percent slopes; Andregg coarse sandy loam, rocky, 2 to 15 percent slopes; Caperton gravelly coarse sandy loam, 2 to 30 percent slopes; Caperton-Andregg coarse sandy loams, 2 to 15 percent slopes; and Xerorthents, Placer Areas**. General characteristics associated with these soils types are described below.

- **Andregg coarse sandy loam, 2 to 9 percent slopes:** This soil type is found on low hills in the Loomis Basin at elevations from 200 to 1,000 feet. It is a moderately deep and well drained soil underlain by weathered granitic bedrock. Permeability is moderately rapid and surface runoff is medium. Natural vegetation associated with this soil type includes annual grasses and herbaceous species, blue and live oaks, and scattered pines. The hydric soils list for Placer County identifies one unnamed hydric inclusion located within drainageways in this soil type.
- **Andregg coarse sandy loam, rocky, 2 to 15 percent slopes:** This soil type is found on low hills in the Loomis Basin at elevations from 200 to 1,000 feet. It is a moderately deep, gently rolling, well-drained soil underlain by weathered granitic bedrock. Permeability is moderately rapid and surface runoff is very moderate.

Natural vegetation associated with this soil type includes annual grasses and herbaceous species, blue and live oak, and scattered pines. The hydric soils list for Placer County identifies two hydric inclusions, xerofluvents and an unnamed inclusion, within drainageways in this soil type.

- **Caperton gravelly coarse sandy loam, 2 to 30 percent slopes:** This soil type is found on side slopes in the Folsom Lake-Loomis Basin area at elevations from 200 to 1,000 feet. It is an undulating to hilly, shallow, and somewhat excessively drained soil underlain by granitic rock. Permeability is moderately rapid and surface runoff is medium or rapid. Natural vegetation associated with this soil type includes annual grasses and herbaceous species, blue and live oak, and scattered brush. The hydric soils list for Placer County identifies one unnamed hydric inclusion located on mountainsides in this soil type.
- **Caperton-Andregg coarse sandy loams, 2 to 15 percent:** These soils are found on the granitic foothills in the Folsom Lake-Loomis Basin area at elevations from 200 to 1,000 feet. This soil unit is comprised of 50 percent Caperton soil and 30 percent Andregg soil. The Caperton is a shallow, somewhat excessively drained soil and the Andregg is a moderately deep, well-drained soil. Permeability is moderately rapid and surface runoff is medium. Natural vegetation associated with this soil type includes annual grasses and herbaceous species, blue and live oak, and scattered pines. The hydric soils list for Placer County identifies one unnamed hydric inclusion located on mountainsides in this soil type.
- **Xerorthents, Placer areas:** These soils are stony, cobbly, and gravelly material adjacent to streams that have been placer mined. The soil is derived from a mixture of rocks. Permeability, surface runoff, and soil depth are variable. Natural vegetation on this soil type generally consists of annual grasses, oaks, willows, and cottonwoods. The hydric soils list for Placer County identifies one unnamed hydric inclusion located within drainageways in this soil type.

### 5.3 Biological Communities

Annual grassland and mixed oak woodland are the two major biological communities that occur on the Rancho Del Oro site. Within these communities are various wetland communities. These communities provide habitat to a number of common species of wildlife and may provide suitable habitat for special-status species. The biological communities, including the plant and wildlife species observed or expected to occur within each community, are described below.

#### 5.3.1 Annual Grassland

The plant community covering a large portion of the site is annual grassland, which is characterized primarily by an assemblage of non-native grasses and forbs. Much of the vegetation in these communities is common to the Central Valley. Common grass species on the site include ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), medusahead grass (*Taeniatherum caput-medusae*), dogtail grass (*Cynosurus echinatus*), and wild oat (*Avena* sp.). Common herbaceous species include yellow star-

thistle (*Centaurea solstitialis*), tarplant (*Holocarpha virgata*), tarweed (*Hemizonia fitchii*), hedge parsley (*Torilis arvensis*), and sow thistle (*Sonchus oleraceus*).

Annual grassland habitats support a variety of wildlife species. Species observed on the site within this habitat include American crow (*Corvus brachyrhynchos*), black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), savannah sparrow (*Passerculus sandwichensis*), western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), and white-tailed kite (*Elanus leucurus*).

### **5.3.2 Mixed Oak Woodland**

The plant community covering the majority of the site is mixed oak woodland, which is characterized primarily by a canopy of various oak species with an understory of shrubs and annual species common to the Central Valley and Sierra foothills. The overstory of this community is dominated by blue oaks (*Quercus douglasii*) and interior live oaks (*Quercus wislizenii*) with scattered valley oaks (*Quercus lobata*), and foothill pines (*Pinus sabiniana*). The understory contains widely scattered coyote brush (*Baccharis pilularis*), buck brush (*Ceanothus cuneatus*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), California coffeeberry (*Rhamnus californica*), Himalayan blackberry (*Rubus discolor*), blue elderberry (*Sambucus mexicana*), and California buckeye (*Aesculus californica*). The open areas within this habitat support annual grassland species such as those mentioned above.

Oak woodland habitats provide breeding, foraging, and shelter habitat for several species of wildlife. Species observed in this habitat during the field surveys include acorn woodpecker (*Melanerpes formicivorus*), barn owl (*Tyto alba*), California quail (*Callipepla californica*), great horned owl (*Bubo virginianus*), mourning dove (*Zenaida macroura*), western scrub jay (*Aphelocoma coerulescens*), western bluebird (*Sialia mexicana*), western fence lizard (*Sceloporus occidentalis*), western gray squirrel (*Sciurus griseus*), wild turkey (*Meleagris gallopavo*), and turkey vulture (*Cathartes aura*).

### **5.3.3 Wetlands and Other Waters of the U.S.**

#### **Depressional Seasonal Marsh**

A total of **0.07** acre of depressional seasonal marsh has been delineated within the site. Depressional seasonal marshes are wetlands that are seasonally inundated or saturated, but inundation/saturation persists for some period into the warm season. The persistence of inundation/saturation into the warm season permits the growth of primarily perennial herbaceous plant species capable of withstanding extended periods of inundation or saturated soil conditions. Within the Central Valley, these features are typically located on the fringes of naturally occurring or artificially created impoundments, such as ponds or reservoirs. These features are also associated with slow moving riverine systems where natural and/or artificial flows persist into the warm season.

### **Depressional Seasonal Wetland**

A total of **0.34** acre of depressional seasonal wetlands has been delineated within the site. Depressional seasonal wetlands are defined by a hydrologic regime that is dominated by saturation, rather than inundation. Depressional seasonal wetlands were identified on the site as inundated depressions within the topography capable of supporting hydrophytic plant species and hydric soils. At the time of the survey, the depressional seasonal wetlands were inundated and supported plant species that are adapted to withstand periods of saturation or saturated soils conditions.

### **Ephemeral Drainage**

Less than **0.01** acre of ephemeral drainage has been delineated within the site. Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils but do convey water and exhibit an “ordinary high-water mark.” Ephemeral drainages are primarily fed by storm water run off. These features convey flows during and immediately after storm events but may stop flowing or begin to dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. The ephemeral drainage on the site connects the northernmost stock pond with the riverine riparian wetland.

### **Riverine Perennial Marsh**

A total of **0.96** acre of riverine perennial marsh has been delineated within the site. As with depressional perennial marshes, riverine perennial marshes can occur as the result of natural and/or artificial water flows associated with agricultural or residential water uses. By definition, riverine perennial marshes are dominated by unidirectional flow of water. Typically, riverine perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses and perennial herbaceous plant species. Riverine perennial marshes occur in association with perennial, flowing features such as creeks and streams, typically on the fringes of such features.

### **Riverine Riparian Wetland**

A total of **0.23** acre of riverine riparian wetland has been delineated within the site. Riverine riparian wetlands are similar in all aspects to riverine perennial wetlands, with the exception that they support a relatively dense vegetation cover comprised of riparian tree and shrub species. Riverine riparian wetlands typically occur adjacent to perennial, flowing features such as creeks and streams.

### **Riverine Seasonal Wetland**

Approximately **1.27** acres of riverine seasonal wetlands have been delineated within the site. Riverine seasonal wetlands are defined by a hydrologic regime dominated by a unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support

wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events. Riverine seasonal wetlands have a moderately defined bed and bank and often exhibit sufficient gradient to convey water off of the site. As in depressional seasonal wetlands, plant species found within riverine seasonal wetlands are typically adapted to a hydrologic regime dominated by saturation rather than inundation.

