Biological Resources Assessment

±34-Acre El Dorado Hills 52
El Dorado County, California

Prepared for:

EDH 52, GP

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Executive Summary

Foothill Associates' biologists conducted a biological resources assessment (BRA) and focused surveys for western burrowing owl, special-status plants, and California red-legged frog on the El Dorado Hills 52 Study Area located within El Dorado County, California. The purpose of this BRA is to summarize the general biological resources on the Study Area, to assess the suitability of the Study Area to support special-status species and sensitive habitat types, to summarize the results of various focused surveys, and to provide recommendations for regulatory permitting or further analysis that may be required prior to development activities occurring on the Study Area.

The El Dorado Hills 52 Study Area (Study Area) consists of ±34 acres of land that is primarily annual grassland. The Study Area is bifurcated by Silva Valley Parkway. A former home site is located on the southern portion of the property and a large part of the northern portion was used to stockpile soil during the construction of the adjacent Silva Valley Parkway – U.S. Highway 50 Interchange Project. Land uses surrounding the Study Area include an elementary school, residences, and U.S. Highway 50.

Known or potential biological constraints within the Study Area include:

- Potential habitat for special-status plant species;
- Potential habitat for valley elderberry longhorn beetle;
- Potential habitat for western pond turtle;
- Potential habitat for Blainville's horned lizard;
- Potential habitat for foothill yellow-legged frog;
- Potential habitat for western spadefoot;
- Potential foraging habitat for golden eagle;
- Potential foraging habitat for tricolored blackbird;
- Potential habitat for burrowing owl;
- Potential nesting sites and foraging habitat for raptors and other birds;
- Potential habitat for American badger;
- Potential habitat for special-status bat species including pallid bat and silver-haired bat; and
- Sensitive habitats, including potentially jurisdictional waters of the U.S. (seasonal wetlands, perennial marsh, and ephemeral and perennial drainages), riparian habitat, valley oak woodland, and purple needlegrass grassland.

1.0 INTRODUCTION

This report summarizes the findings of a BRA, focused surveys for burrowing owl, California red-legged frog, and special-status plants and an aquatic resources delineation completed for the ±34-acre El Dorado Hills 52 Study Area, located within El Dorado County, California. This document addresses the onsite physical features, as well as plant communities present and the common plant and wildlife species occurring, or potentially occurring, in the Study Area. 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 required prior to development activities occurring on the Study Area.

1.1. Project Description

Development proposed within the Study Area will ultimately result in the development of approximately 32-acres of commercial development. The northern portion of the Study Area is approximately 17.07 acres (North Site) and the southern portion is approximately 15.73 acres (South Site), net of the right-of-way for roads. Development is designed to allow either the North Site or the South Site to develop independent from the other. Proposed improvements will include construction of commercial buildings and associated parking, utilities, and storm water management facilities as well as multiple points of access, and a new traffic signal on Silva Valley Parkway. Ancillary amenities include pedestrian walkways, bicycle parking, signage and lighting and landscaping. A 7.69-acre area within the North Site is dedicated right-of-way associated with the future extension of Country Club Drive. A 1.38-acre open space area west of Old Silva Valley Road will not be developed.

2.0 REGULATORY FRAMEWORK

Federal, State, and local environmental laws, regulations, and policies relevant to the California Environmental Quality Act (CEQA) review process are summarized below. The CEQA significance criteria are also included in this section.

2.1. Federal Regulations

2.1.1. Federal Endangered Species Act

The U.S. 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). Harass 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.

In the context of the proposed project, FESA consultation with the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) 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.

2.1.2. 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.

2.1.3. The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to "*take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof*." Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as "*to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to*

an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

2.2. State Jurisdiction

2.2.1. California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW), when preparing CEQA documents. The purpose is to ensure that the State lead agency 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 CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFW 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).

2.2.2. California Department of Fish and Game Codes

A number of species have been designated "fully protected" species under Sections 5515, 5050, 3511, and 4700 of the Fish and Game Code, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of fully protected species is prohibited. The California Fish and Game Code defines take as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*" Additionally, Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests.

2.2.3. Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants protected under the NPPA. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

2.3. Jurisdictional Waters

2.3.1. Federal Jurisdiction

The U.S. Army Corps of Engineers (Corps) regulates discharge of dredge or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA). "Discharges of fill material"

is 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)].

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)].

An aquatic feature is determined to be a water of the U.S. based on nexus with a traditionally navigable water pursuant to the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208) and agency guidance subsequent to this decision. Under these rules, the Corps asserts jurisdiction over wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries (i.e., waters that have a continuous flow at least three months out of the year), and wetlands that abut relatively permanent tributaries. The Corps determines jurisdiction over waters that are non-navigable tributaries that are not relatively permanent, and wetlands adjacent to these tributaries, by making a determination whether such waters "significantly affect the chemical, physical, and biological integrity of other jurisdictional waters more readily understood as "navigable." Finally, the Corps generally does not consider the following to be "waters of the United States": swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow) and ditches "wholly in and draining only uplands…which do not carry a relatively permanent flow of water." Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation.

2.3.2. State Jurisdiction

Regional Water Quality Control Boards

Discharges of fill or waste material to waters of the State are regulated by the State Water Resources Control Board (SWRCB) through its Regional Water Quality Control Boards (RWQCB) under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (contained in the California Water Code). All waters of the U.S. are also considered waters of the State. In addition, other aquatic features that are not subject to Corps' jurisdiction, such as roadside ditches or isolated wetlands, may be considered waters of the State. This determination will be made by RWQCB staff on a case-by-case basis.

Section 401 of the CWA requires an applicant to obtain "water quality certification" to ensure compliance with State water quality standards before certain federal licenses or permits may be issued. Section 13260(a) of the Porter-Cologne Water Quality Control Act requires any person discharging waste, including dredged or fill material, or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste discharge. The permits subject to Section 401 include CWA Section 404 permits issued by the Corps. Waste discharge requirements under the Porter-Cologne Water Quality Control Act were typically waived for projects that required certification. Discharges to waters of the State that are not subject to a CWA Section 404 permit rely on the report of waste discharge process.

California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW 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.*" Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over 4-inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW 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 CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

2.4. CEQA Significance

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 CDFW 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 the CDFW 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, 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.

2.4.1. California Native Plant Society

The California Native Plant Society (CNPS) maintains a rank 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-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS ranks:

- Rank 1A: Plants presumed Extinct in California
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- Rank 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere

- Rank 3: Plants about which we need more information – A Review List
- Rank 4: Plants of limited distribution – A Watch List

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA.

2.4.2. California Department of Fish and Wildlife Species of Concern

Some additional fish, amphibian, reptile, bird, and mammal species may receive consideration by CDFW and lead agencies during the CEQA process, in addition to species that are formally listed under FESA and CESA or are fully protected. These species are included on the *Special Animals List*, which is maintained by CDFW. This list tracks species in California whose numbers, reproductive success, or habitat may be in decline. In addition to "Species of Special Concern" (SSC), the *Special Animals List* includes species that are tracked in the California Natural Diversity Database (CNDDB), but warrant no legal protection. These species are identified as "California Special Animals" (CSA).

2.5. El Dorado County Policies and Regulations

2.5.1. El Dorado County General Plan

In addition to the federal and State regulations described above, the *County of El Dorado General Plan* identifies goals, objectives, and policies to provide further protection to biological resources within the County's limits (El Dorado County 2004). Applicable General Plan policies are summarized below and included in **Appendix A**.

The General Plan's *Conservation Element* sets a number of goals to conserve, enhance, and manage water resources, wildlife, fisheries, vegetation, and wildlife habitat resources. In furtherance of these goals, the County has established a number of policies designed to minimize impacts to sensitive species and habitats. Policy 7.3.3.4 requires setbacks from riparian areas and wetlands. Policy 7.4.1.6 requires that development projects be designed to avoid fragmentation of sensitive habitats to the greatest extent feasible. A number of policies related to Objective 7.42 require preservation of wildlife migration and movement corridors, including increased oak canopy retention requirements and prohibition of fences or other structures that would restrict wildlife movement.

2.5.2. El Dorado Hills Specific Plan

In addition to federal and State regulations, the *El Dorado Hills Specific Plan* (Specific Plan) identifies goals, objectives, and policies regarding establishment and maintenance of open space and wetland areas. The construction of the El Dorado Hills 52 Project is in conformance with this Specific Plan. Applicable Specific Plan requirements are included in **Appendix A**.

2.5.3. El Dorado County Tree Ordinance

The County of El Dorado currently regulates impacts to oak woodland canopy under General Plan Policy 7.4.4.4. All oak trees, of all sizes, are included in the measurement of oak canopy. All new development projects on parcels greater than 1 acre with at least 1 percent canopy cover must adhere to the retention standard described in Option A of the policy. Canopy retention requirements are based on the amount of existing canopy on the site. In addition to preservation of existing oak woodland canopy, mitigation for impacts to oak woodland canopy is required at a 1:1 ratio. Application of the policy is described in the Interim Interpretive Guidelines for General Plan Policy 7.4.4.4 (Option A), which was last amended on October 12, 2007. The policy states that mitigation can be in the form of on-site or off-site planting of oak trees or acorns, or obtaining an offsite conservation easement to protect existing oak woodland habitat in lieu of planting. As per the Guidelines, a Monitoring and Reporting Plan needs to be prepared and is subject to maintenance and monitoring for up to ten years.

The County is in the process of revising the *El Dorado County Oak Resources Management Plan* (ORMP), which is expected to be adopted and go into effect in the near future. Under the proposed new plan, an oak woodland removal permit will be required prior to removal of oak trees that are part of an oak woodland. Mitigation requirements will be based on the percentage of existing oak woodland removed ranging from 1:1 mitigation for zero to 50 percent removal to 2:1 mitigation for more than 75 percent removal. Mitigation may be completed with a combination of the following options: acquisition of an off-site conservation easement, payment of in-lieu fees, or either on-site or off-site replacement planting of up to 50 percent of the required mitigation area. A tree removal permit shall be required prior to the removal of any oak tree not located in an oak woodland and for removal of all Heritage Trees (native oaks with a trunk diameter of 36” or greater at breast height). Trees removed under permit shall require replacement planting or payment of in-lieu fees in an amount equivalent to the number of trunk inches removed.

2.6. El Dorado Hills Community Services District Policies

In addition to federal and State regulations, the El Dorado Hills Community Services District (EDHCSD) identifies goals, objectives, and policies regarding oak tree preservation. Applicable policies are included in **Appendix A**.

3.0 METHODS

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this assessment are listed in the **References** section. The following site-specific information was reviewed:

- California Department of Fish and Wildlife (CDFW). 2017. *California Natural Diversity Data Base* (CNDDB: *Clarksville, Pilot Hill, Coloma, Shingle Springs, Latrobe, Folsom SE, Buffalo Creek*, *Rocklin*, and *Folsom* U.S. Geological Survey (USGS) 7.5-minute series quadrangles), Sacramento, CA. Accessed [8/15/2017] (**Appendix B**);
- California Native Plant Society (CNPS). 2017. *Inventory of Rare and Endangered Plants* (online edition, v8-02) (CNPS: *Clarksville, Pilot Hill, Coloma, Shingle Springs, Latrobe, Folsom SE, Buffalo Creek*, *Rocklin*, and *Folsom* quadrangles). Accessed [8/15/2017] (**Appendix B**);
- U.S. Fish and Wildlife Service (USFWS). 2017. *Information for Planning and Conservation* (IPaC) *Official Species List*: *El Dorado Hills 52*. Accessed [8/15/2017] (**Appendix B**);
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2015. Web Soil Survey. Available online at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.html. Accessed [8/15/2017]; and
- U.S. Geological Survey. 1967. Photorevised 1980. *Clarksville, California*. 7.5-minute series topographic quadrangle. United States Department of Interior; and
- Biological reports and associated documents previously prepared for the Study Area.

Prior to the site survey, existing information, including the previous wetland delineation and soil maps, were reviewed and the results of the records search and five-mile radius CNNDB query were summarized in a table (**Appendix B**). General field surveys of the Study Area were conducted on April 5, 2013 and August 8, 2017. The Study Area was systematically surveyed on foot with binoculars to ensure total search coverage, with special attention given to identifying those portions of the Study Area with the potential for supporting special-status species and sensitive habitats. During the field surveys, biologists recorded plant and animal species observed (**Appendix C**), as well as characterized biological communities occurring onsite. Following the site survey, the potential for each species identified in the records search to occur in the Study Area was determined based on the site surveys, soils, and species-specific information, as shown in **Appendix B**.

A wetland delineation was performed separately utilizing the Corps 1987 three-parameter methodology to delineate potentially jurisdictional waters of the U.S. on the ±200-acre Silva Valley Interchange Project, which includes the Study Area. The Corps issued a Preliminary Jurisdictional Determination for the aquatic features delineated within the Study Area on June 30, 2009 (SPK-2005-00070), as part of the Silva Valley Interchange Project, concurring with the amount of jurisdictional aquatic features mapped. The delineation has since expired. Therefore,

an updated delineation was performed on December 15, 2015. The results of the wetland delineation are summarized herein and are discussed in detail under a separate cover (Foothill Associates 2017a). The results are considered preliminary until the Corps verifies the findings.

Botanical inventories were conducted on April 24, 2015, May 26, 2015, and June 16, 2015. The botanical inventories were conducted in accordance with CDFW's (CDFG 2009) protocol plant surveys. The results of the botanical surveys are summarized herein and are discussed in detail under a separate cover (Foothill Associates 2016c). A complete list of plants observed within the Study Area is provided in **Appendix C**.

Protocol-level burrowing owl surveys were conducted on March 12, 2015, April 24, 2015, May 26, 2015, and June 16, 2015. The surveys were conducted in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The results of the burrowing owl surveys are summarized herein and are discussed in detail under a separate cover (Foothill Associates 2016c).

Protocol-level breeding season California red-legged frog (CRLF) surveys were conducted on January 12 and 26, 2016 and February 2 and 9, 2016. The protocol-level breeding season surveys were conducted in accordance with the *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog* (USFWS 2005; CRLF Guidance). The results of the protocol-level breeding season surveys are summarized herein and are discussed in detail under a separate cover (Foothill Associates 2016a).

An oak woodland analysis was performed to document the extent of the existing oak trees in the Study Area and impacts from the proposed project. The oak woodland report is contained under separate cover (Foothill Associates 2017b).

4.0 RESULTS

4.1. Site Location and Description

The Study Area is located in in El Dorado County adjacent to U.S. Highway 50 immediately east of Silva Valley Parkway and north of Tong Road. Land uses surrounding the Study Area include residential development to the north and paved roads, oak woodland, and annual grassland to the east, west, and south. The Study Area is located within Township 9 North, Range 8 East, Section 1 of the *Clarksvill*e USGS 7.5-minute series quadrangle. The approximate location of the center of the Study Area is 38° 39' 40.160" North, 121° 3' 23.354" West (**Figure 1**).

The Study Area consists of approximately 34 acres of land that is primarily annual grassland. The Study Area is bifurcated by Silva Valley Parkway. Two drainage corridors cross the Study Area from the northeast to the southwest.

4.2. Physical Features

4.2.1. Topography and Drainage

Topography within the Study Area ranges from relatively level to moderately sloped with elevations ranging from approximately 700 to 800 feet above mean sea level (MSL) (~210-240 meters). Surface runoff flows through and exits the Study Area via riverine drainages, which run in a northeast to southwest direction.

4.2.2. Soils

The Natural Resources Conservation Service (NRCS) has mapped one soil unit within the Study Area (**Figure 2**): **Auburn Silt Loam, 2 to 30 Percent Slopes**. General characteristics associated with this soil type are described below (USDA, NRCS 1974).

- **(AwD) Auburn Silt Loam, 2 to 30 Percent Slopes**: The soils in this series are well drained. Permeability is moderate. Vegetation associated with this soil series includes annual grasses, forbs, and oaks. The hydric soils list for El Dorado County does not identify this soil type as hydric (USDA, NRCS 2015).

4.3. Biological Communities

Six major biological communities occur in the Study Area including annual grassland, riparian woodland, valley oak woodland, seasonal wetland, perennial marsh, and disturbed/developed. These communities provide habitat to a number of common species of wildlife and may provide suitable habitat for special-status species. It should be noted that wetlands may occur within a biological community. For instance, a creek surrounded by riparian woodland would be included within the riparian woodland for the purposes of determining biological community acreage. Vernal pools and seasonal wetlands may be included in the annual grassland community and are often used by wildlife from the annual grassland. However, a very different aquatic habitat, such as a perennial marsh, is considered its own biological community. Dominant vegetation observed within each biological community is discussed in detail below. A

comprehensive list of plants observed within the Study Area is provided in **Appendix C**. The location and extent of each biological community are depicted in **Figure 3**.

4.3.1. Annual Grassland

Annual grassland dominates both the northern and southern portions of the Study Area (**Figure 3**). This vegetation community is characterized primarily by an assemblage of non-native annual grasses and forbs. Dominant vegetation includes ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and wild oat (*Avena fatua*) intermixed with red-stemmed filaree (*Erodium cicutarium*), popcornflower (*Plagiobothrys* sp.), black mustard (*Brassica nigra*), winter vetch (*Vicia villosa*), scarlet pimpernel (*Anagallis arvensis*), St. John's wort (*Hypericum perforatum*), brodiaea (*Brodiaea elegans*), fiddleneck (*Amsinckia* sp.), rose clover (*Trifolium hirtum*), and milk-thistle (*Silybum marianum*).

Two areas within the annual grassland contain purple needlegrass within the southern portion of the Study Area (**Figure 3**). The purple needlegrass is interspersed with northern willow herb (*Epilobium ciliatum*), ripgut brome, soft chess, and wild oat.

The annual grassland community includes small ephemeral and perennial drainages. The ephemeral drainage is mostly unvegetated and highly seasonal. The perennial drainage has a small clump of willows (*Salix* sp.) and broadleaf cattail (*Typha latifolia*) and is otherwise minimally vegetated.

4.3.2. Riparian Woodland

Riparian woodland habitat occurs within the along perennial drainage on the western boundary of the Study Area (**Figure 3**). Dominant vegetation includes broadleaf cattail, willow, spike rush (*Eleocharis macrostachya*), pennyroyal (*Mentha pulegium*), Himalayan blackberry (*Rubus armeniacus*), and valley oak (*Quercus lobata*).

4.3.3. Valley Oak Woodland

Valley oak woodland is found in a small area on the southwest boundary of the Study Area where a small stand of mature valley oak trees overhangs a small perennial drainage (**Figure 3**). The understory is primarily annual grassland with small areas of milkweed (*Asclepias fascicularis*) and pennyroyal immediately adjacent to the drainage.

4.3.4. Seasonal Wetland

A number of seasonal wetland features are found in the Study Area (**Figure 3**). Most are associated with the eastern drainage system. The seasonal wetlands include riverine, depressional, and slope topography, but the vegetation is similar throughout the Study Area. Dominant vegetation in the seasonal wetlands includes rabbitsfoot grass (*Polypogon monspeliensis*), spike rush (*Eleocharis macrostachya*), nutsedge (*Cyperus eragrostis*), curly dock (*Rumex crispus*), pennyroyal, coyote-thistle (*Eryngium vaseyi*), brome fescue (*Festuca bromoides*), ryegrass, annual hair grass (*Deschampsia danthonioides*), and rye grass (*Festuca perennis*).

4.3.5. Perennial Marsh

Perennial marsh habitat is found in the southern portion of the Study Area (**Figure 3**). It is dominated by common knotweed (*Persicaria lapathifolia*) and curly dock with areas of dense cattails, Himalayan blackberry, and a small clump of willows.

4.3.6. Disturbed/ Developed

Disturbed/developed areas in the Study Area include graded roads and a stockpile area (**Figure 3**). The disturbed/developed areas are sparsely vegetated with red-stemmed filaree, soft chess, wild oat, and winter vetch.

4.4. 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. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under CESA or FESA;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- Included on the CDFW Special Animals List;
- Identified as Rank 1-4 by CNPS; or
- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on queries of the CNDDB, the USFWS, and CNPS ranked species (online versions) for the *Clarksville* and eight surrounding quadrangles. **Appendix B** includes the common name and scientific name for each species, regulatory status (federal, State, local, CNPS), habitat descriptions, and potential for occurrence in the Study Area. The following set of criteria has been used to determine each species' potential for occurrence in the Study Area:

- **Present**: Species known to occur within the Study Area based on CNDDB records and/or observed within the Study Area during the biological surveys.
- **High**: Species known to occur on or in the vicinity of the Study Area (based on CNDDB records within five miles and/or based on professional expertise specific to the Study Area or species) and there is suitable habitat within the Study Area.
- **Low**: Species known to occur in the vicinity of the Study Area and there is marginal habitat within the Study Area **-OR-** Species is not known to occur in the vicinity of the Study Area, however, there is suitable habitat on the Study Area.
- **None**: Species is not known to occur on or in the vicinity of the Study Area and there is no suitable habitat within the Study Area -**OR-** Species was surveyed for during the

appropriate season with negative results **-OR-** The Study Area occurs outside of the known elevation or geographic ranges.

Only those species that are known to be *present* or have a *high* or *low* potential for occurrence are discussed further in the following sections. Species that were determined to have a potential for occurrence but for which focused surveys were conducted with negative results are not discussed further in this report. Detailed results of focused surveys are contained under separate covers.

4.4.1. Listed and Special-Status Plants

According to the records search, 30 special-status plant species have the potential to occur on or in the vicinity of the Study Area. Based on field observations and literature review, four species were determined to have the potential for occurrence to occur on the Study Area: big-scale balsamroot (*Balsamorhiza macrolep*is var. *macrolepis*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downingia pusilla*), and Sanford's arrowhead (*Sagittaria sanfordii*). Focused botanical surveys were conducted in 2015 during the bloom period of these plants. No special-status plant species were found.

4.4.2. Listed and Special-Status Wildlife

According to the records search, 41 special-status animal species have the potential to occur onsite or in the vicinity. Based on field observations and literature review, 15 species were determined to have the potential for occurrence to occur in the Study Area. Protocol surveys for burrowing owl (*Athene cunicularia*) and California red-legged frog (*Rana draytonii*) were conducted in 2015 and 2016. No observations or evidence of either species was found.

Species that are known to be *present* or that are considered to have a *high* potential to occur onsite include: western pond turtle (*Emys marmorata*) and raptors and other migratory birds. Species that are considered to have a *low* potential to occur onsite include: valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Blainville's horned lizard (*Phrynosoma blainvillii*), foothill yellow-legged frog (*Rana boylii*), western spadefoot (*Spea hammondii*), golden eagle (*Aquila chrysaetos*), tricolored blackbird (*Agelaius tricolor*), American badger (*Taxidea taxus*), and special-status bat species.

Wildlife Species with a High Potential for Occurrence

Western Pond Turtle

Western pond turtles are found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with suitable basking sites (Californiaherps 2017). Suitable aquatic habitat typically has a muddy or rocky bottom and has emergent aquatic vegetation for cover (Stebbins 2003). Western pond turtles nest and overwinter in areas of sparse vegetation comprised of grassland and forbs with less than ten percent slopes, less than 492 feet (150 meters) from aquatic habitat (Rosenberg *et. al.* 2009). There are three CNDDB records for this species within five miles of the Study Area (CDFW 2017a). The riverine perennial marsh, perennial drainage, and surrounding riparian habitat provide aquatic habitat and the surrounding annual grassland

provides upland habitat. This species was not observed within the Study Area during the biological surveys. This species has a *high* potential to occur within the Study Area.

Nesting Birds and Raptors

The nests of raptors and most other birds are protected under the MBTA. Raptors are also protected by Section 3503.5 of the California Fish and Game Code, which makes it illegal to destroy any active raptor nest. Additionally, the USFWS and CDFW identified a number of avian species of conservation concern that do not have specific statutory protection. Avian species forage and nest in a variety of habitats throughout El Dorado County. As shown in **Appendix B**, the riparian and valley oak woodlands, perennial marsh, and annual grasslands on and surrounding the Study Area may provide nesting or foraging habitat for raptors and other protected birds, including: white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*), grasshopper sparrow (*Ammodramus savannarum*), and purple martin (*Progne subis*). Raptors and other protected migratory birds have a high potential to occur in the Study Area.

Wildlife Species with a Low Potential for Occurrence

Valley Elderberry Longhorn Beetle

The USFWS has determined the range of the valley elderberry longhorn beetle (VELB) to include the watersheds of the American, San Joaquin, and Sacramento Rivers and their tributaries up to approximately 3,000 feet above MSL (USFWS 1980). 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. Typical plant species that co-occur with the elderberry shrubs include California sycamore (*Platanus racemosa*), willow, blackberry, and western poison oak (*Toxicodendron diversilobum*) (USFWS 1984). Beetles require elderberry stems with at least one-inch diameter at ground level (dgl) in order for the larvae to utilize the stems (USFWS 1999). The valley elderberry longhorn beetle 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 (Barr 1991). There is one CNDDB record of valley elderberry longhorn beetle listed within five miles of the Study Area (CDFW 2017a). One blue elderberry (*Sambucus nigra* ssp. *caerulea*) stem measuring one-inch dgl and several stems less than one-inch dgl occurs within the riparian habitat within the western portion of the Study Area (**Figure 3**). No exit holes were observed. This species has a *low* potential to occur within the Study Area.