### **Perennial Drainage (Miners Ravine)**

A total of **0.65** acre of perennial drainage has been delineated within the site. Perennial drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils but do convey water and exhibit an “ordinary high-water mark”. Perennial drainages generally convey unidirectional water flows throughout the entire year. Perennial drainages typically consist of a channel, bed and bank and are devoid of vegetation due to the scouring effect of flowing water. Perennial drainages are often bordered by wetland vegetation communities of various composition and cover depending on flow rates, duration of flows and soil types.

### **Stock Pond**

A total of **0.03** acre of stock pond has been delineated within the site. Stock ponds are typically the result of the deliberate impoundment of water through artificial damming. The stock ponds on the site are fed by riverine seasonal wetlands. Stock ponds are seasonally inundated.

## **5.4 Special-Status Species**

Special-status species are plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Special-status species are defined as:

- Listed or proposed for listing under CESA and/or FESA;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- Listed by CDFG as a Species of Special Concern;
- Listed by the USFWS as a Species of Concern;
- Listed by CNPS as being rare (a ranking of 1A, 1B, or 2); or
- Any other species that would receive consideration according to the CEQA Guidelines.

Special-status species considered for this analysis are based on queries of the CNDDDB for the Rocklin, Roseville, and Folsom quadrangles, the USFWS Online Species List for the Rocklin, Roseville, and Folsom quadrangles, and the CNPS Inventory of Rare and Endangered Plants list for the Rocklin, Roseville, and Folsom quadrangles (online version) (**Table 1**). **Table 1** includes the common name and scientific name for each species, regulatory status (federal, state, local, CNPS), habitat descriptions, and potential

for occurrence on the project site. **Figure 3** depicts the locations of special-status species recorded in the CNDDDB within five miles of the site. The following set of criteria has been used to determine each species' potential for occurrence on the site:

- **Present:** Species known to occur on the site, based on CNDDDB records, and/or was observed on the site during the field survey(s).
- **High:** Species known to occur on or near the site (based on CNDDDB records within five miles, and/or based on professional expertise specific to the site or species) and there is suitable habitat on the site.
- **Low:** Species known to occur in the vicinity of the site, and there is marginal habitat on the site.-**OR**-Species is not known to occur in the vicinity of the site; however there is suitable habitat on the site.
- **No:** Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.-**OR**-Species was surveyed for during the appropriate season with negative results.

Only those species that are known to be present or that have a high or low potential for occurrence will be discussed in further detail following **Table 1**.

**TABLE 1 — LISTED AND SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING  
ON THE SITE OR IN THE VICINITY**

<b>Special-Status Species</b>	<b>Regulatory Status (Federal; State; Local; CNPS)</b>	<b>Habitat Requirements</b>	<b>Potential for Occurrence</b>
<b>Plants</b>			
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	--;--;--;4	Found on margins of vernal pools and seasonal wetlands.	<b>Low.</b>
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--;--;--1B	Dry rocky slopes, often associated with serpentine soils.	<b>No.</b> There is no suitable habitat for this species on the site.
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>	--;CE;--;1B	Shallow ponds and margins of vernal pools and other seasonal wetlands.	<b>Low.</b>
Dwarf downingia <i>Downingia pusilla</i>	--;--;--;2	Found on the edges of vernal pools in alkaline and non-alkaline soils.	<b>Low.</b>
Hispid bird's-beak <i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	--;--;--;1B	Found in moist alkaline meadows and playas.	<b>No.</b> There is no suitable habitat for this species on the site.
Legenere <i>Legenere limosa</i>	--;--;--;1B	Moist areas and vernal pools.	<b>Low.</b>
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	--;--;--;1B	Moist areas and vernal pools.	<b>Low.</b>
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--;--;--;1B	Found on margins of marshes and riparian areas.	<b>Low.</b>
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE;--;--;1B	Found in deep vernal pools. Nearest populations known from eastern Sacramento County.	<b>No.</b> Species not known to occur in vicinity, not observed during field surveys, and onsite wetlands are relatively small and do not represent characteristic habitat.
<b>Wildlife</b>			
<b>Invertebrates</b>			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT;--;--;--	Blue elderberry shrubs usually associated with riparian areas.	<b>High.</b>
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT; --; --; --	Vernal pools, swales, and ephemeral freshwater habitat.	<b>Low.</b>
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE;--;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	<b>Low.</b>
<b>Amphibians/Reptiles</b>			

<b>Special-Status Species</b>	<b>Regulatory Status (Federal; State; Local; CNPS)</b>	<b>Habitat Requirements</b>	<b>Potential for Occurrence</b>
California horned lizard <i>Phrynosoma coronatum frontale</i>	--;CSC;--;--	Found in open oak and conifer woodlands, grasslands, and riparian areas. Most often found in areas with sandy soil types.	<b>Low.</b>
California red-legged frog <i>Rana aurora draytonii</i>	FT; CSC; --; --	Requires a permanent water source and is typically found along quiet, slow moving streams, ponds, or marsh communities with emergent vegetation.	<b>No.</b> Species not observed during the field surveys and bull frogs (known predators of CRLF) were observed in the perennial marsh on the site. The portions of Miners Ravine on the site flow too quickly for this species.
California tiger salamander <i>Ambystoma californiense</i>	FT;CSC;--;--	Ponded water required for breeding. Adults spend summer in small mammal burrows.	<b>No.</b> The site is outside the known range for this species.
Giant garter snake <i>Thamnophis gigas</i>	FT; CT; --; --	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	<b>No.</b> The site is outside the known range for this species.
Western pond turtle <i>Clemmys marmorata</i>	--;CSC;--;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	<b>No.</b> The perennial marsh on the site is very shallow and does not provide suitable habitat. The portions of Miners Ravine on the site flow too quickly for this species.
Western spadefoot <i>Spea hammondi</i>	--;CSC;--;--	Open grasslands and woodlands. Requires vernal pools or seasonal wetlands for breeding.	<b>Low.</b>
<b>Fish</b>			
Central Valley fall/late fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FC; CSC; --; --	Sacramento and San Joaquin rivers and their tributaries.	<b>High.</b>
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT;CT;--;--	Sacramento and San Joaquin rivers and their tributaries.	<b>High.</b>
Winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE;CE;--;--	Sacramento and San Joaquin rivers and their tributaries.	<b>High.</b>

<b>Special-Status Species</b>	<b>Regulatory Status (Federal; State; Local; CNPS)</b>	<b>Habitat Requirements</b>	<b>Potential for Occurrence</b>
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT;--;--	Sacramento and San Joaquin rivers and their tributaries.	<b>High.</b>
Delta smelt <i>Hypomesus transpacificus</i>	FT;CT;--;--	Sacramento and San Joaquin rivers and their tributaries.	<b>No.</b> The site is outside the known range of this species.
Longfin smelt <i>Spirinchus thaleichthys</i>	--;CSC;--;--	Sacramento and San Joaquin rivers and their tributaries.	<b>No.</b> The site is outside the known range of this species.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	--;CSC;--;--	Sacramento and San Joaquin rivers and their tributaries.	<b>No.</b> The site is outside the known range of this species.
<b>Birds</b>			
Aleutian Canada goose <i>Branta Canadensis leucopareia</i>	FD; CSC; -- (Wintering)	Winter resident of agricultural lands.	<b>No.</b> There is no suitable habitat for this species on the site.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD;CE;--;--	Nests on high cliffs, banks, dunes, or mounds in woodland, forest, and coastal habitats near permanent water sources.	<b>No.</b> There is no suitable nesting habitat for this species on the site.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT;CE;--;--	Nesting restricted to the mountainous habitats near permanent water sources in the northernmost counties of California, the Central Coast Region, and on Santa Catalina Island. Winters throughout most of California at lakes, reservoirs, river systems, and coastal wetlands.	<b>No.</b> There is no suitable habitat for this species on the site.
Bank swallow <i>Riparia riparia</i>	--; CT;--;--	Nests in riverbanks and forages over riparian areas and adjacent uplands.	<b>No.</b> There is no suitable habitat for this species on the site.
Black swift <i>Cypseloides niger</i>	--;CSC;--;--	Nests on cliffs near water sources.	<b>No.</b> There is no potential nesting habitat for this species on the site.
Ferruginous hawk <i>Buteo regalis</i>	--;CSC;--;--	A winter resident of open habitats in California including grasslands, shrubsteppes, sagebrush, deserts, saltbush-greasewood shrublands, and outer edges of pinyon-pine and other forests.	<b>Low.</b>