Blainville's Horned Lizard

Blainville's horned lizard inhabits open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains from sea level to 8,000 feet above MSL. It is typically found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose

soil. This species is often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills (Zeiner *et. al.* 1988). There are two CNDDB records of this species within five miles of the Study Area (CDFW 2017a). The species was not observed within the Study Area during the biological surveys. The annual grassland within the Study Area provides minimal habitat for the Blainville's horned lizard due to lack of sandy washes. Therefore, this species has a *low* potential to occur within the Study Area.

Foothill Yellow-Legged Frog

The Foothill yellow-legged frog (FYLF) is a moderate-sized frog (1.5-3.5" long) found on the western slope of the Sierras and along the coast. It has vague dorsolateral folds, horizontal pupils, yellow coloring on the underside of its hind legs, and a granular skin texture that covers the eardrums of colors that harmonize with the surroundings. The FYLF is a stream or river frog of chaparral, forest, and woodland ecozones. This species breeds after the high-water flows subside, mid-March to early June. The FYLF resides in streams and the associated riparian habitat. Metamorphosis generally occurs in three to four months and FYLF reach sexual maturity typically the first summer after they have metamorphosed. Breeding sties occur in shallow, slow flowing water with some pebble and/or cobble substrate. The introductions of bullfrogs and mosquitofish have led to declines in populations in California and Oregon. The perennial drainages provide marginal habitat for this species but there are no CNDDB records of this species within five miles of the Study Area (CDFW 2017a) and the species was not observed within the Study Area during the biological surveys. Therefore, this species has a *low* potential to occur within the Study Area.

Western Spadefoot

Western spadefoot occurs throughout the Central Valley and on the coast from Point Conception, south to the Mexican border. This species occurs from sea level up to 4,500 feet above MSL, in the southern Sierra foothills. Western spadefoot individuals are most commonly found in grassland habitats with temporary pools of water, but they have also been found in open chaparral and valley-foothill pine-oak woodlands (Stebbins 2003). This species spends most of the year underground, where members seek refuge from desiccating by constructing and residing in small burrows. This species often breeds in temporary pools and quiet streams between the months of January and May. There are no CNDDB records for this species within five miles of the Study Area (CDFW 2017a). The species was not observed within the Study Area during the biological surveys. The depressional seasonal wetlands provide low quality breeding habitat given that they do not likely hold water for long enough for the western spadefoot to breed. This species has a *low* potential for utilizing the annual grassland as upland aestivation given the limited aquatic habitat available within the Study Area for breeding.

Golden Eagle

Golden eagles live in semi-open habitats where they have easy access to their primary prey of small to medium-sized mammals. Grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats provide necessary foraging habitat. Nests are placed on cliffs or large trees and are maintained year after year. Breeding occurs from January through August (Kochert *et al.* 2002). Golden eagle home range territories vary widely from 8 to 77 square

miles (McGrady 1997) and are estimated to average 48 square miles in northern California (Zeiner *et al.* 1990). Breeding territories range from 8 to 21 square miles, or 3 to 5 miles surrounding the nest, but activity is often concentrated in a smaller core area. Although only one nest is used each year, a territory may contain multiple alternate nests. Typically, there are between 6 and 14 nests are found in a territory (Kochert *et al.* 2002). Golden eagles may use the same nest for multiple years or use new nest sites every year (Watson 2010).

There is one known occurrence approximately two miles northwest of the Study Area. This active nest was located in a foothill pine on a hillslope surrounded by oak woodland. Existing residences are located uphill within 300 feet of the nest on the north and east. Two juvenile and two adult golden eagles were observed at the nest in August 2013. A pair of adult eagles returned to the nest in 2014 and successfully raised one eaglet, which fledged by June 18, 2014. However, the nest tree fell over during a storm in November 2014. A golden eagle nest was subsequently identified in a foothill pine approximately 2.5 miles northwest of the Study Area on March 6, 2015. The new nest occurred within a foothill pine on a hillslope surrounded by oak woodland, approximately 25 feet from a residential dwelling. This foothill pine died in late 2015. The eagles relocated to another foothill pine downhill from their first nest location in 2016, but this nest is not active in 2017. The current nest location is unknown as of the writing of this report.

No golden eagles were observed during the biological surveys of the Study Area. Although the Study Area does not provide suitable nest trees, the annual grassland provides foraging habitat. This species has a *low* potential to occur within the Study Area.

Tricolored Blackbird

The tricolored blackbird is a colonial species that occurs in pastures, dry seasonal pools, and agricultural fields in the Central Valley and the surrounding foothills. This species usually nests within dense cattails (*Typha* sp.) or tules (*Scirpus* sp.) in emergent wetlands. Tricolored blackbird also nests in thickets of blackberry (*Rubus* sp.), wild rose (*Rosa* sp.), willows, and tall herbs (Zeiner *et. al.* 1990). Nesting locations typically must be large enough to support a minimum colony of approximately fifty pairs (Zeiner *et. al.* 1990). There are three CNDDB records for this species within five miles of the Study Area (CDFW 2017a). The perennial marsh and surrounding riparian habitat could provide nesting habitat, though these areas are not large enough to support colonies. The annual grassland provides foraging habitat for this species. This species was not observed during the biological surveys of the Study Area. This species has a *low* potential to occur within the Study Area.

American Badger

American badgers are found in dry, open habitats including grassland and open woodland. Suitable burrowing habitat requires dry, sandy soil. Breeding occurs in summer and early fall, with young being born from March to April (Nature Serve 2015). There are no CNDDB records for this species within five miles of the Study Area (CDFW 2017a). The annual grassland provides habitat for this species, however, very few potential burrow sites that could be utilized by this species were observed during the biological surveys. No American badgers were

observed during the biological surveys. This species has a *low* potential to occur within the Study Area.

Special-Status Bats

California is home to several special-status bat species, including pallid bat (*Antrozous pallidus*) and silver-haired bat (*Lasionycteris noctivagans*). Bat numbers are in decline throughout the U.S. due to loss of roosting habitat, habitat conversion, and habitat alteration. There are no CNDDB records for bats within five miles of the Study Area (CDFW 2017a). No bats were observed roosting or foraging during the biological surveys. However, the riparian habitat and isolated trees within the annual grassland provide roosting habitat for these species. This species has a *low* potential to occur within the Study Area.

4.5. 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, and/or Sections 401 and 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific policies outlined in the *El Dorado County General Plan*. Sensitive habitats known to occur onsite are seasonal wetlands, perennial marsh, ephemeral and perennial drainages, riparian woodland, oak woodlands, and purple needlegrass grassland (**Figure 3**).

4.5.1. Potential Jurisdictional Waters of the U.S. and State

Potential jurisdictional waters of the U.S. and State located in the Study Area total approximately 0.57 acres. This acreage includes 0.01 acres of depressional seasonal wetland, 0.07 acres of slope seasonal wetland, 0.05 acres of riverine seasonal wetland, 0.31 acres of riverine perennial marsh, 0.05 acres of ephemeral drainage, and 0.07 acres of perennial drainage (**Figure 3**). To date the Corps has not verified these acreages. As discussed in **Section 2.3**, jurisdictional waters of the U.S. are subject to Section 404 of CWA and are regulated by the Corps.

4.5.2. Riparian Habitat

A total of 0.15 acres of riparian habitat are located in the Study Area along the northern perennial drainage (**Figure 3**). As discussed in **Section 2.2**, riparian areas, defined as the outermost bank or the edge of riparian vegetation, whichever is greater, may be subject CDFW jurisdiction under Section 1602 of the Fish and Game Code. Additionally, CDFW may exert jurisdiction over the drainages and other riverine aquatic features. CDFW should be consulted prior to disturbance or development to determine whether issuance of a Section 1602 Lake or Streambed Alteration Agreement is required.

4.5.3. Oak Trees and Oak Woodlands

A total of ten oak trees protected under Policy 7.4.5.2, consisting of nine valley oaks (*Quercus lobata*) and one blue oak (*Quercus douglasii*) are present in the Study Area. In total, there is 0.55 acres of oak canopy in the Study Area, which is equivalent to 1.6 percent canopy cover (**Figure 3**). Oak woodland habitat is currently regulated under Section 7.4.4.4 of the *El Dorado*

County General Plan (refer to Section 3.8.1, 3.9, and 3.10) based on canopy coverage. The Study Area is within the area covered by the *El Dorado Hills Specific Plan*, which generally describes preservation criteria for oak trees within designated open space areas.

4.5.4. Purple Needlegrass

Approximately 0.33 acres of purple needlegrass are interspersed within the annual grassland. Purple needlegrass grassland is listed as a sensitive plant community on the CDFW Natural Communities List and is required to be considered in CEQA documents. In order for purple needlegrass grassland to be considered a natural community, at least five percent of the species is required as a characteristic to dominant species in the herbaceous layer and the species is usually greater than 10 percent relative cover of the herbaceous layer (Sawyer *et al.* 2009). These mapped areas contain greater than 10 percent relative cover within the herbaceous layer. Therefore, the two polygons of purple needlegrass are considered a sensitive habitat since the acreage meets the minimum percentage criteria necessary to be considered a purple needlegrass grassland natural community.

4.6. Wildlife Migration Corridors and Important Biological Corridors

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Fragmentation can also occur when a portion of one or more habitats is converted into another habitat, such as when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs. The Study Area does not link two significant natural areas and is surrounded by similar habitat types; therefore, it is not considered a wildlife migration corridor.

The *El Dorado County General Plan* identifies a number of Important Biological Corridors (IBC). The Study Area is not located within any existing IBC.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Known or potential biological constraints within the Study Area include:

- Potential habitat for special-status plant species;
- Potential habitat for valley elderberry longhorn beetle;
- Potential habitat for western pond turtle;
- Potential habitat for Blainville's horned lizard;
- Potential habitat for foothill yellow-legged frog;
- Potential habitat for western spadefoot;
- Potential foraging habitat for golden eagle;
- Potential foraging habitat for tricolored blackbird;
- Potential habitat for burrowing owl;
- Potential nesting sites and foraging habitat for raptors and other birds;
- Potential habitat for American badger;
- Potential habitat for special-status bat species including pallid bat and silver-haired bat; and
- Sensitive habitats, including potentially jurisdictional waters of the U.S. (seasonal wetlands, perennial marsh, and ephemeral and perennial drainages), riparian habitat, valley oak woodland, and purple needlegrass grassland.

5.1. Special-Status Plant Species

Botanical inventories were conducted on April 24, 2015, May 26, 2015, and June 16, 2015. No special-status plants occur within the Study Area. However, if construction does not commence within two years of the 2015 botanical inventories, additional botanical inventories are recommended to ensure that populations have not established in the intervening years, in accordance with CDFW's (CDFG 2009) plant protocols.

5.2. Valley Elderberry Longhorn Beetle

Although no VELB were observed, there is a low potential for VELB to be present in the Study Area due to a single blue elderberry shrub observed within southern portion of the Study Area. According to the USFWS *Conservation Guidelines for Valley Elderberry Longhorn Beetle* (Guidelines; USFWS 1999), encroachment within 100 feet from elderberry shrubs with stems measuring at least one-inch dgl should be approved by the USFWS and a minimum setback of 20 feet from the driplines of the elderberry shrubs must be maintained. Project activities that will encroach into the 20-foot minimum setback area are assumed to adversely affect VELB. Project activities that may directly or indirectly affect elderberry shrubs with stems measuring at least one-inch dgl require minimization measures including planting replacement habitat or

purchasing mitigation credits from a USFWS-approved mitigation bank. The mitigation ratios vary based on whether exit holes are present and whether the shrubs occur within riparian habitat.

The outer edge of the non-development area is approximately 25 feet from the elderberry shrub measuring one-inch dgl. Therefore, the proposed project would not adversely affect potential habitat for VELB. However, the project proponent should consult with the USFWS to establish avoidance measures to ensure that no indirect effects associated with the encroachment of 100-foot avoidance buffer would occur. At minimum, high visibility construction fencing followed by silt fencing should be placed around the perimeter of the open space area. Signs should be erected approximately 20 feet apart along the high visibility construction fencing with the following information, "*This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the FESA, as amended. Violators are subject to prosecution, fines, and imprisonment.*" The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

5.3. Western Pond Turtle

The perennial marsh and perennial drainages and surrounding uplands within the Study Area may be suitable habitat for western pond turtle and they are known to occur in the vicinity. Filling of these features could impact this species, if present. In addition, vegetation clearing and grading within the surrounding uplands could impact this species, if present.

A pre-construction survey for western pond turtle should be conducted within 14 days of the initiation of construction by a qualified biologist prior to any construction activity that would directly impact pond or stream habitat or disturb the ground within 300 feet of aquatic habitat. If no western pond turtles are observed, a letter report should be prepared to document the survey, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey or halts for more than 14 days a new survey should be conducted prior to reinitiating construction.