Special-Status Species	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Great blue heron <i>Ardea herodias</i>	--; (Sensitive); --; -- (Rookery)	Colonial nester in tall trees, Rookery sites are generally located close to foraging habitats such as marshes, lake margins, tidalflats, rivers, streams, and wet meadows.	<b>No.</b> No evidence of rookeries observed during field surveys. Land uses surrounding the site likely preclude species from nesting on site.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	--;CE;--;--	Nests in dense riparian vegetation such as willows and alders.	<b>No.</b> There is no suitable habitat for this species on the site.
Loggerhead shrike <i>Lanius ludovicianus</i>	--; CSC;--;--	Found in a variety of woodland and grassland habitats throughout California.	<b>Low.</b>
Long-billed curlew <i>Numenius americanus</i>	--;CSC;--;-- (Nesting)	Mudflats and shallow marsh areas.	<b>No.</b> There is no suitable habitat for this species on the site.
Mountain plover <i>Charadrius montanus</i>	--;CSC;--;--	Winters in California in agricultural fields and grasslands.	<b>Low.</b>
Rufous hummingbird <i>Selasphorus rufus</i>	--;CSC;--;-- (Nesting)	Nests within berry tangles, shrubs, and conifers in areas north of California and in the Trinity Mountains of Trinity and Humboldt County.	<b>No.</b> Site is outside species' known breeding range.
Swainson's hawk <i>Buteo swainsoni</i>	--; CT; -- (Nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	<b>Low.</b>
Tricolored blackbird <i>Agelaius tricolor</i>	--;CSC;--;--	Nests in dense blackberry, cattail, tules, willow, or wild rose within emergent wetlands throughout the Central Valley and foothills surrounding the valley.	<b>Low.</b>
Vaux's swift <i>Chaetura vauxi</i>	-- ;CSC(Nesting);-- ;--	Nests within large hollow trees and snags in redwood and Douglas-fir habitats.	<b>No.</b> There is no suitable habitat for this species on the site.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	--;CSC; (burrow sites);--;--	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat.	<b>Low.</b>
White-faced ibis <i>Plegadis chihi</i>	--;CSC;--;--	Nests colonially in riparian areas with large trees.	<b>No.</b> There is no suitable habitat for this species on the site.
White-tailed kite <i>Elanus leucurus</i>	--;CFP;--;--	Nests in isolated trees or woodland areas with suitable open foraging habitat.	<b>Present.</b>

Special-Status Species	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Other Raptors (Hawks, Owls and Vultures)	MBTA and §3503.5 Department of Fish and Game Code	Nests in a variety of communities including cismontane woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	<b>Present.</b>
<b>Mammals</b>			
Greater western mastiff bat <i>Eumops perotis californicus</i>	--;CSC;--;--	Found in grasslands and open woodlands and conifer habitats. Roosts in cliff faces, buildings, tunnels, and caves.	<b>No.</b> There is no suitable roosting habitat for this species on the site.
Spotted bat <i>Euderma maculatum</i>	--;CSC;--;--	Roosts in rock crevices and occasional buildings of foothills and desert areas.	<b>No.</b> There is no suitable roosting habitat for this species on the site.
Yuma myotis <i>Myotis yumanensis</i>	--; CSC; --; --	Reside in open forests and woodland habitats with sources of water over which to feed. Roost in buildings, mines, caves, and crevices.	<b>No.</b> There is no suitable roosting habitat for this species on the site.
<b>Federally Listed Species:</b> FE = federal endangered FT = federal threatened FSC = federal species of concern FC = candidate PT = proposed threatened FPD = proposed for delisting FD = delisted		<b>California State Listed Species:</b> CE = California state endangered CT = California state threatened CR = California state rare CSC = California Species of Special Concern CFP = California Fully Protected Species	<b>CNPS* List Categories:</b> 1A = plants presumed extinct in California 1B = plants rare, threatened, or endangered in California and elsewhere 2 = plants rare, threatened, or endangered in California, but common elsewhere 3 = plants about which we need more information 4 = plants of limited distribution  <b>Other Special-status Listing:</b> SLC = species of local or regional concern or conservation significance
<i>Source: Foothill Associates</i>			

#### 5.4.1 Listed and Special-Status Plants

Based on a records search of the CNDDDB and the USFWS list, special-status plant species have the potential to occur on the site or in the vicinity. Based on field observations and literature review specific to the special-status plants listed in **Table 1**, the potential for occurrence has been determined for each species. No special-status plant species are expected to occur or have a high potential to occur due to the historic and current grazing operations on the site. The species that are considered to have a low potential to occur on the site include Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia

(*Downingia pusilla*), legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), and Sanford's arrowhead (*Sagittaria sanfordii*).

## **Plant Species with a Low Potential to Occur**

### Ahart's Dwarf Rush

Ahart's dwarf rush is an annual grass-like herb. It occurs on the margins of vernal pools and seasonal wetlands in grassland areas. The typical identification period for this species is April through May. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005). This species was not observed on the site during the field surveys; however, a focused plant survey was not performed. Given the limited distribution of this species along with the disturbed nature of the onsite wetlands from cattle grazing, the potential for this species to occur on the site is low.

### Bogg's Lake Hedge-hyssop

Bogg's Lake hedge-hyssop is an annual herb. It is typically found on the margins of vernal pools or shallow ponds. The typical identification period for this species is May through June. There are two CNDDDB records for this species occurring within five miles of the project site (CNDDDB 2005). This species was not observed on the site during the field surveys; however, a focused plant survey was not performed. Given the limited number of known occurrences for this species in the vicinity of the site along with the disturbed nature of the onsite wetlands from cattle grazing, the potential for this species to occur on the site is low.

### Dwarf Downingia

Dwarf downingia is a small annual herb. It occurs in vernal pools and other seasonal wetlands with a short hydrological period. The typical identification period for this species is March through May. There are two CNDDDB records for this species within five miles of the site (CNDDDB 2005). This species was not observed on the site during the field surveys; however, a focused plant survey was not performed. Given the limited number of known occurrences for this species in the vicinity of the site along with the disturbed nature of the onsite wetlands from cattle grazing, the potential for this species to occur on the site is low.

### Legenere

Legenere is a small annual herb. It is found in vernal pools and seasonal marsh habitat. The typical identification period for this species is April through May. There is one CNDDDB record for this species within five miles of the site (CNDDDB 2005). This species was not observed on the site during the field surveys; however, a focused plant survey was not performed. Given the limited number of known occurrences for this species in the vicinity of the site along with the disturbed nature of the onsite wetlands from cattle grazing, the potential for this species to occur on the site is low.

### Pincushion Navarretia

Pincushion navarretia is a small annual herb. It is found in the margins of vernal pools and other seasonal wetlands. The typical identification period for this species is in May. The known distribution for this species is small with only four known locations of this species in Amador, Merced, and Sacramento counties. There are no CNDDDB records for this species within five miles of the project site (CNDDDB 2005). This species was not observed on the site during the field surveys; however, a focused plant survey was not performed. Given the limited distribution of this species along with the disturbed nature of the onsite wetlands from cattle grazing, the potential for this species to occur on the site is low.

### Sanford's Arrowhead

Sanford's arrowhead is a perennial herb that is generally found in shallow, freshwater conditions such as marsh habitats or margins of wetlands that remain moist throughout the year. The typical identification period for this species is May through October. There is one CNDDDB record for this species within five miles of the site (CNDDDB 2005). Given the limited number of known occurrences for this species in the vicinity of the site along with the disturbed nature of the onsite marsh habitats from cattle grazing, the potential for this species to occur on the site is low.

#### **5.4.2 Listed and Special-Status Animals**

Based on a records search of the CNDDDB and the USFWS list, special-status animal species have the potential to occur on the site or in the vicinity. Based on field observations and literature review specific to the special-status animals listed in **Table 1**, the potential for occurrence has been determined for each species. Species that are known to be present or that are considered to have a high potential to occur on the site include Central Valley steelhead (*Oncorhynchus mykiss*), Chinook salmon (*Oncorhynchus tshawytscha*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), white-tailed kite (*Elanus leucurus*), as well as other raptor species. The species that are considered to have a low potential to occur on the site include California horned lizard (*Phrynosoma coronatum frontale*), ferruginous hawk (*Buteo regalis*), loggerhead shrike (*Lanius ludovicianus*), mountain plover (*Charadrius montanus*), Swainson's hawk (*Buteo swainsonii*), tricolored blackbird (*Agelaius tricolor*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), western burrowing owl (*Athene cunicularia hypugaea*), and western spadefoot (*Spea hammondi*).

## **Animal Species Present or with a High Potential for Occurrence**

### Special-Status Fish Species

Special-status fish species including Chinook salmon and steelhead have been known to utilize Miners Ravine for spawning (Merron, pers comm. 2005). Therefore, these species are considered present in the stretch of Miners Ravine on and in the vicinity of the site. Based on current site plans, no impacts to Miners Ravine are proposed; therefore, no direct impacts to these species' habitat are expected and no mitigation for these species is expected to be necessary. An outfall structure for the proposed project will add some limited runoff from the site to Miners Ravine. However, an analysis of the expected flow amounts and location of the outfall shows that impacts to salmonid habitat in Miners Ravine is not expected.

### Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) depends on elderberry shrubs for its entire lifecycle. Adults are typically active from March through May during the flowering period of the elderberry shrub. The female lays its eggs on the leaves and stems of the elderberry shrub. The larvae emerge within a few days and burrow into the elderberry stem. The larvae feed on the stem pith until they pupate. When the host shrub begins flowering, the pupa emerges from the stem as an adult creating exit holes on the stem (Barr 1991).

Typically, the beetles are found on elderberry shrubs within riparian plant communities. Some studies have found that multiple elderberry shrubs clumped together provide superior habitat for the beetle while isolated elderberry shrubs are less likely to support beetle populations (Collinge *et al.* 2001). Typical plant species that co-occur with the elderberry shrubs include California sycamore (*Platanus racemosa*), willows, blackberry, and poison oak (USFWS 1984). Beetles require elderberry stems with a basal diameter of at least 1 inch in order for the larvae to utilize the stems (USFWS 1999). Of the 23 elderberry shrubs located on the site (**Figure 4**), six of them showed evidence of VELB exit holes on the stems at the time of the surveys. Therefore, the potential for this species to occur on the site is high.

### White-tailed Kite

The white-tailed kite is a medium-sized raptor that is a yearlong resident in coastal and valley lowlands in California. White-tailed kites are monogamous and breed from February to October, peaking from May to August (Zeiner *et al.* 1990). This species nests near the top of dense oak, willow, or other large trees. This species is more widespread within five miles of the site than the one record in the CNDDDB indicates (CNDDDB 2005). Additionally, this species was observed on the site during multiple survey dates. The oak woodland and annual grassland habitats on the site provide suitable nesting and foraging habitat, respectively, for this species, although no active nests were observed. Therefore, this species is considered present on the site.

### Other Raptor Species

Raptor species forage and nest in a variety of habitats throughout Placer County. Raptor nests are protected under the MBTA and Section 3503.5 of the California Fish and Game Code, which makes it illegal to destroy any active raptor nest. Although no active nests were observed during the field surveys, the oak woodland habitat on the site provides suitable nesting habitat for various raptor species. Additionally, as previously mentioned, several common raptor species were observed foraging on the site during the field surveys. Consequently, other raptor species are considered present on the site.

### **Animal Species with a Low Potential to Occur**

#### California Horned Lizard

The California horned lizard is found in a variety of grassland and woodland habitats. It forages in open areas between shrubs primarily on ants and other insects. Horned lizards typically breed during April and hatchlings first appear during July and August. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005) and although the oak woodland annual grassland habitats onsite provide potential habitat for this species, none were observed during the field surveys. For these reasons, any development activities occurring on the site would not likely have a significant impact on the local or regional population of this species; consequently, no mitigation measures are expected to be necessary for this species.

#### Ferruginous Hawk

Ferruginous hawk is a winter resident and migrant of California. In the winter, this species can be found throughout California, with the exception of the extreme northeastern and northwestern regions (Zeiner *et al.* 1990). Ferruginous hawks migrate to California in August or September and return to their breeding grounds in late February or early March. This species occurs in open habitats including grasslands, shrubsteppes, sagebrush, deserts, saltbush-greasewood shrublands, and outer edges of pinyon-pine and other forest. There are no CNDDDB records of ferruginous hawk within five miles of the project site (CNDDDB 2005) and all field surveys were conducted in the spring and summer months when this species would not be expected to inhabit the site; however, there is suitable wintering habitat for ferruginous hawk in the annual grassland on the site. Consequently, this species has a low potential to occur on the site. Since this species would only be expected to occur during the rainy season, no significant impacts to this species are expected since initial grading would not be expected to occur during the rainy season. For this reason, no impacts to this species are expected and no mitigation is expected to be necessary.

#### Freshwater Invertebrates

Freshwater invertebrates, including California linderiella, vernal pool fairy shrimp, and vernal pool tadpole shrimp, occur throughout California in seasonally inundated depressions such as vernal pools and depression seasonal wetlands. If present, the cysts

hatch soon after the wetland becomes inundated. After the adults mate, the female produces cysts, which eventually become embedded in the bottom of the wetland. The cysts lay dormant as the wetland dries and can withstand extreme environmental conditions until they hatch. The cysts typically hatch once the wetland inundates the following winter; however they can lay dormant for a number of years before hatching. Cysts are known to be dispersed from one location to the other through watersheds that connect appropriate freshwater invertebrate habitat, by bird discharge (cysts eaten by birds pass undamaged through their digestive tract and can be deposited in other wetlands) and the transfer of cyst-containing mud on the feet and bodies of birds and migratory mammals (Eriksen and Belk, 1999).

There are several records of California linderiella and vernal pool fairy shrimp within five mile of the site (CNDDDB 2005). These species were not observed during the field surveys; however dip nets were not used and protocol-level sampling was not conducted. Since the depressional seasonal wetlands, which represent suitable habitat for these species, comprise a relatively small amount of acreage and are not hydrologically connected to offsite areas that are known to support freshwater invertebrates, the potential for these species to occur on the site is low.

#### Loggerhead Shrike

Loggerhead shrikes are common residents and winter visitors of valleys and foothills throughout California. The loggerhead shrike utilizes open habitats with scattered shrubs and trees, posts, fences, utility lines, and occurs often in cropland (Zeiner *et al.* 1990). The highest density of shrikes occurs in open valley foothill grassland areas with occasional shrubs and available perch sites. Shrikes are predators and are often observed at a fixed perch site; they hunt from perches for lizards, large insects and small mammals where often they spear prey on fence posts or thorns. This species nests from March to May, building twig nests within the dense foliage of shrubs or trees that conceal the nest. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005) and this species was not observed on the site during the field surveys. However, this species is more widespread than what CNDDDB records indicate and the site provides suitable nesting and foraging habitat for this species. Therefore, the potential for this species to occur on the site is low.

#### Mountain Plover

Mountain plovers winter in California in agricultural fields and grassland habitats below 3,000 feet (Zeiner *et al.* 1990). They do not breed in California. They feed on large insects and other invertebrates. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005) and all field surveys were conducted in the spring and summer months when this species would not be expected to inhabit the site; however, there is suitable wintering habitat for this species in the annual grasslands on the site. Consequently, this species has a low potential to occur on the site. Since this species would only be expected to occur during the rainy season, no significant impacts to this species are expected since initial grading would not be expected to occur during the rainy

season. For this reason, no impacts to this species are expected and no mitigation is expected to be necessary.

#### Swainson's Hawk

This species is a long-distance migrant with nesting grounds in western North America. The Swainson's hawk population that nests in the Central Valley winters primarily in Mexico, while the population that nests in the interior portions of North America winters in South America (Bradbury *et al.*, in prep.). Swainson's hawks arrive in the Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to late August, peaking in late May through July (Zeiner *et al.* 1990). In the Central Valley, Swainson's hawks nest in isolated trees, small groves, or large woodlands next to open grasslands or agricultural fields. This species typically nests near riparian areas; however, it has been known to nest in urban areas as well. Nest locations are usually in close proximity to suitable foraging habitats, which include fallow fields, irrigated pastures, alfalfa and other hay crops, and low-growing row crops. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom and De Water, 1994). Although this species was not observed on the site during the field surveys, suitable nesting and foraging habitat exist on the site.

CDFG considers annual grassland annual grasslands, agricultural fields, or other suitable foraging habitat within 10 miles of an active nest to be potential foraging habitat for this species (CDFG 1994). According to the CNDDDB, there are two known Swainson's hawk nests within 10 miles of the site. Both of these records are roughly seven miles away in western Roseville, which is bordered on the west by extensive agricultural land. The CDFG Staff Report regarding mitigation for impacts to Swainson's hawks (CDFG Staff Report; CDFG 1994) discusses suitable foraging habitat as "suitable agricultural lands within an energetically efficient flight distance from active Swainson's hawk nests." Although Swainson's hawks may range up to 18.0 miles from the nest in search of prey, Swainson's hawk adults must "achieve an energy balance between the needs of themselves and the demands of nestlings" (CDFG, 1994). It seems reasonable to assume that Swainson's hawks would generally forage in areas that provide an adequate prey base, are in reasonable proximity to their nests, and do not require extended flight distances to get to foraging habitat.

Given that there are no known Swainson's hawk nests in close proximity to the site and the presence of large expanses of high-quality foraging habitat closer to the known nest sites, it is extremely unlikely that a Swainson's hawk would forage on the Rancho Del Oro site. Therefore, no mitigation for the loss of Swainson's hawk foraging habitat is expected to be necessary.