If western pond turtles are found during the pre-construction survey, then a qualified biological monitor should be onsite during initial clearing and grading within 300 feet of a drainage, pond, or other aquatic habitat. The biological monitor will relocate any western pond turtles found within the construction footprint to suitable habitat away from the construction zone, but within the vicinity of the Study Area, if required. In addition, a pre-construction worker awareness training should be conducted alerting workers to the presence of and protections for the western pond turtle.

5.4. Blainville's Horned Lizard

The annual grassland within the Study Area provides a low potential for Blainville's horned lizard to occur given the lack of sandy soil. Pre-construction surveys for Blainville's horned lizard are recommended within 14 days prior to the start of ground disturbance. If no Blainville's horned lizards are observed, then no additional measures are recommended. If construction

does not commence within 14 days of the pre-construction survey or halts for more than 14 days, a new survey is recommended.

If Blainville's horned lizards are found, additional avoidance measures are recommended including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a worker awareness training to all construction workers, and being present on the Study Area during grading activities for the purpose of relocating any Blainville's horned lizards found within the construction footprint to suitable habitat away from the construction zone, but within the Study Area.

5.5. Foothill Yellow-Legged Frog

The perennial drainages and surrounding uplands within the Study Area provide potential habitat for foothill yellow-legged frog. A qualified biologist should conduct a pre-construction survey of the drainages and uplands within 150 feet for foothill yellow-legged frog within 14 days prior to commencement of construction activities. If no foothill yellow-legged frog are observed, then a letter report documenting the results of the survey should be provided to the applicant for their records, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, a new survey is recommended.

If any foothill yellow-legged frog are found, additional avoidance measures are recommended including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a worker awareness training to all construction workers, and being present on the Study Area during grading activities for the purpose of relocating any foothill yellow-legged frog found within the construction footprint to suitable habitat away from the construction zone, but within the Study Area.

5.6. Western Spadefoot

The annual grassland within the Study Area provides a low potential for upland aestivation habitat and the depressional seasonal wetland provide low quality breeding habitat for western spadefoot. A qualified biologist should conduct a pre-construction survey for western spadefoot within 14 days prior to commencement of construction activities. If no western spadefoot are observed, then a letter report documenting the results of the survey should be provided to the applicant for their records, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, a new survey is recommended.

If any western spadefoot are found, additional avoidance measures are recommended including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a worker awareness training to all construction workers, and being present on the Study Area during grading activities for the purpose of relocating any western spadefoot found within the construction footprint to suitable habitat away from the construction zone, but within the Study Area.

5.7. Golden Eagle

Although the Study Area does not provide suitable nest trees, the annual grassland provides foraging habitat for golden eagle. A map identifying suitable foraging habitat for golden eagle within a three-mile radius of the last known location of the nest, which includes the Study Area, is provided in **Figure 4**. There is over 4,495 acres of potential foraging habitat surrounding the nest, based on an assessment of current aerial photographs. The project will result in the removal of 27.71 acres of annual grassland. The removal of approximately 0.62 percent of foraging habitat would have no impact on this species. Therefore, no additional measures are recommended.

5.8. Tricolored Blackbird

Although the Study Area does not provide suitable nesting areas for a tricolored blackbird colony, the annual grassland provides suitable foraging habitat. There are currently no requirements for conservation or mitigation for tricolored blackbird foraging habitat. Therefore, no additional measures are recommended.

5.9. Burrowing Owl

Although burrowing owl has a low potential to occur within the annual grassland, given the lack of suitable burrows and that they were not observed during the protocol-level breeding and non-breeding season surveys (Foothill Associates 2016b) or any other biological surveys conducted within the Study Area, they are not currently present. However, the species could occupy the Study Area in the future. The project proponent should conduct a take avoidance survey within 30 days prior to commencement of construction, in accordance with the 2012 *California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation* (2012 Staff Report) (CDFW 2012). The survey area includes an approximately 500-foot (150-meter) buffer around the Study Area, where access is permitted. If the surveys are negative, then no additional measures are recommended.

If burrows are observed within 500 feet of the Study Area, an impact assessment should be prepared and submitted to the CDFW, in accordance with the 2012 Staff Report. If it is determined that project activities may result in impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat, the project proponent should consult with CDFW and develop a detailed mitigation plan such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced. The mitigation plan should be based on the requirements set forth in Appendix A of the 2012 Staff Report.

5.10. Other Raptors and Migratory Birds

Several species of raptors and other migratory birds may forage and nest in the Study Area, including the special-status species white-tailed kite, Cooper's hawk, golden eagle, ferruginous hawk, merlin, grasshopper sparrow, and purple martin. Active nests are protected by the California Fish and Game Code Section 3503.5 and the MBTA. Construction activities could result in disturbance of nest sites through temporary increases in ambient noise levels and increased human activity. In addition, vegetation clearing operations, including pruning or

removal of trees and shrubs, could impact nesting birds if these activities occur during the nesting season (February 15 to August 31). All vegetation clearing including removal of trees and shrubs should be completed between September 1 to February 14, if feasible.

If vegetation removal and grading activities begin during the nesting season (February 15 to August 31), a qualified biologist should conduct a pre-construction survey of the project footprint for active nests. Additionally, the surrounding 500 feet should be surveyed for active raptor nests. The pre-construction survey should be conducted within 14 days prior to commencement of ground-disturbing activities. If the pre-construction survey shows that there is no evidence of active nests, a letter report should be prepared to document the survey, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, an additional survey is required prior to starting work.

If nests are found and considered to be active, the project biologist should establish buffer zones to prohibit construction activities and minimize nest disturbance until the young have successfully fledged. Buffer width will depend on the species in question, surrounding existing disturbances, and specific site characteristics, but may range from 20 feet for some songbirds to 250 feet for most raptors. If active nests are found within any trees slated for removal, then an appropriate buffer should be established around the trees and the trees should not be removed until a biologist determines that the nestlings have successfully fledged. In addition, a pre-construction worker awareness training should be conducted alerting workers to the presence of and protections for the active avian nests. If construction activities are proposed to begin during the non-breeding season (September 1 through January 31), a survey is not required and no further studies are necessary.

5.11. American Badger

The annual grassland provides habitat for American badger. A qualified biologist should conduct a pre-construction survey for American badger within 14 days prior to the start of ground disturbance. If no American badgers are observed, then a letter report documenting the results of the survey should be provided to the project proponent for their records, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, a new survey is recommended.

If American badgers or their dens are found, additional avoidance measures are recommended including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a worker awareness training to all construction workers, and being present on the Study Area during grading activities for the purpose of temporarily halting construction activities until the biologist determines that the badger has left the construction footprint on its own accord.

5.12. Special-Status Bat Species

The existing riparian and oak woodlands provide potential roosting habitat for various bat species that occur in the vicinity of the Study Area. Removal of trees could impact bats should they be roosting in areas proposed for removal.

A qualified biologist should conduct a preconstruction survey within 14 days prior to clearing or grading operations and removal of trees. If no bats are observed, a letter report should be prepared to document the survey, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, an additional survey is required prior to starting work.

If special-status bat species are present and roosting on or within 100 feet of the Study Area, then the biologist should establish an appropriate buffer around the roost site. At minimum, no trees should be removed until the biologist has determined that the bat is no longer roosting in the tree. Additional mitigation measures for bat species, such as installation of bat boxes or alternate roost structures, would be recommended only if special-status bat species are found to be roosting within the project area. In addition, a pre-construction worker awareness training should be conducted alerting workers to the presence of and protections for various bat species.

5.13. Sensitive Habitats

5.13.1.Jurisdictional Waters

Since proposed construction activities will impact aquatic features located in the Study Area, a Section 404 permit should be obtained from the Corps and a Section 401 Water Quality Certification should be obtained for the Regional Water Quality Control Board (RWQCB) prior to the start of construction. Any waters of the U.S. or jurisdictional wetlands 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 agencies.

If a 404 permit is required for the proposed project, 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.

5.13.2. Oak Woodlands

The Project would result in the removal of 9 protected oak trees, resulting in impacts to 0.45-acres of oak canopy. To mitigate for the biological resources impact associated with the loss of oak woodlands associated with the project, a combination of avoidance, protection, onsite replacement, where feasible, and offsite preservation or creation of oak woodland habitat is recommended. Tree protection measures should be implemented around trees to remain in the Study Area as detailed in the project's Tree Survey, Preservation, and Replacement Plan.

5.13.3. Riparian Habitats

Although proposed construction activities will not remove riparian woodland habitat, other drainages and riverine features that will be impacted may be subject to CDFW jurisdiction. It is recommended that a Streambed Alteration Agreement application be submitted to CDFW, pursuant to Section 1600 of the CDFW Code, for any activities affecting the bed, bank or associated riparian vegetation of the stream. If required, the project applicant should coordinate with CDFW in developing appropriate mitigation, and should abide by the conditions of any executed permits.

5.13.4. Purple Needlegrass Grassland

The proposed project would result in the removal of purple needlegrass grassland. Therefore, the acreage of removal should be replaced at a 1:1 ratio. The mitigation location may occur within project's open space areas currently characterized by annual grassland or may occur off-site. Purple needlegrass plants in areas slated for removal should be salvaged to the extent feasible and replanted within the open space area. If this is infeasible, then seedlings/saplings from a local nursery should be obtained. A mitigation and monitoring plan should be prepared outlining methods to be used, success criteria to be met, and adaptive management strategies will be completed prior to project construction. At minimum, the purple needlegrass creation areas shall be monitored twice annually for the first year and once annually for the four subsequent years for a total of five years, success criteria should be established to ensure an 80 percent success rate is met by the fifth year, and adaptive management techniques should be implemented to ensure that the 80 percent success rate is met by the fifth year. This plan may be combined with the Operations and Management Plan for the open space area.

5.14. Summary of Avoidance and Minimization Measures

- Obtain a Section 404 Clean Water Act Permit, 401 Water Quality Certification, and SAA prior to the start of construction;
- Conduct botanical inventories for potentially occurring special-status plants if construction does not commence within two years of the 2015 botanical inventories;
- Conduct clearing and tree and shrub removal operations between September 16 and February 28 to minimize potential impacts to nesting birds;
- If construction begins during the nesting season (March 1 – September 15) conduct a pre-construction survey for active bird nests within the Study Area;

- Conduct a take avoidance survey for burrowing owl within 30 days prior to commencement of construction activities, in accordance with the 2012 Staff Report;
- Within 14 days prior to the initiation of construction activities, conduct a pre-construction survey for coast horned lizard, foothill yellow-legged frog, western pond turtle, American badger, and special-status bat species;
- Implement the tree avoidance, maintenance, and mitigation measures as described in the Tree Survey, Preservation, and Replacement Plan (Foothill Associates 2017); and
- Mitigate for the removal of purple needlegrass grassland at a 1:1 ratio and prepare a mitigation and monitoring plan.

6.0 REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual: Vascular Plants of California*, *2nd Edition*. University of California, Berkeley.

Barbour, Michael G., Todd Keeler-Wolf, and Allan A. Schoenherr, Editors. 2007. *Terrestrial Vegetation of California*, Third Edition. University of California Press, Berkeley and Los Angeles, California.

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, California.

Bradbury, M., Estep, J.A., and D. Anderson. In Preparation. *Migratory Patterns and Wintering Range of the Central Valley Swainson's Hawk*.

Calflora. 2017. *The Calflora Database: Information on California plants for Education, Research and Conservation*. Berkeley, California. Available online at: http://www.calflora.org. [Accessed 8/15/2017].

Californiaherps. 2017. *A Guide to the Amphibians and Reptiles of California*. Available online at: http://californiaherps.com. [Accessed 8/15/2017].

California Department of Fish and Wildlife (CDFW). 2009. *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities*. State of California, California Natural Resources Agency. Department of Fish and Wildlife. November 24, 2009.

CDFW. 2012. *Staff Report on Burrowing Owl Mitigation*. State of California Natural Resources Agency Department of Fish and Game. March 7, 2012.

CDFW. 2017a. *California Natural Diversity Data Base* (CNDDB: *Clarksville, Pilot Hill, Coloma, Shingle Springs, Latrobe, Folsom SE, Buffalo Creek*, *Rocklin*, and *Folsom* U.S. Geological Survey (USGS) 7.5-minute series quadrangles), Sacramento, CA. Accessed [8/15/2017].

CDFW. 2017b. *Special Animals List*. Available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline. Accessed [8/21/2017].

California Native Plant Society (CNPS). 2017. *Inventory of Rare and Endangered Plants* (online edition, v8-02) (CNPS: *Clarksville, Pilot Hill, Coloma, Shingle Springs, Latrobe, Folsom SE, Buffalo Creek*, *Rocklin*, and *Folsom* quadrangles). Accessed [8/15/2017].

California Wildlife Habitat Relationship System (CWHR). Various years. Various *Life History Accounts* and *Range Maps*. California Department of Fish and Wildlife, Sacramento, California. Available online at: http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx. [Accessed 8/15/2017].

El Dorado County. 2004. *El Dorado County General Plan*. Placerville, California. 2004.