#### Tricolored Blackbird

The tricolored blackbird is a colonial nester of marshy areas throughout the Central Valley and coastal California. It can be observed in the Central Valley year-round and is typically a resident throughout its range; however tricolored blackbirds that occur in northeastern California have been known to migrate south during fall and winter months.

This species usually nests with dense cattails (*Typha* spp.) or tules (*Scirpus* sp.) in emergent wetlands. Tricolored blackbird will also nest in thickets of blackberry (*Rubus* spp.), wild rose (*Rosa* sp.), willow, and tall herbs. Nests are built using mud and plant material and usually located a few feet over water or may be hidden on the ground in vegetation. Tricolored blackbirds are highly colonial; nesting areas must be large enough to support a minimum colony of at least 50 pairs (Zeiner *et al.* 1990). Tricolored blackbirds are omnivorous and often shift their diet from insects and spiders during the spring season, to seeds, cultivated grains, rice and oats during fall and winter months. This species forages on the ground in croplands, grassy fields, and flooded rice fields. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005) and the species was not observed during the field surveys; however, the large blackberry thickets and patches of other riparian vegetation on the site provide suitable nesting habitat for this species. Consequently, the potential for this species to occur on the site is low.

#### Western Burrowing Owl

Western burrowing owl is a small ground-dwelling owl that occurs in western North America from Canada to Mexico, and east to Texas, and Louisiana. Although in certain areas of its range western burrowing owls are migratory, these owls are predominantly non-migratory in California (Zeiner *et al.* 1990). The breeding season for western burrowing owls occurs from February to August, peaking in April and May (Zeiner *et al.* 1990). Western burrowing owls nest in burrows in the ground, often in old ground squirrel burrows. This owl is also known to use artificial burrows including pipes, culverts, and nest boxes. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005) and no western burrowing owls were observed during the field surveys. However, the large debris piles in the northern portion of the site provide suitable nesting habitat and the on site grassland habitat provides suitable foraging habitat for this species. Therefore, the potential for western burrowing owls to occur on the site is low.

#### Western Spadefoot

The western spadefoot is found throughout the Central Valley south to Baja Mexico. It is found in a variety of habitats including grasslands, washes, and floodplains. It breeds in seasonal depressional wetlands and deep vernal pools (Stebbins 2003). During the summer months, adults will seek out upland refugia such as small mammal burrows. The breeding period is typically January through May (Stebbins 2003). There is one record for this species in the CNDDDB within five miles of the project site (CNDDDB 2005); however, this species was not observed on the site during any of the field surveys. This, along with the limited amount of breeding habitat on the site reduces the potential for this species to occur on the site to low. Therefore, any development activities occurring on the site would not likely have a significant impact on the local or regional population of this species. Consequently, no mitigation measures are expected to be necessary for this species.

## 5.5 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific policies outlined in the Placer County General Plan. Sensitive habitats on the site include a variety of seasonal and perennial wetlands, Miners Ravine, and mixed oak woodland (**Figure 4**).

### 5.5.1 *Jurisdictional Waters of the U.S.*

Jurisdictional waters of the U.S. located on the site include a variety of seasonal and perennial wetlands and Miners Ravine. As previously mentioned, a formal wetland delineation was conducted for the site. The Corps verified the wetlands on January 30, 2007.

Jurisdictional waters of the U.S. include jurisdictional wetlands as well as all other waters of the U.S. such as creeks, ponds, and intermittent drainages. Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Corps 1987). The majority of jurisdictional wetlands in the United States meet the following three wetland assessment criteria: hydrophilic vegetation, hydric soils, and wetland hydrology. Jurisdictional waters of the U.S. can also be defined by exhibiting a defined bed and bank and ordinary high-water mark (OHWM). As discussed in Regulatory Framework, jurisdictional waters of the U.S. are subject to Section 404 of CWA and are regulated by the Corps.

## **6.0 DISCUSSION AND RECOMMENDATIONS**

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As discussed, the ±121-acre site consists of mixed oak woodland, annual grassland, and a variety of wetland habitats. The site is currently and has historically been used for grazing. Known or potential biological constraints on the site include the following:

- Potential habitat for special-status plant species;
- Potential habitat for freshwater invertebrates;
- Potential habitat for valley elderberry longhorn beetle;
- Potential nesting habitat and foraging habitat for raptors;
- Potential nesting habitat for other bird species protected by the MBTA, including loggerhead shrike, and tricolored blackbird; and
- Sensitive habitats (waters of the U.S. and mixed oak woodland).

### **6.1 Special-Status Plant Species**

As discussed, the wetlands on the site provide suitable habitat for special-status plant species including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, pincushion navarretia, and Sanford's arrowhead. Based on this, if impacts to these wetland habitats are anticipated, focused special-status plant surveys are recommended to determine the presence or absence of these plant species. The survey should be conducted by a qualified biologist during the identification period for all the species listed above. If any of the special-status plant species are found, then a mitigation plan conceived from consultation with the appropriate agencies should be prepared. The plan should detail the various mitigation approaches to ensure no net loss of rare plants. Examples of mitigation include avoidance of the resource, salvage of plant materials where possible, acquisition of credits at an approved mitigation bank, or acquisition and preservation of property that supports these species.

### **6.2 Freshwater Invertebrates**

As discussed, the depression seasonal wetlands on the site represent suitable habitat for freshwater invertebrate species including California linderiella, vernal pool fairy shrimp, and vernal pool tadpole shrimp. If the proposed project can avoid all direct and indirect impacts to potential freshwater invertebrate habitat, then no mitigation would be required. The USFWS typically considers invertebrate habitat to be indirectly impacted by fill or development activities within 250 feet of the habitat. However, the 250-foot indirect impact area may be reduced based on site-specific information such as topography or hydrologic data indicating that activities can encroach closer than 250 feet without impacting those habitats.

If impacts to listed invertebrate habitat cannot be avoided, then protocol-level surveys can be conducted to determine the presence or absence of these species. If the species are

absent and USFWS accepts the survey findings, then no mitigation for listed invertebrates is likely required. If the species are present, or if the project proponent decides to assume presence without conducting the surveys, then mitigation for listed invertebrates would be required.

If mitigation for listed invertebrates is required and the project has a federal nexus (e.g., is pursuant to a Corps permit, is federally funded, or occurs on federal land), impacts to listed invertebrates can be addressed through Section 7 consultation with the USFWS. If the project does not have a federal nexus, the project proponent, through coordination with USFWS, can prepare a Habitat Conservation Plan under Section 10 of FESA. Typically, the USFWS requires compensatory mitigation for impacts to these species at a 3:1 ratio (2:1 preservation and 1:1 creation). Possible mitigation opportunities include onsite or offsite preservation and creation of seasonal wetlands or purchase of seasonal wetland credits at a qualified mitigation bank.

### **6.3 Valley Elderberry Longhorn Beetle**

Since six elderberry shrubs showed evidence of VELB use, there is a high potential for VELB to be present on the site. Currently, the USFWS suggests mitigation for impacts to any elderberry shrub with stems greater than 1 inch in diameter at ground level. USFWS calls for a 100-foot buffer to be maintained around any existing elderberry shrub to prevent potential VELB habitat from being impacted. If impacts to the shrubs cannot be avoided, impacts to VELB can be addressed through Section 7 or Section 10 consultation with the USFWS, as discussed above for freshwater invertebrates. Mitigation for impacts to elderberry shrubs typically involves the transplantation of the shrubs to be impacted along with the planting of additional elderberry shrubs and associated riparian plant species within a designated mitigation area. The number of additional elderberry shrubs and associated vegetation varies depending on the number and diameter of elderberry stems suitable for use by VELB that are impacted by the project. The USFWS requires transplantation to occur between the beginning of November and the first two weeks of February when elderberries are typically dormant and the chance of transplantation success is higher.

### **6.4 Western Burrowing Owl**

Although burrowing owls were not observed during the field surveys, the site contains suitable nesting and foraging habitat for burrowing owl. For this reason, it is recommended that a burrowing owl survey be conducted no more than 30 days prior to the onset of construction. Burrowing owls can be present during all times of the year in California, so this survey is recommended regardless of the time construction activities occur. If active owl burrows are located during the pre-construction survey, it is recommended that a 250-foot buffer zone be established around each burrow with an active nest until the young have fledged and are able to exit the burrow. In the case of occupied burrows without active nesting, active burrows after the young have fledged, or if development commences after the breeding season (typically February 1-August 31), passive relocation of the birds should be performed. Passive relocation involves installing a one-way door at the burrow entrance, which encourages the owls to move

from the occupied burrow. CDFG should be consulted for current guidelines and methods for passive relocation of any owls found on the site. Mitigation for project impacts that result in relocation of burrowing owls and loss of burrows and/or foraging habitat may be required for CEQA projects (CDFG recommends 6.5 acres of foraging habitat for burrowing owl be preserved for each active burrow that would be impacted by project activities). The lead agency under CEQA, in coordination with CDFG, is responsible for prescribing appropriate mitigation for any project-related impacts to burrowing owls. These mitigation measures would only apply in the event that burrowing owls were encountered during the pre-construction survey.

## **6.5 Other Raptors**

As discussed, several species of raptors were observed during the field surveys and have the potential to nest within the extensive oak woodland habitat on the site. Active raptor nests are protected by the California Fish and Game code Section 3503.5 and the MBTA. For this reason, if construction is expected to occur during the typical raptor nesting season (February 1-August 31), a pre-construction raptor survey is recommended to determine if active raptor nests are present on the site. The survey should be conducted by a qualified biologist no more than 30 days prior to the onset of construction activities. If active nests are found on or within 500 feet of the site, construction activities should not occur within 500 feet of the nests until the young have fledged or until the biologist has determined that the nest is no longer active. If construction activities are proposed to occur during the non-breeding season (September 1-January 31), a survey is not required and no further studies are necessary.

## **6.6 Other Bird Species Protected by the MBTA**

The trees, shrubs, and grasslands on the site provide suitable nesting habitat for a number of common and special-status birds protected solely by the MBTA. As discussed, the MBTA prohibits the killing of migratory birds. Therefore, if any vegetation removal occurs during the typical avian nesting season (February 1-August 31), a pre-construction survey is recommended to determine if active nests are present on the site. The survey should be conducted by a qualified biologist no more than two weeks prior to the onset of vegetation removal. If active nests are found on the site, disturbance or removal of the nest should be avoided until the young have fledged and the nest is no longer active. Extensive buffers, such as those recommended for nesting raptors, are not necessary for nesting avian species protected solely by the MBTA. However, depending on the species, site conditions, and the proposed construction activities near the active nest, a small buffer may be prescribed, as determined by the biologist. Alternatively, vegetation removal could be scheduled to avoid all potential impacts. Vegetation removal conducted between September 1 and January 31 will prevent impacts to nesting birds or unfledged young.

## **6.7 Waters of the U.S.**

The appropriate Section 404 permit shall be acquired for any project-related impacts to jurisdictional wetlands or other waters of the U.S. The current site plan estimates that a

total of 3.21 acres of jurisdictional wetlands and other waters of the U.S. would be impacted by the proposed project including the following; 0.34 acre of depressional seasonal wetland, 0.07 acre of depressional seasonal marsh, 1.27 acres of riverine seasonal wetland, 0.23 acre of riparian wetland, 0.96 acre of riverine perennial marsh, less than 0.001 acre of ephemeral drainage, 0.65 acre of perennial drainage, and 0.03 acre of pond (**Figure 5**). Any waters of the U.S. that would be lost or disturbed should be replaced or rehabilitated on a “no-net-loss” basis in accordance with the Corps’ mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement should be at a location and by methods agreeable to the Corps. As of the preparation of this document, preliminary site plans indicate that Miners Ravine will not be directly impacted. However, should the final site plan include impacts to Miners Ravine, Section 7 consultation with NMFS and USFWS will be required to address potential impacts to special-status fish species. Consultations with NMFS and USFWS would be initiated by the Corps as part of the 404 permit process.

Water quality concerns during construction would be addressed in a Section 401 water quality certification from the Regional Water Quality Control Board. A Storm Water Pollution Prevention Plan (SWPPP) would also be required during construction activities. SWPPPs are required in issuance of a National Pollutant Discharge Elimination System (NPDES) construction discharge permit by the U.S. Environmental Protection Agency. Implementation of Best Management Practices (BMPs) during construction is standard in most SWPPPs and water quality certifications. Examples of BMPs include stockpiling of debris away from regulated wetlands and waterways; immediate removal of debris piles from the site during the rainy season; use of silt fencing and construction fencing around regulated waterways; and use of drip pans under work vehicles and containment of fuel waste throughout the site during construction.

It is also recommended that a Lake or Streambed Alteration Agreement be obtained from CDFG, pursuant to Section 1600 of the CDFG Code, for each stream crossing and any other activities affecting the bed, bank or associated riparian vegetation of the riverine perennial marsh, riverine riparian wetland, or Miners Ravine. If required, the project applicant should coordinate with CDFG in developing appropriate mitigation, and should abide by the conditions of any executed permits.

## **6.8 Mixed Oak Woodland**

Oak woodland habitats are known to support a high diversity of wildlife and are generally considered sensitive natural communities. Although this habitat is not afforded special protection under federal law, loss of oak woodland habitats is of special concern to CDFG, CNPS, and Placer County. Additionally, oak woodland habitats are also considered a sensitive habitat type under CEQA. Oak woodland habitats are considered sensitive due to the continual depletion of this habitat throughout the state of California.

Additionally, the Placer County Tree Preservation Ordinance regulates both the removal of protected trees and the encroachment of construction activities within their driplines. Protected trees include any tree, excluding foothill pine (*Pinus sabiniana*), with a diameter at breast height (DBH) of six inches or greater, or a multiple-trunk tree with an

aggregate diameter of 10 inches or greater. Therefore, most of the onsite trees are subject to regulation and mitigation by Placer County.

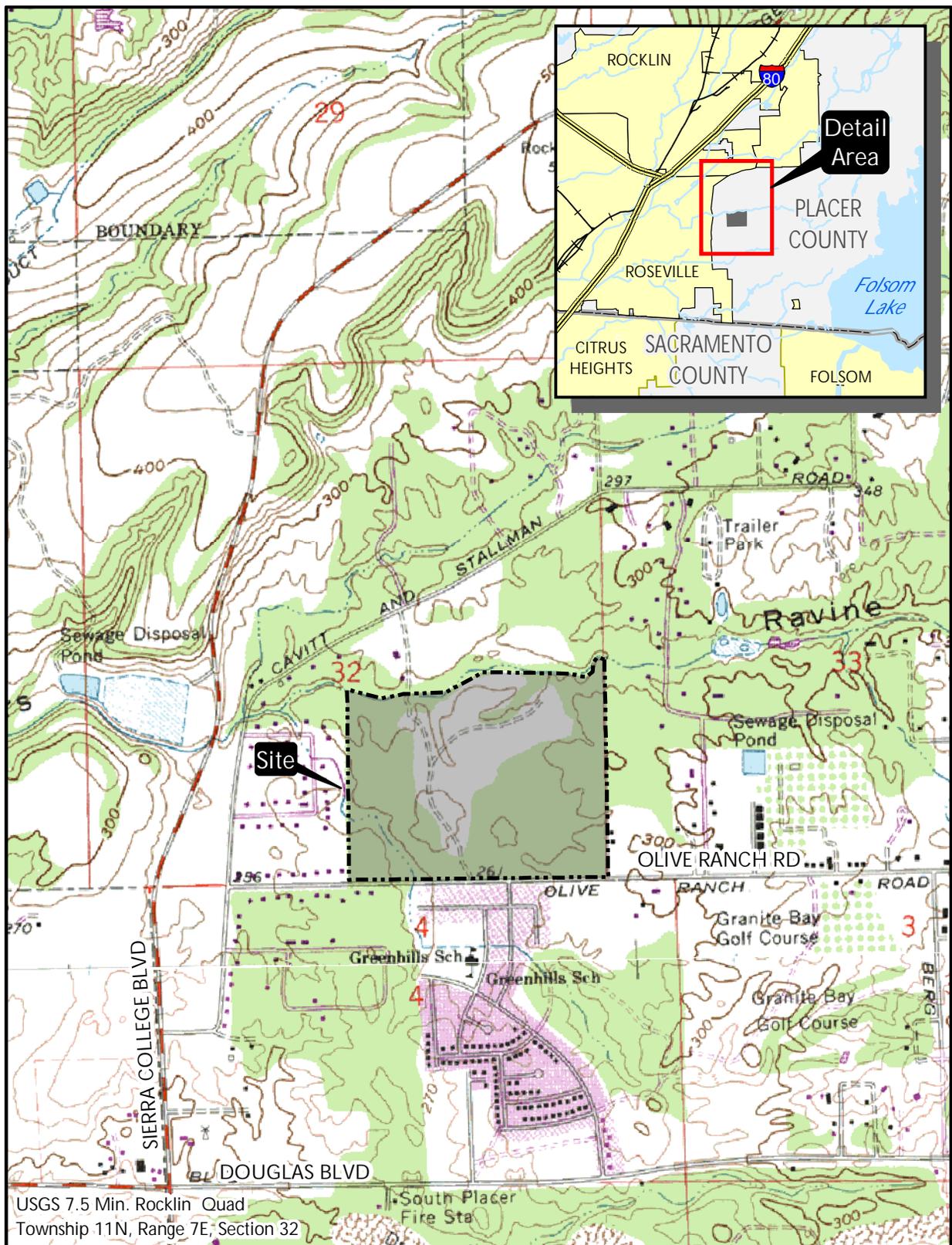
An arborist report has been prepared for the site. Site plans should show the trunk locations and driplines of all protected trees onsite. Grading plans can then be used to evaluate the impact of the proposed project on the protected trees. Mitigation for impacts, either through onsite planting of native trees or payment of fees, is typically required as a condition of project development.