El Dorado Hills Community Services District. 2008. *Design Review Committee Guideline/Covenants, Conditions & Restrictions Manual Revised July 15, 2008*. El Dorado Hills Community Services District. Available online at: http://www.edhcsd.org/downloadable_documents.html. [Accessed 8/15/2017].

Foothill Associates. 2009. *Delineation of Waters of the United States for the Silva Valley Interchange ±200-Acre Site, El Dorado County, California*. Originally prepared in 2005. Revised April 22, 2009.

Foothill Associates. 2012a. *California Red-Legged Frog Surveys on the Proposed Silva Valley Parkway Interchange Project (SPK-2005-00070), El Dorado County, California*. Prepared for El Dorado County, dated November 13, 2012.

Foothill Associates. 2012b. *Survey for Potential Habitat for the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) for the Proposed Silva Valley Parkway Interchange Project (08ESMF00-2011-TA-0871-1), El Dorado County, California*. Prepared for the U.S. Fish and Wildlife Service dated April 19, 2012.

Foothill Associates. 2013. *California Red-Legged Frog Surveys on the Proposed Silva Valley Parkway Interchange Project (SPK-2005-00070), El Dorado County, California*. Prepared for El Dorado County, dated April 2, 2013.

Foothill Associates. 2015. *El Dorado Hills 52 Tree Survey, Preservation, and Replacement Plan*. Dated October 20, 2015.

Foothill Associates. 2016a. *California Red-Legged Frog (Rana draytonii) Breeding Season Survey Report for the 32-Acre El Dorado Hills 52 Project, El Dorado County, California*. August 30, 2016.

Foothill Associates. 2016b. *Results of the Protocol Level Burrowing Owl Surveys Letter Report for the El Dorado Hills 52 Project, El Dorado County, California*. February 22, 2016.

Foothill Associates. 2016c. *Results of the Protocol Level Special-Status Plant Surveys Letter Report for the El Dorado Hills 52 Project, El Dorado County, California*. February 25, 2016.

Foothill Associates. 2017a. *Aquatic Resources Delineation Report for the El Dorado Hills 52 ±32-Acre Site, El Dorado County, California*. September 18, 2017.

Foothill Associates. 2017b. *El Dorado Hills 52 Tree Survey, Preservation, and Replacement Plan*. September 18, 2017.

Kochert, M. N., K. Steenhof, C. L. Mcintyre and E. H. Craig. 2002. Golden Eagle (Aquila chrysaetos), *The Birds of North America Online* (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Available online at: http://bna.birds.cornell.edu/bna/species/684.

McGrady, M.J. 1997. "*Golden Eagle*". Birds of the Western Palearctic Update, 1: 99-114.

Nature Serve. 2017. *Nature Serve Explorer*: *An Online Encyclopedia of Life* [Web Application]. Version 7.1. NatureServe, Arlington, Virginia. Available online at: http://www.natureserve.org/explorer. [Accessed 8/21/2017].

Poulin, Ray, L. Danielle Todd, E. A. Haug, B. A. Millsap and M. S. Martell. 2011. Burrowing Owl (*Athene cunicularia*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online at: http://bna.birds.cornell.edu/bna/species/061. doi:10.2173/bna.61. [Accessed 8/21/2017].

Rana Resources. 2013. Mark Jennings. Personal Communication. September 18, 2013.

Rosenberg, D., J. Gervais, and D. Vesely. 2009. *Conservation Assessment of the Western Pond Turtle in Oregon* (*Actinemys marmorata*). Version 1.0. November 2009. U.S.D.I. Bureau of Land Management and Fish and Wildlife Service. U.S.D.A. Forest Service Region 6. Oregon Department of Fish and Wildlife, City of Portland. Metro.

Sawyer, John O. and Todd Keeler-Wolf. 2009. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California.

Stebbins, R. C. 2003. *Western Amphibians and Reptiles*, *3rd Edition*. Boston: Houghton Mifflin Co.

Thorpe, Robin. Quoted in "*The Day the First Bumble Bee Arrived*" on Bug Squad. May 2, 2106. Available online at: http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=20925. [Accessed 8/21/2017].

U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 1974. *Soil Survey of El Dorado Area, California*. USDA, NRCS, in cooperation with the Regents of the University of California (Agricultural Experiment Station).

USDA, NRCS. 2017. *National Hydric Soils List by State*. Available online at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed [8/15/2017].

USDA, NRCS. 2017. *Web Soil Survey*. Available online at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.html. Accessed [8/15/2017].

U.S. Fish and Wildlife Service (USFWS). 1980. *Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. Federal Register 45:52803–52807*.

USFWS. 1984. *Recovery Plan for the Valley Elderberry Longhorn Beetle*. U.S. Fish and Wildlife Service, Endangered Species Program: Portland, Oregon.

USFWS. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle: Sacramento, California*.

USFWS. 2002. *Recovery Plan for the California Red-legged Frog* (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. viii + 173 pp.

USFWS. 2005. *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog*.

USFWS. 2010. *Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations*. Available online at: http://www.fws.gov/southwest/es/oklahoma/documents/te_species/wind%20power/usfws_interim_goea_monitoring_protocol_10march2010.pdf.

USFWS. 2011. *California Red-legged Frog* (*Rana draytonii*). U.S. Fish and Wildlife Service: Arcata Fish and Wildlife Office, Pacific Southwest Region. Last updated on April 11, 2011.

USFWS. 2012. *Informal Endangered Species Act Consultation on the Proposed Silva Valley Parkway Interchange Project (SPK-2005-00070), El Dorado County, California*. Letter addressed to the U.S. Army Corps of Engineers, dated August 6, 2012.

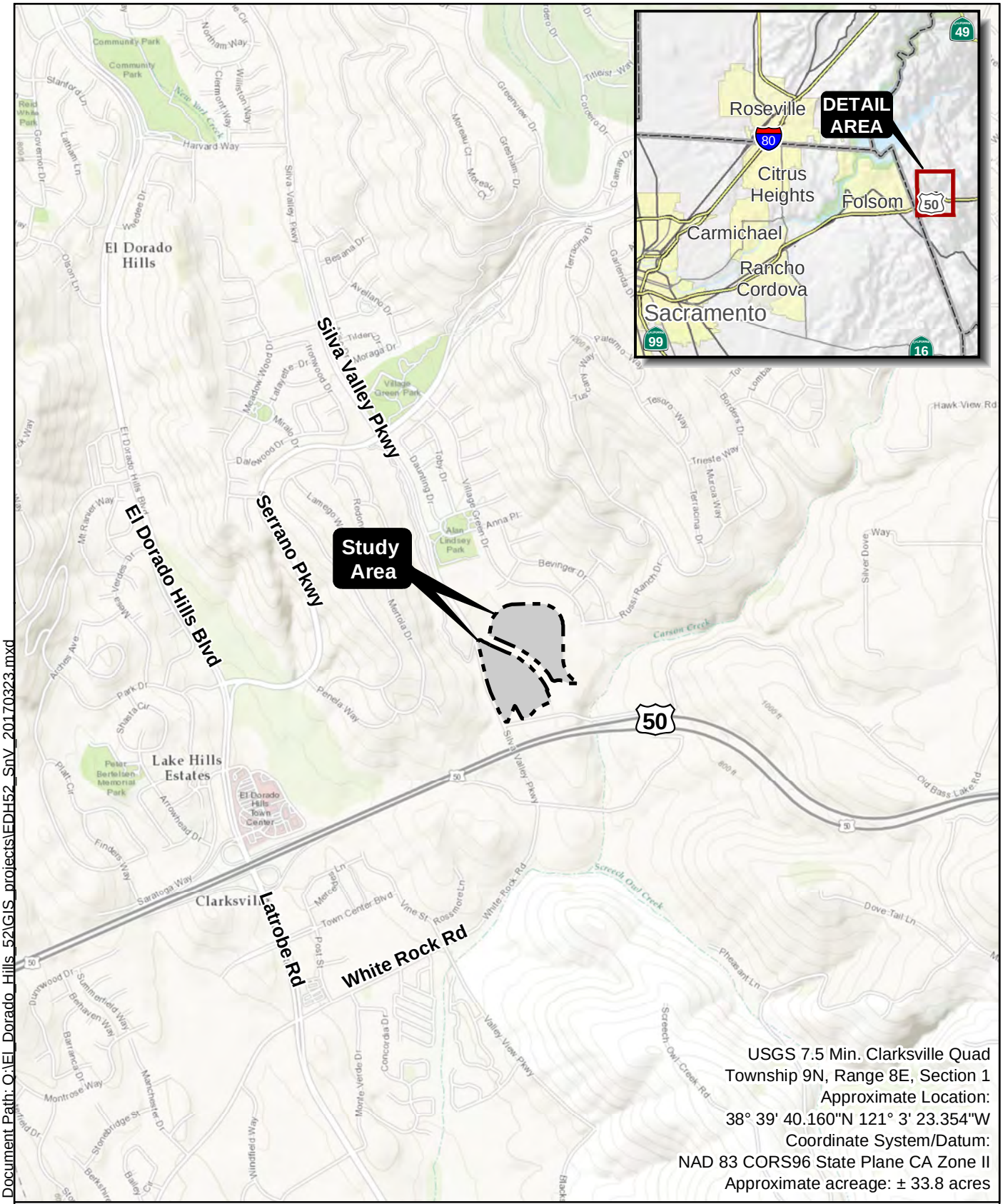
USFWS. 2017. *Information for Planning and Conservation* (IPaC) *Official Species List*: *El Dorado Hills 52*. Accessed [8/15/2017]

U.S. Geological Survey (USGS). 1967. Photorevised 1980. *Clarksville, California*. 7.5 -minute series topographic quadrangle. U.S. Department of the Interior.

Watson, Jeff. 2010. *The Golden Eagle*. 2nd Edition. London: A&C Black Publishers.

Zeiner D.C., W.R. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1988. *California's Wildlife, Volume I, Amphibians and Reptiles.* State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.

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.



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USGS 7.5 Min. Clarksville Quad
Township 9N, Range 8E, Section 1
Approximate Location:
38° 39' 40.160"N 121° 3' 23.354"W
Coordinate System/Datum:
NAD 83 CORS96 State Plane CA Zone II
Approximate acreage: ± 33.8 acres

SITE AND VICINITY

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

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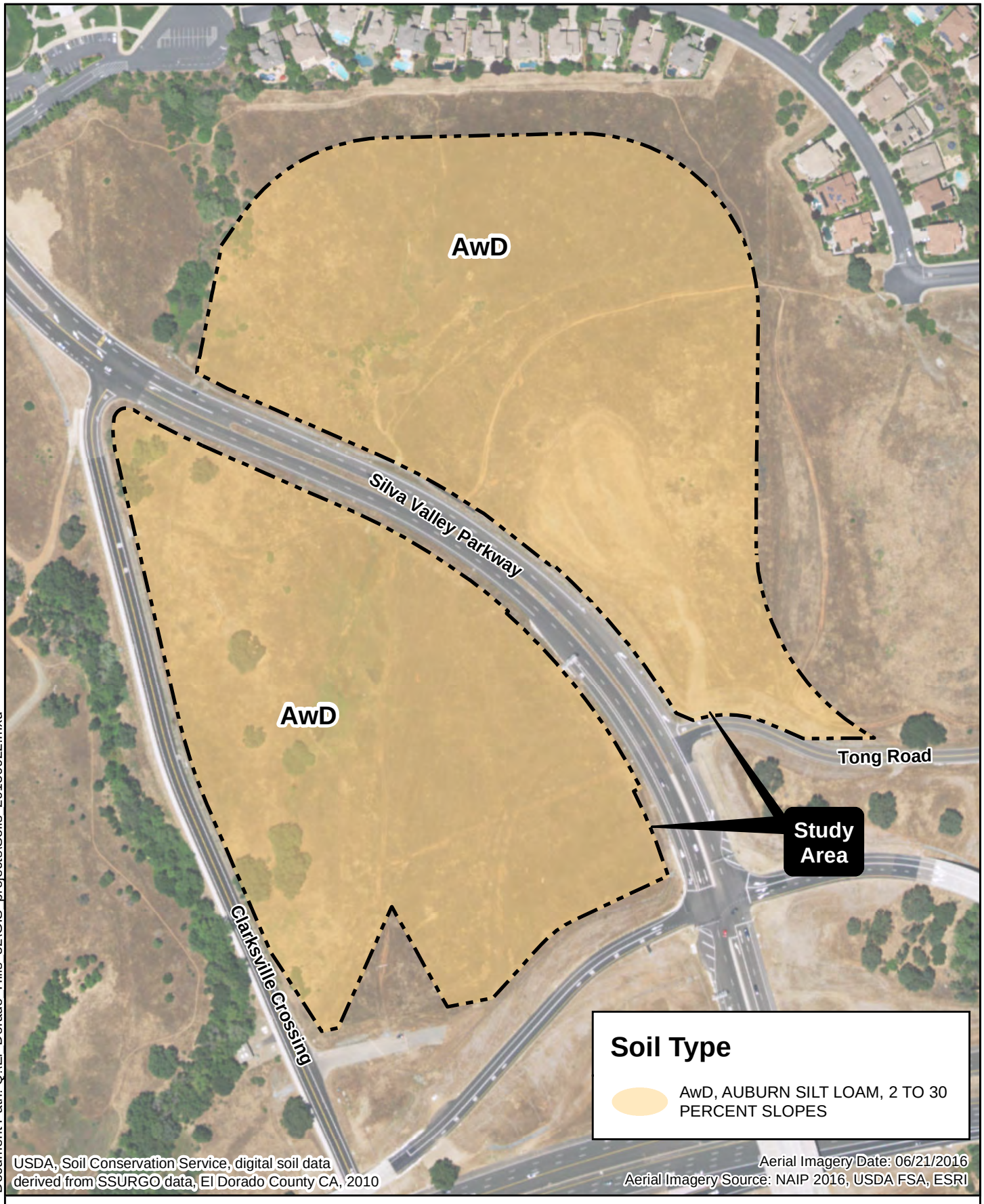
Feet
1 in = 2,000 feet