## 7.0 REFERENCES

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- Barr, C.B. 1991. *The distribution, habitat, and status of the valley elderberry longhorn beetle (Desmocerus californicus dimorphus)*. U.S. Fish and Wildlife Service: Sacramento, CA.;
- Bloom, P. and D. Van De Water. 1994. *Swainson's Hawk in Life on the Edge: A Guide to California's Endangered Natural Resources: Wildlife*. BioSystems Books, Santa Cruz, CA.;
- Bradbury, M., Estep, J.A., and D. Anderson. In Preparation. *Migratory Patterns and Wintering Range of the Central Valley Swainson's Hawk*;
- California Department of Fish and Game. 1988. *A Guide to Wildlife Habitats of California*. Sacramento, CA.;
- California Department of Fish and Game. 1994. *Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California*;
- California Department of Fish and Game. 2005. *California Natural Diversity Data Base (CNDDB): Rocklin Quadrangle*. Sacramento, CA.;
- California Native Plant Society. 2001. *Inventory of Rare and Endangered Plants of California* (sixth edition). Sacramento, CA.;
- Collinge, S.K., M. Holyoak, C.B. Barr, and J.T. Marty. 2001. Riparian habitat fragmentation and population persistence of the threatened valley elderberry longhorn beetle in Central California. *Biological Conservation* 100:103–113;
- Eriksen, C. and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas*. Mad River Press, Inc. Eureka, CA.;
- Hickman, James C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California.;
- Sawyer, John O. and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, CA.;
- Merron, Glenn. Fisheries Biologist, Inland Ecosystems. Personal communication. October 31, 2005.;
- Natural Resource Conservation Service. 1980. *Soil Survey of Placer County, California Western Part*. U.S. Department of Agriculture.;

- Soil Conservation Service. March 1992. *Official List of Hydric Soil Map Units for Placer County*. California. U.S. Department of Agriculture;
- Stebbins, Robert C. 2003. *Western Reptiles and Amphibians* (third edition). Houghton Mifflin Company, Boston, MA;
- U.S. Department of the Interior, Fish and Wildlife Service. 1980. *Listing the valley elderberry longhorn beetle as a threatened species with critical habitat*. Federal Register 45:52803–52807;
- U.S. Department of the Interior, Fish and Wildlife Service. 1984. *Recovery plan for the valley elderberry longhorn beetle*. U.S. Fish and Wildlife Service, Endangered Species Program: Portland, Oregon;
- U.S. Fish and Wildlife Service. 2005. *Federal Endangered and Threatened Species that may be affected by Projects in the Rocklin 7.5 minute series quadrangle*. Sacramento, CA.;
- U.S. Geological Survey. 1967 (photorevised 1981). *Rocklin Quadrangle California. 7.5-minute series topographic quadrangle*. United States Department of Interior.; and
- Zeiner, D.C., W.R. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1990. *California's Wildlife Volume II: Birds*, State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.



USGS 7.5 Min. Rocklin Quad  
Township 11N, Range 7E, Section 32

SITE AND VICINITY

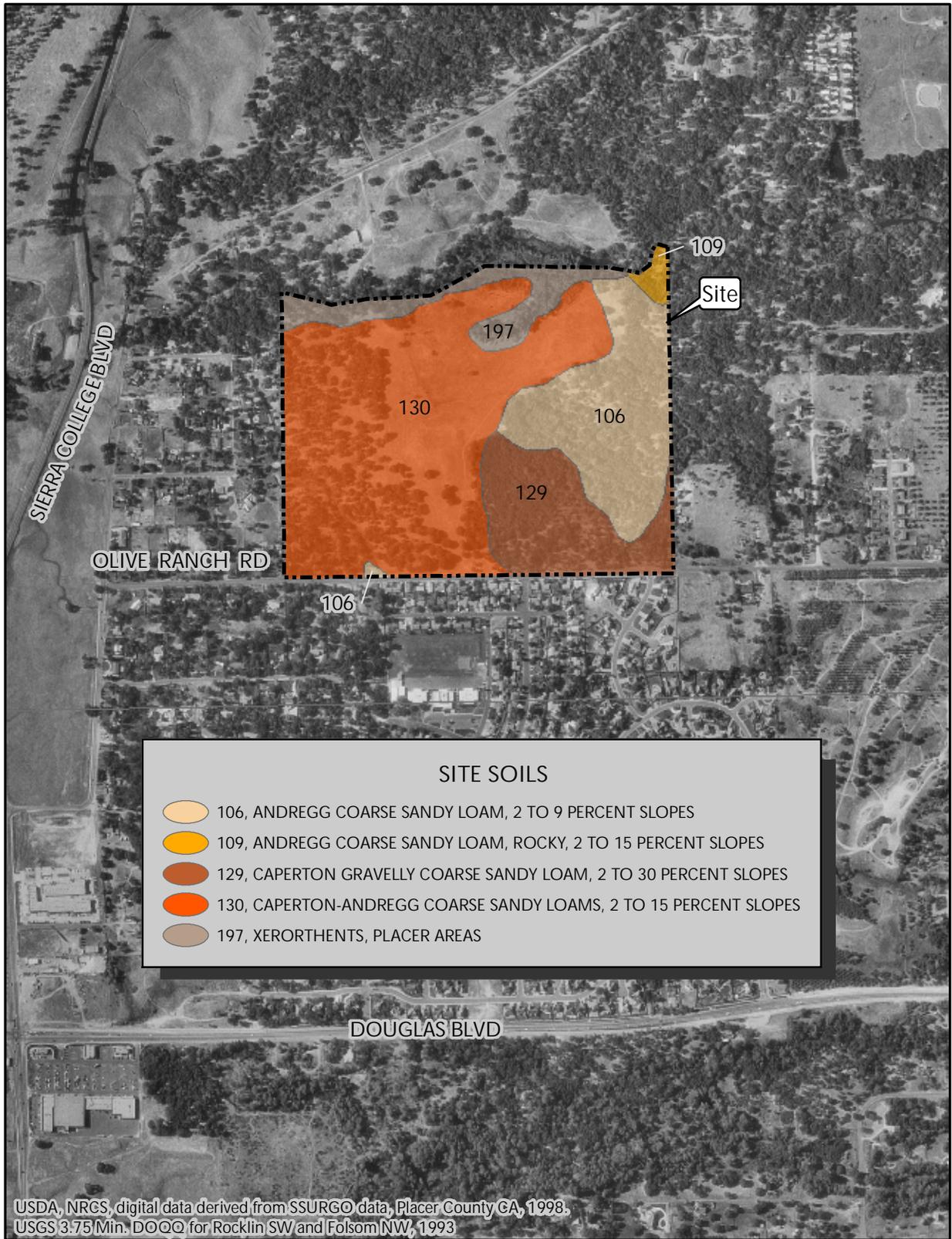
**FOOTHILL ASSOCIATES**  
ENVIRONMENTAL CONSULTING • PLANNING  
LANDSCAPE ARCHITECTURE



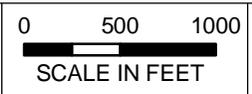
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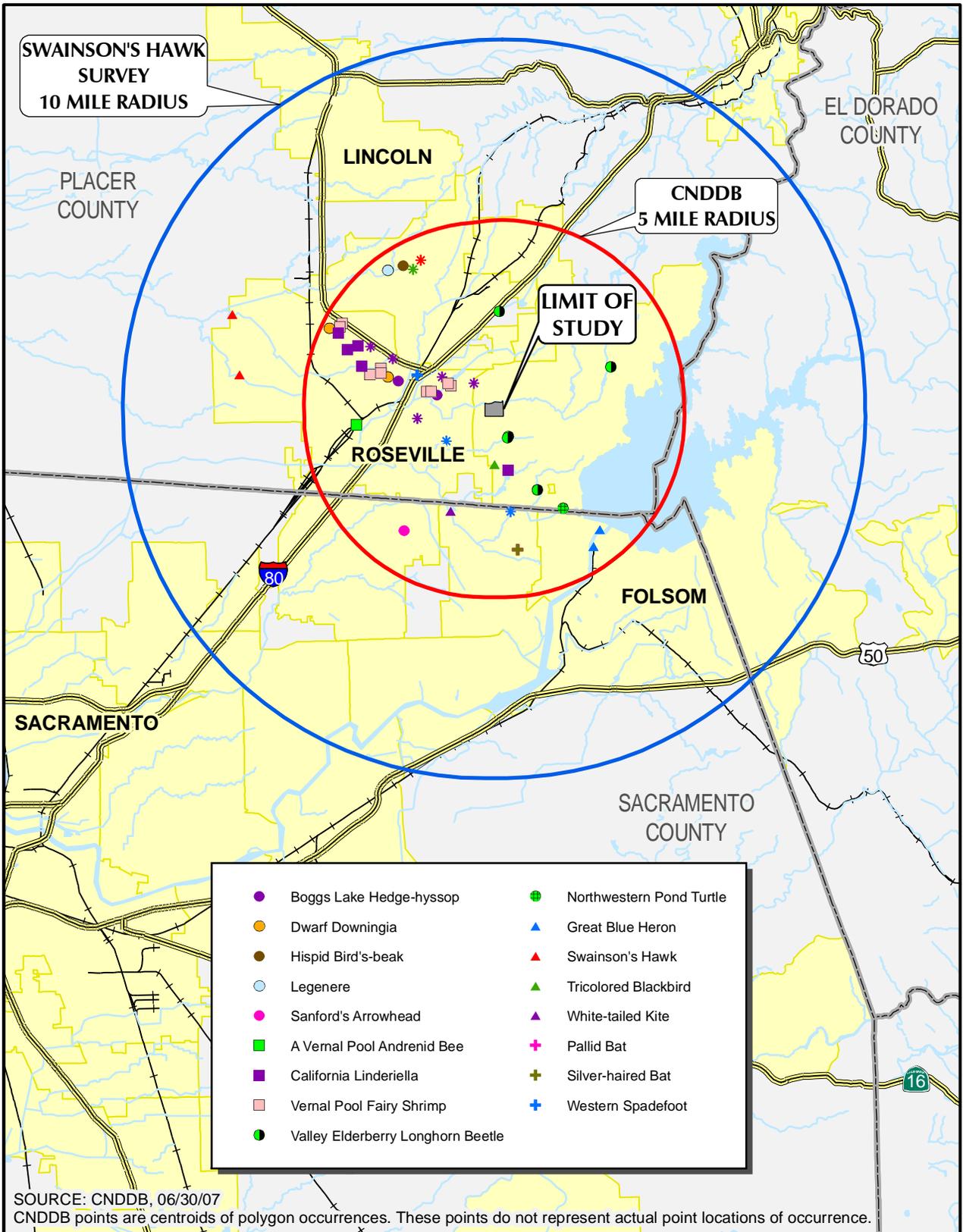
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**FIGURE 1**



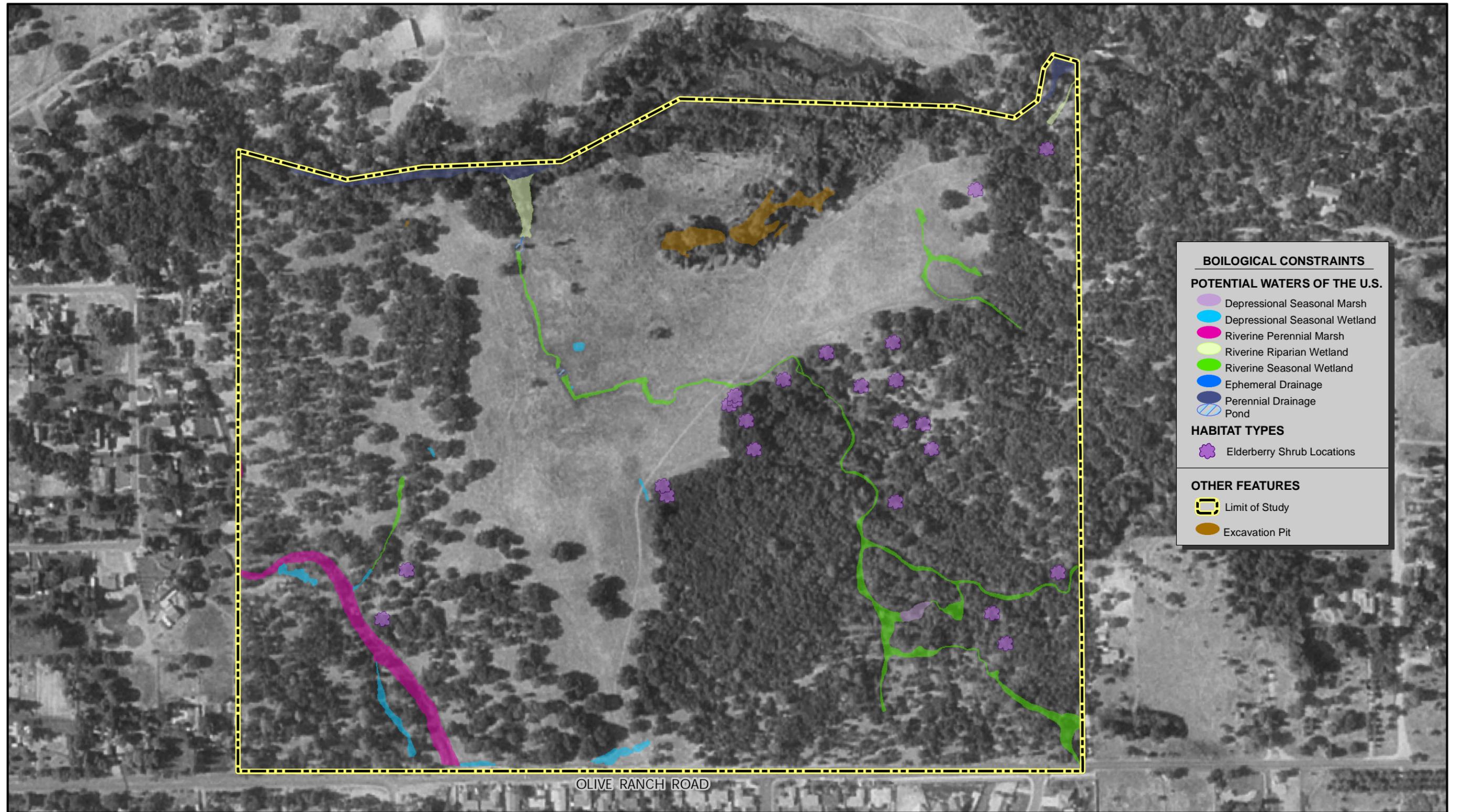
**SOILS**





**CNDDDB**





**BOIOLOGICAL CONSTRAINTS**

**POTENTIAL WATERS OF THE U.S.**

- Depressional Seasonal Marsh
- Depressional Seasonal Wetland
- Riverine Perennial Marsh
- Riverine Riparian Wetland
- Riverine Seasonal Wetland
- Ephemeral Drainage
- Perennial Drainage
- Pond

**HABITAT TYPES**

- ★ Elderberry Shrub Locations

**OTHER FEATURES**

- Limit of Study
- Excavation Pit

**BIOLOGICAL CONSTRAINTS**

WATERS OF THE U.S. ACREAGES			
CLASSIFICATION	FILL	PRESERVED	TOTAL*
<b>DEPRESSIONAL WETLANDS</b>			
Seasonal Marsh	0.07	N/A	0.07
Seasonal Wetland	0.18	0.16	0.34
<b>RIVERINE WETLANDS</b>			
Seasonal Wetland	1.13	0.14	1.27
Riparian Wetland	0.08	0.15	0.23
Perennial Marsh	0.18	0.78	0.96
<b>OTHER WATERS OF THE U.S.</b>			
Ephemeral Drainage	<0.01	N/A	<0.01
Perennial Drainage	N/A	0.65	0.65
Pond	0.03	NA	0.03
<b>TOTAL</b>	<b>1.67</b>	<b>1.88</b>	<b>3.55</b>

\*ACOE verified 1/30/07, #200600800.

OTHER FEATURES	
Project Boundary	Proposed Fill Area
Storm Water Detention Area	Excavation Pit
Water Quality Basin	Open Space, ± 19 acres



## RANCHO DEL ORO ESTATES IMPACTS TO WATERS OF THE U.S.



Digital base data provided by Andregg Geomatics, 2009.  
Project boundary is approximate.



Drawn By: RJM  
Date: 10/22/09