Drawn By: MUB
QA/QC: AMP
Date: 08/18/2017

FIGURE 1



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SOILS

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

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Feet
1 inch = 250 feet

Drawn By: MUB
QA/QC: AMP
Date: 08/15/2017

FIGURE 2

EL DORADO HILLS 52 PROPERTY

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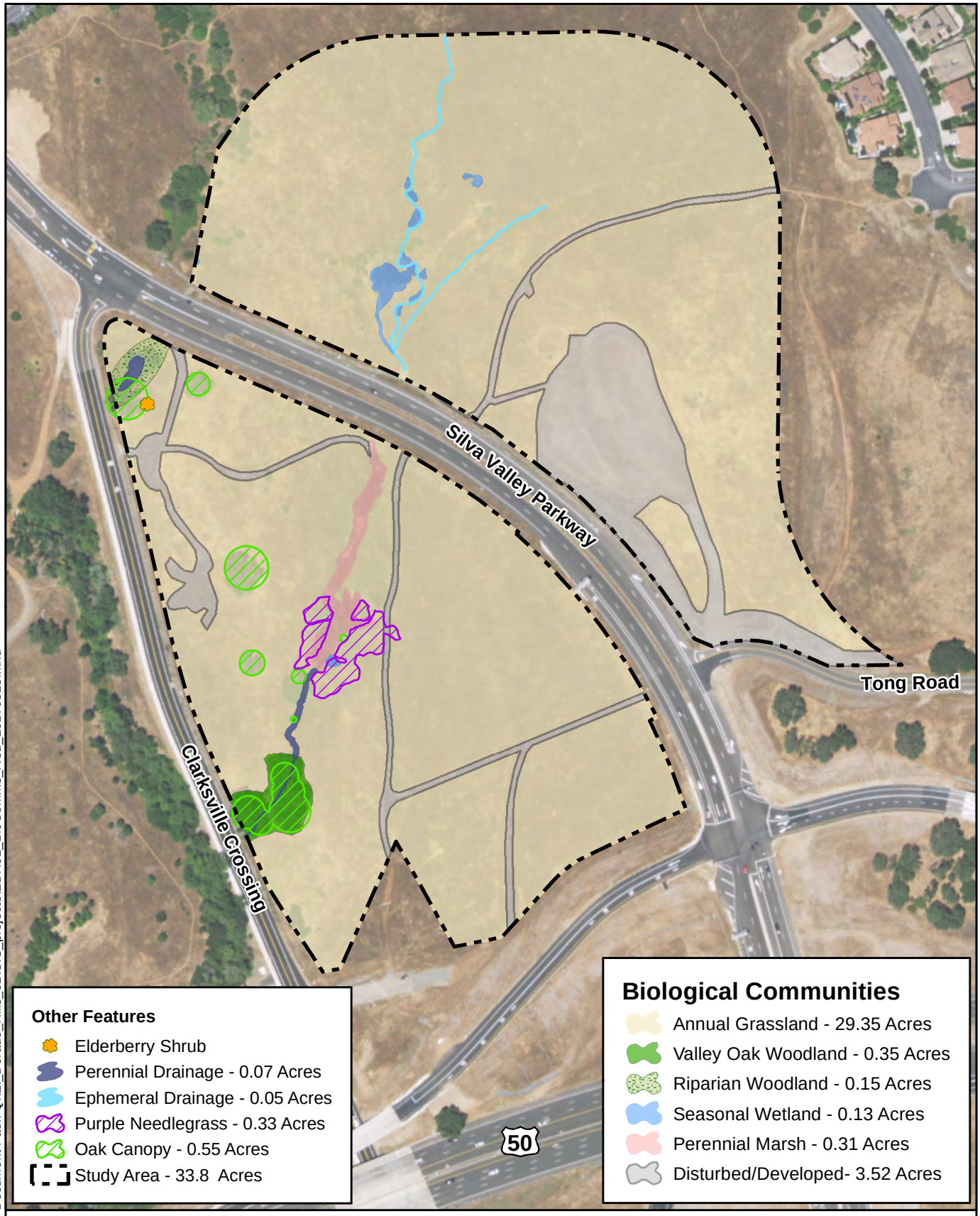

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BIOLOGICAL COMMUNITIES

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

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1 inch = 250 feet

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FIGURE 3

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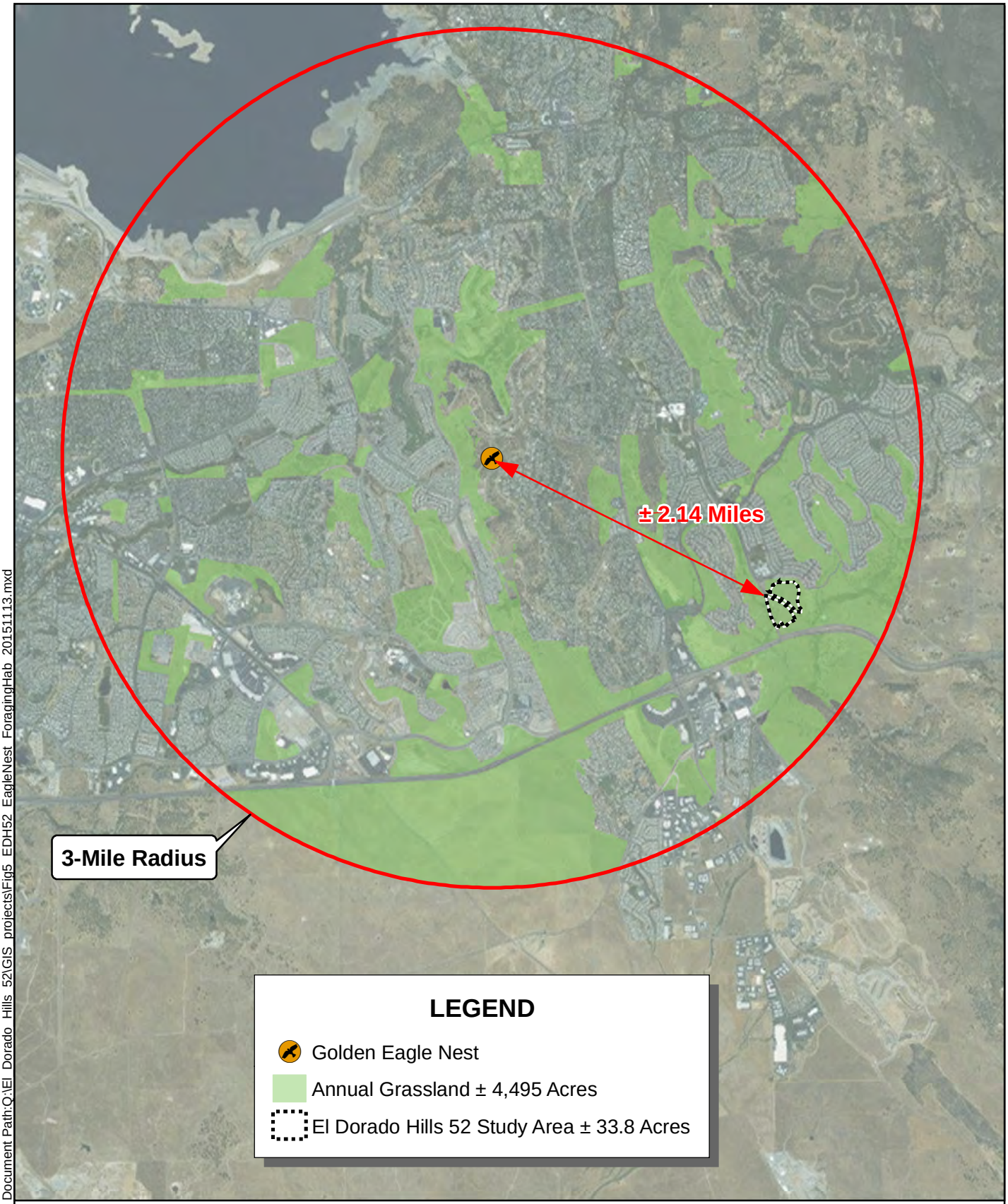

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ANNUAL GRASSLAND FOR GOLDEN EAGLE FORAGING HABITAT WITHIN THE VICINITY OF THE STUDY AREA

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

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FIGURE 4

EL DORADO HILLS 52 PROPERTY

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Appendix A — Selected General and Specific Plan Policies

El Dorado County General Plan

Conservation and Protection of Water Resources

GOAL 7.3: WATER QUALITY AND QUANTITY
Conserve, enhance, and manage water resources and protect their quality from degradation.

OBJECTIVE 7.3.1: WATER RESOURCE PROTECTION
Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1 Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.1.2 Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.

Policy 7.3.1.3 The County shall develop the criteria and draft an ordinance to allow and encourage the use of domestic gray water for landscape irrigation purposes. (See Title 22 of the State Water Code and the Graywater Regulations of the Uniform Plumbing Code).

OBJECTIVE 7.3.2: WATER QUALITY
Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1 Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity.

Policy 7.3.2.2 Projects requiring a grading permit shall have an erosion control program approved, where necessary.

Policy 7.3.2.3 Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).

Policy 7.3.2.4 The County should evaluate feasible alternatives to the use of salt for ice control on County roads.

Policy 7.3.2.5 As a means to improve the water quality affecting the County's recreational waters, enhanced and increased detailed analytical water quality studies and

monitoring should be implemented to identify and reduce point and non-point pollutants and contaminants. Where such studies or monitoring reports have identified sources of pollution, the County shall propose means to prevent, control, or treat identified pollutants and contaminants.

OBJECTIVE 7.3.3: WETLANDS

Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1 *For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual*

Policy 7.3.3.2 *Intentionally blank*

Policy 7.3.3.3 *The County shall develop a database of important surface water features, including lake, river, stream, pond, and wetland resources.*

Policy 7.3.3.4 *The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.*

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned lands that utilize "best management practices (BMPs)" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5 *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.*

OBJECTIVE 7.3.4: DRAINAGE
Protection and utilization of natural drainage patterns.

Policy 7.3.4.1 *Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.*

Policy 7.3.4.2 *Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.*

OBJECTIVE 7.3.5: WATER CONSERVATION
Conservation of water resources, encouragement of water conservation, and construction of wastewater disposal systems designed to reclaim and re-use treated wastewater on agricultural crops and for other irrigation and wildlife enhancement projects.

Policy 7.3.5.1 *Drought-tolerant plant species, where feasible, shall be used for landscaping of commercial development. Where the use of drought-tolerant native plant species is feasible, they should be used instead of non-native plant species.*

Policy 7.3.5.2 *A list of appropriate local indigenous drought tolerant plant materials shall be maintained by the County Planning Department and made available to the public.*

Policy 7.3.5.3 *The County Parks and Recreation Division shall use drought tolerant landscaping for all new parks and park improvement projects.*

Policy 7.3.5.4 *Require efficient water conveyance systems in new construction. Establish a program of ongoing conversion of open ditch systems shall be considered for conversion to closed conduits, reclaimed water supplies, or both, as circumstances permit.*

Policy 7.3.5.5 *Encourage water reuse programs to conserve raw or potable water supplies consistent with State Law.*

Conservation of Biological Resources

GOAL 7.4: WILDLIFE AND VEGETATION RESOURCES
Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

OBJECTIVE 7.4.1: RARE, THREATENED, AND ENDANGERED SPECIES
The County shall protect State and federally recognized rare, threatened, or endangered species and their habitats consistent with Federal and State laws.

Policy 7.4.1.1 *The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 17.71 and the USFWS's Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan (USFWS 2002).*

Policy 7.4.1.2 *Private land for preserve sites will be purchased only from willing sellers.*

Policy 7.4.1.3 *Limit land uses within established preserve areas to activities deemed compatible. Such uses may include passive recreation, research and scientific study, and education. In conjunction with use as passive recreational areas, develop a rare plant educational and interpretive program.*

Policy 7.4.1.4 *Proposed rare, threatened, or endangered species preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.*

Policy 7.4.1.5 *Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special-status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that those resources exist, and either are or can be protected, on public lands or private Natural Resource lands.*

Policy 7.4.1.6 *All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan (INRMP) (see Policy 7.4.2.8 and Implementation Measure CO-M).*

The County Agricultural Commission, Plant and Wildlife Technical Advisory Committee, representatives of the agricultural community, academia, and other

stakeholders shall be involved and consulted in defining the important habitats of the County and in the creation and implementation of the INRMP.

Policy 7.4.1.7 The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.

OBJECTIVE 7.4.2: IDENTIFY AND PROTECT RESOURCES
Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.1 To the extent feasible in light of other General Plan policies and to the extent permitted by State law, the County of El Dorado will protect identified critical fish and wildlife habitat, as identified on the Important Biological Resources Map maintained at the Planning Department, through any of the following techniques: utilization of open space, Natural Resource land use designation, clustering, large lot design, setbacks, etc.

Policy 7.4.2.2 Where critical wildlife areas and migration corridors are identified during review of projects; the County shall protect the resources from degradation by requiring all portions of the Site that contain or influence said areas to be retained as non-disturbed natural areas through mandatory clustered development on suitable portions of the Site or other means such as density transfers if clustering cannot be achieved. The setback distance for designated or protected migration corridors shall be determined as part of the project's environmental analysis. The intent and emphasis of the Open Space land use designation and of the non-disturbance policy is to ensure continued viability of contiguous or interdependent habitat areas and the preservation of all movement corridors between related habitats. The intent of mandatory clustering is to provide a mechanism for natural resource protection while allowing appropriate development of private property. Horticultural and grazing projects on agriculturally designated lands are exempt from the restrictions placed on disturbance of natural areas when utilizing "Best Management Practices" (BMPs) recommended by the County Agricultural Commission and adopted by the Board of Supervisors when not subject to Policy 7.1.2.7.

Policy 7.4.2.3 Consistent with Policy 9.1.3.1 of the Parks and Recreation Element, low impact uses such as trails and linear parks may be provided within river and stream buffers if all applicable mitigation measures are incorporated into the design.

Policy 7.4.2.4 Establish and manage wildlife habitat corridors within public parks and natural resource protection areas to allow for wildlife use. Recreational uses within these areas shall be limited to those activities that do not require grading or vegetation removal.

Policy 7.4.2.5 Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.

Policy 7.4.2.6 El Dorado County Biological Community Conservation Plans shall be required to protect, to the extent feasible, rare, threatened, and endangered plant species only when existing federal or State plans for non-jurisdictional areas do not provide adequate protection.

Policy 7.4.2.7 The County shall form a Plant and Wildlife Technical Advisory Committee to advise the Planning Commission and Board of Supervisors on plant and wildlife issues, and the committee should be formed of local experts, including agricultural, fire protection, and forestry representatives, who will consult with other experts with special expertise on various plant and wildlife issues, including representatives of regulatory agencies. The Committee shall formulate objectives which will be reviewed by the Planning Commission and Board of Supervisors.

Policy 7.4.2.8 Develop within five years and implement an Integrated Natural Resources Management Plan (INRMP) that identifies important habitat in the County and establishes a program for effective habitat preservation and management. The INRMP shall include the following components:

A. Habitat Inventory. This part of the INRMP shall inventory and map the following important habitats in El Dorado County:

1. *Habitats that support special-status species;*
2. *Aquatic environments including streams, rivers, and lakes;*
3. *Wetland and riparian habitat;*
4. *Important habitat for migratory deer herds; and*
5. *Large expanses of native vegetation.*

The County should update the inventory every three years to identify the amount of important habitat protected, by habitat type, through County programs and the amount of important habitat removed because of new development during that period. The inventory and mapping effort shall be developed with the assistance of the Plant and Wildlife Technical Advisory Committee, CDFW, and USFWS. The

inventory shall be maintained and updated by the County Planning Department and shall be publicly accessible.

B. *Habitat Protection Strategy. This component shall describe a strategy for protecting important habitats based on coordinated land acquisitions (see item D below) and management of acquired land. The goal of the strategy shall be to conserve and restore contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the county. The Habitat Protection Strategy should be updated at least once every five years based on the results of the habitat monitoring program (item F below). Consideration of wildlife movement will be given by the County on all future 4- and 6-lane roadway construction projects. When feasible, natural undercrossings along proposed roadway alignments that could be utilized by terrestrial wildlife for movement will be preserved and enhanced.*

C. *Mitigation Assistance. This part of the INRMP shall establish a program to facilitate mitigation of impacts to biological resources resulting from projects approved by the County that are unable to avoid impacts on important habitats. The program may include development of mitigation banks, maintenance of lists of potential mitigation options, and incentives for developers and landowner participation in the habitat acquisition and management components of the INRMP.*

D. *Habitat Acquisition. Based on the Habitat Protection Strategy and in coordination with the Mitigation Assistance program, the INRMP shall include a program for identifying habitat acquisition opportunities involving willing sellers. Acquisition may be by state or federal land management agencies, private land trusts or mitigation banks, the County, or other public or private organizations. Lands may be acquired in fee or protected through acquisition of a conservation easement designed to protect the core habitat values of the land while allowing other uses by the fee owner. The program should identify opportunities for partnerships between the County and other organizations for habitat acquisition and management. In evaluating proposed acquisitions, consideration will be given to site specific features (e.g., condition and threats to habitat, presence of special-status species), transaction related features (e.g., level of protection gained, time frame for purchase completion, relative costs), and regional considerations (e.g., connectivity with adjacent protected lands and important habitat, achieves multiple agency and community benefits). Parcels that include important habitat and are located generally to the west of the El Dorado National Forest should be given priority for acquisition. Priority will also be given to parcels that would preserve natural wildlife movement corridors such as*

crossing under major roadways (e.g., U.S. Highway 50 and across canyons). All land acquired shall be added to the Ecological Preserve overlay area.

E. *Habitat Management. Each property or easement acquired through the INRMP should be evaluated to determine whether the biological resources would benefit from restoration or management actions. Examples of the many types of restoration or management actions that could be undertaken to improve current habitat conditions include: removal of non-native plant species, planting native species, repair and rehabilitation of severely grazed riparian and upland habitats, removal of culverts and other structures that impede movement by native fishes, construction of roadway under and overcrossing that would facilitate movement by terrestrial wildlife, and installation of erosion control measures on land adjacent to sensitive wetland and riparian habitat.*

F. *Monitoring. The INRMP shall include a habitat monitoring program that covers all areas under the Ecological Preserve overlay together with all lands acquired as part of the INRMP. Monitoring results shall be incorporated into future County planning efforts so as to more effectively conserve and restore important habitats. The results of all special-status species monitoring shall be reported to the CNDDB. Monitoring results shall be compiled into an annual report to be presented to the Board of Supervisors.*

G. *Public Participation. The INRMP shall be developed with and include provisions for public participation and informal consultation with local, state, and federal agencies having jurisdiction over natural resources within the County.*

H. *Funding. The County shall develop a conservation fund to ensure adequate funding of the INRMP, including habitat maintenance and restoration. Funding may be provided from grants, mitigation fees, and the County general fund. The INRMP annual report described under item F above shall include information on current funding levels and shall project anticipated funding needs and anticipated and potential funding sources for the following five years.*

Policy 7.4.2.9 *The Important Biological Corridor (-IBC) overlay shall apply to lands identified as having high wildlife habitat values because of extent, habitat function, connectivity, and other factors. Lands located within the overlay district shall be subject to the following provisions except that where the overlay is applied to lands that are also subject to the Agricultural District (-A) overlay or that are within the Agricultural Lands (AL) designation, the land use restrictions associated with the -IBC policies will not apply to the extent that the agricultural practices do not interfere with the purposes of the -IBC overlay.*

- *Increased minimum parcel size;*
- *Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;*
- *Lower thresholds for grading permits;*
- *Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;*
- *Increased riparian corridor and wetland setbacks;*
- *Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Wildlife);*
- *Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;*
- *Building permits discretionary or some other type of "site review" to ensure that canopy is retained;*
- *More stringent standards for lot coverage, floor area ratio (FAR), and building height; and*
- *No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).*

The standards listed above shall be included in the Zoning Ordinance.

Wildland Fire Safe measures are exempt from this policy, except that Fire Safe measures will be designed insofar as possible to be consistent with the objectives of the Important Biological Corridor.

OBJECTIVE 7.4.3: COORDINATION WITH APPROPRIATE AGENCIES
Coordination of wildlife and vegetation protection programs with appropriate federal and State agencies.

OBJECTIVE 7.4.5: NATIVE VEGETATION AND LANDMARK TREES
Protect and maintain native trees including oaks and landmark and heritage trees.

Policy 7.4.5.1 A tree survey, preservation, and replacement plan shall be required to be filed with the County prior to issuance of a grading permit for discretionary permits on all high-density residential, multifamily residential, commercial, and industrial projects. To ensure that proposed replacement trees survive, a mitigation monitoring plan should be incorporated into discretionary projects when applicable and shall include provisions for necessary replacement of trees.

Policy 7.4.5.2 It shall be the policy of the County to preserve native oaks wherever feasible, through the review of all proposed development activities where such trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. To ensure that oak tree loss is reduced to reasonable acceptable levels, the County shall develop and implement an Oak Tree Preservation Ordinance that includes the following components:

A. Oak Tree Removal Permit Process. Except under special exemptions, a tree removal permit shall be required by the County for removal 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. Special exemptions when a tree removal permit is not needed shall include removal of trees less than 36 inches dbh on 1) lands in Williamson Act Contracts, Farmland Security Zone Programs, Timber Production Zones, Agricultural Districts, designated Agricultural Land (AL), and actions pursuant to a Fire Safe plan; 2) all single family residential lots of one acre or less that cannot be further subdivided; 3) when a native oak tree is cut down on the owner's property for the owner's personal use; and 4) when written approval has been received from the County Planning Department. In passing judgment upon tree removal permit applications, the County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak trees, the public and the surrounding property, or sensitive habitats. The County Planning Department may condition any removal of native oaks upon the replacement of trees in kind. The replacement requirement shall be calculated based upon an inch for inch replacement of removed oaks. The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement trees may be planted onsite or in other areas to the satisfaction of the County Planning Department. The County may also condition any tree removal permit that would affect sensitive habitat (e.g., valley oak woodland), on preparation of a Biological Resources Study and an Important Habitat Mitigation Program as described in Policy 7.4.1.6. If an application is denied, the County shall provide written notification, including the reasons for denial, to the applicant.

B. Tree Removal Associated with Discretionary Project. Any person desiring to remove a native oak shall provide the County with the following as part of the project application:

- *A written statement by the applicant or an arborist stating the justification for the development activity, identifying how trees in the vicinity of the project or construction site will be protected and stating*

that all construction activity will follow approved preservation methods;

- *A site map plan that identifies all native oaks on the project site; and*
- *A report by a certified arborist that provides specific information for all native oak trees on the project site.*

C. *Commercial Firewood Cutting. Fuel wood production is considered commercial when a party cuts firewood for sale or profit. An oak tree removal permit shall be required for commercial firewood cutting of any native oak tree. In reviewing a permit application, the Planning Department shall consider the following:*

- *Whether the trees to be removed would have a significant negative environmental impact;*
- *Whether the proposed removal would not result in clear-cutting, but will result in thinning or stand improvement;*
- *Whether replanting would be necessary to ensure adequate regeneration;*
- *Whether the removal would create the potential for soil erosion;*
- *Whether any other limitations or conditions should be imposed in accordance with sound tree management practices; and*
- *What the extent of the resulting canopy cover would be.*

D. *Penalties. Fines will be issued to any person, firm, or corporation that is not exempt from the ordinance who damages or destroys an oak tree without first obtaining an oak tree removal permit. Fines may be as high as three times the current market value of replacement trees as well as the cost of replacement, and/or replacement of up to three times the number of trees required by the ordinance. If oak trees are removed without a tree removal permit, the County Planning Department may choose to deny or defer approval of any application for development of that property for a period of up to 5 years. All monies received for replacement of illegally removed or damaged trees shall be deposited in the County's Integrated Natural Resources Management Plan (INRMP) conservation fund.*

Preservation of Open Space

GOAL 7.6: OPEN SPACE CONSERVATION

Conserve open space land for the continuation of the County's rural character, commercial agriculture, forestry and other productive uses, the enjoyment of scenic beauty and recreation, the protection of natural resources, for protection from natural hazards, and for wildlife habitat.

OBJECTIVE 7.6.1: IMPORTANCE OF OPEN SPACE

Consideration of open space as an important factor in the County's quality of life.

Policy 7.6.1.1 *The General Plan land use map shall include an Open Space land use designation. The purpose of this designation is to implement the goals and objectives of the Land Use and the Conservation and Open Space Elements by serving one or more of the purposes stated below. In addition, the designations on the land use map for Rural Residential and Natural Resource areas are also intended to implement said goals and objectives. Primary purposes of open space include:*

A. Conserving natural resource areas required for the conservation of plant and animal life including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, banks of rivers and streams and watershed lands;

B. Conserving natural resource lands for the managed production of resources including forest products, rangeland, agricultural lands important to the production of food and fiber; and areas containing important mineral deposits;

C. Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes including those providing access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and open space reservations including utility easements, banks of rivers and streams, trails and scenic highway corridors;

D. Delineating open space for public health and safety including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality; and

E. Providing for open spaces to create buffers which may be landscaped to minimize the adverse impact of one land use on another.

Policy 7.6.1.2 *The County will provide for Open Space lands through:*

A. The designation of land as Open Space;

B. The designation of land for low-intensity land uses as provided in the Rural Residential and Natural Resource land use designations;

C. *Local implementation of the Federal Emergency Management Agency's National Flood Insurance Program;*

D. *Local implementation of the State Land Conservation Act Program; and*

E. *Open space land set aside through Planned Developments (PDs).*

Policy 7.6.1.3 *The County shall implement Policy 7.6.1.1 through zoning regulations and the administration thereof. It is intended that certain districts and certain requirements in zoning regulations carry out the purposes set forth in Policy 7.6.1.1 as follows:*

A. *The Open Space (OS) Zoning District is consistent with and shall implement the Open Space designation of the General Plan land use map and all other land use designations.*

B. *The Agricultural (A), Exclusive Agricultural (AE), Planned Agricultural (PA), Select Agricultural (SA-10), and Timberland Production Zone (TPZ) zoning districts are consistent with Policy 7.6.1.1 and serve one or more of the purposes set forth therein.*

C. *Zoning regulations shall provide for setbacks from all flood plains, streams, lakes, rivers and canals to maintain Purposes A, B, C, and D set forth in Policy 7.6.1.1.*

D. *Zoning regulations shall provide for maintenance of permanent open space in residential, commercial, industrial, agricultural, and residential agricultural zone districts based on standards established in those provisions of the County Code. The regulations shall minimize impacts on wetlands, flood plains, streams, lakes, rivers, canals, and slopes in excess of 30 percent and shall maintain Purposes A, B, C, and D in Policy 7.6.1.1.*

E. *Landscaping requirements in zoning regulations shall provide for vegetative buffers between incompatible land uses in order to maintain Purpose E in Policy 7.6.1.1.*

F. *Zoning regulations shall provide for Mineral Resource Combining Zone Districts and/or other appropriate mineral zoning categories which shall be applied to lands found to contain important mineral deposits if development of the resource can occur in compliance with all other policies of the General Plan. Those regulations shall maintain Purposes A, B, C, D, and E of Policy 7.6.1.1.*

Policy 7.6.1.4 *The creation of new open space areas, including Ecological Preserves, common areas of new subdivisions, and recreational areas, shall include wildfire safety planning.*

El Dorado Hills Specific Plan

1.4.1.1 Site Development and Grading

The policies set forth in the Specific Plan are intended to maintain, to the maximum extent possible, the natural land forms and to exercise control over vegetation removal, landscaping, and grading. Grading controls are intended to reduce soil erosion to a minimum to ensure capability with adjacent terrain.

a) *Grading for roadways, driveways, building pads, and onsite improvements shall be minimized.*

b) *Grading volumes of cut-and-fill material shall be minimized and balanced onsite wherever possible. Larger grading volumes may be acceptable where improved visual and environmental effects would result.*

c) *Residential structures or accessory structures on slopes in access of 20 percent shall be carefully designed through use of erosion controls, engineered grading, and use of post and beam or step-footing construction to ensure long-term slope stability. Benched hillsides for building sites shall be avoided and split-level structures encouraged.*

d) *A plan to minimize impact to oak trees shall be submitted to the El Dorado County Community Development Department prior to approval of any tentative map. The plan will include, at a minimum, the locations and sizes of individual trees that should not be impacted.*

e) *A minimum of 20 percent of all roadside trees and parking lot trees shall be native oaks.*

f) *Removal of oak trees and other large native trees with trunk circumferences of 25 inches at 4.5 feet above grade shall be avoided where feasible. A tree replacement policy is provided in the Design Guidelines on file with the County of El Dorado.*

g) *To avoid damage to root systems of retained trees, residential construction shall not occur within the canopy area of oak trees over 30 inches in circumference at breast height, and shall be subject to review as provided in the Design Guidelines.*

h) *Landscaping in improved common areas shall be of drought-resistant varieties.*

i) *To preserve the vegetative character of the Plan Area, the planting of native trees, shrubs, and ground cover shall be encouraged in all new landscaping.*

j) *Landscaping in areas adjacent to natural open spaces shall be fire resistant.*

k) *Site design, building orientation, and street and lot patterns shall follow solar orientation principles to the maximum extent practicable to maximize energy conservation.*

l) Archaeological test excavations for selected locations within the Plan Area shall be required as a condition of approval of tentative subdivision maps.

m) As part of the tentative map approval, areas having expansive clays and seasonably wet areas shall be identified by a geotechnical engineer. Such areas, if deemed to be potential construction hazards, shall be subject to further evaluation and identification to determine appropriate mitigation measures.

n) To the maximum extent feasible, development shall be sited and designed to avoid impacts to culturally significant sties identified by the Final EIR for the Plan Area as EDH-26 and EDH-29.

o) Where feasible, and given the physical constraints of the Plan Area, subdivisions and other new development shall be designed to facilitate solar use as a means of reducing total energy consumption. The design elements that shall be considered include:

- *Solar orientation*
- *Shade Control*
- *Wind Management*
- *Solar access*

p) The Design Guidelines shall be one of the implementation measures of the Specific Plan.

1.4.1.2 Development Near Native Oak Trees

These guidelines are for the protection of healthy oak trees that will remain after construction in developed areas. The term circumference is breast height (CBH) refers to the trunk measurement of either one trunk or the addition of all trunks in a multi-trunked tree. The respective measure in circumference would also apply. Also refer to **Section 3.10** for Oak Tree Preservation Guidelines.

a) Protect all oak trees larger than 25 inches CBH o the maximum extent feasible. Priority will be given to oaks larger than 56 inches CBH.

b) Trees to be saved will be surrounded by a barrier or fence installed at the dripline and flagged.

c) Pruning of limbs will be confined to low-hanging branches over roads and sidewalks, and large branches that are weak or may reasonably appear to pose a safety hazard. Pruning paint will not be used under any circumstances. Pruning cuts will be made cleanly to avoid damaged to the "bark ridge" tissue of adjacent limbs.

d) The El Dorado County Planning Department will be responsible for enforcement of oak tree protection during construction.

e) In development areas, no oak trees larger than 25 inches CBH will be removed until a site survey and inspection report is performed.

1.4.1.5 Vegetation and Fire Hazards

In areas of planned development:

a) All potentially dry herbaceous vegetation will be mowed or disked within a 50-foot radius of all construction site activity.

b) Disking or mowing will be done to keep herbaceous vegetation under 3 inches in height at all construction sites.

c) No construction equipment or vehicles will be allowed within 50 feet of the unmowed perimeter.

d) Firebreaks will be installed by disking or mowing a trail that is satisfactory to the El Dorado Hills Fire Development. Mowing is preferred to disking or scraping because the latter two practices promote invasion of noxious weed species on fire trails.

e) Temporary or permanent firebreaks will be installed on all ridgelines, crossing all areas in the vicinity of construction and grading activity, prior to beginning work.

f) Firebreak installation will avoid the removal of native oaks and other native trees.

1.4.8 Natural Open Space Policies

The Natural Open Space Policies are to guide the preservation, management, and maintenance of these areas in relation to adjacent land uses.

1.4.8.1 General Policies

a) The boundaries of natural open space shall blend with the boundaries of the development as to enhance the integration of open space and developed areas.

b) Perimeter fencing may be permitted for rural parcels as provided in the El Dorado County Design Guidelines and CC&Rs.

c) Increased runoff from adjacent development will require erosion control measures to be coordinated with landscape design of adjacent development areas. Emphasis shall be placed on methods that rely on natural drainage systems and minimize change to the existing condition of creek channels within open space areas.

d) An Open Space Management Plan shall be completed and submitted to the El Dorado County Community Development Department prior to approval of any tentative map creating open space. It shall be an implementation mechanism of the Specific Plan in order to set forth procedures and responsibilities as to the ownership, preservation, and management of public and private natural open space areas. The Open Space Management Plan shall consider dedication to the County of El Dorado of easements

over the public open space areas, should dedication of fee ownership of these areas be made to any other entity. The open space plan shall be reviewed by the El Dorado Hills Fire Department. The plan shall also include, at a minimum:

1. *The locations of fire access roads, fuel breaks, and passive recreation trails.*
2. *Control burning techniques.*
3. *Guidelines established in the Open Space Guidelines for El Dorado County*
4. *Investigation of opportunities for wildlife use of water in open space areas as a part of ongoing wildlife maintenance.*

1.4.8.2 Riparian and Other Drainageway Policies

A 200-foot-wide undeveloped buffer zone shall be established along Carson Creek in accordance with California Department of Fish and Wildlife requirements. In this buffer, vegetation removal shall be for the purpose of drainage improvements. In consideration of setback reductions for purposes of a gold course, the County shall consider such mitigation measures as additional plantings, erosion controls, and other habitat improvement and protection steps.

a) *Drainageway easements shall specifically preclude erection of structures and vegetation removal, except for drainage improvements, and shall forestall other site development not consistent with the purpose of these areas.*

b) *Drainageways located on privately owned property shall be placed within recorded easements that provide for routine maintenance and pedestrian access.*

c) *A 100-foot-wide buffer (50 feet horizontal on each side as measured from centerline of the creek) of natural vegetation shall be maintained along all intermittent creeks.*

d) *Grazing shall not be allowed in riparian buffer zones.*

e) *Plantings of riparian trees and shrubs shall be situated according to the flood and soil moisture tolerances of individual species as in Appendix C of the Specific Plan.*

f) *Areas disturbed during construction shall be replanted with native riparian species listed in Appendix C of the Specific Plan. Replanting will include a mandatory 3-year maintenance and irrigation period.*

g) *Riparian vegetation on the golf course areas shall be kept naturally dense and unpruned except where needed for crossings, ball pay passages, and personal and fire safety.*

h) *Pedestrian, vehicular, and utility bridges over creeks, if feasible, will be oriented at right angles to the waterway to minimize loss of vegetation.*

i) The capacity of flow under bridges and culverts will be designed to reduce the need for extensive vegetation clearing near the structures.

j) Periodic vegetation removal to ensure adequate floodway capacity in drainages will be performed to promote an overstory of mature individual riparian trees spaced to accommodate designed flows.

El Dorado Hills Community Services District Policies

5.27 Oak Tree Preservation

5.27.3 General Requirements for Development Activity in the Protected Zone of Protected Trees

The importance of oak tree preservation is recognized with tree protection provisions in the Covenants, Conditions, and Restrictions (CC&Rs) of the most units in El Dorado Hills and in County Code 17.73 titled Oak Woodland Conservation prior to initiating any activity that may affect an oak tree on their land or on that of an adjoining property, owners of property in El Dorado Hills should check their CC&Rs carefully to determine whether Design Review Committee (DRC) approval is required.

5.27.4 Removal of Protected Trees

It shall be the policy of the DRC to preserve protected trees wherever feasible while recognizing individual rights to develop private property in a reasonable manner. It shall be the responsibility of the applicant to demonstrate the need for any oak tree removal. In determining whether to approval the removal or major trimming of a protected tree, the DRC will consider the following listed factors and, depending upon particular circumstances, may consider others which are not listed:

a) The degree to which the tree will be an obstacle to approval development activity.

b) The condition of the tree with respect to disease, general health, damage, danger of falling.

c) The effect removal would have upon safety, public health, remaining trees, and the beauty and general welfare of the area.

d) The effect removal would have upon soil stability, erosion, particularly near water courses and on slopes.

e) Present and future shade effect with respect to cooling and solar power/heating.

f) Whether or not there are feasible alternative measures to removal.

g) Applicants may be required to provide an arborist report from an arborist who would not be performing any eventual tree removal or major limbing. Alternatively, and it is discretion the DRC may employ an arborist of its choice.

5.27.5 Protecting Oak Trees During Development Activity

Property owners are responsible for taking the following measures to protect oak trees, except any approval from removal during development activity.

a) *Erect protective orange "ski fencing" around the protected zone of each protected tree or group of trees within 50 feet of development activity prior to initiating work and excluded from the enclosed protected zone any work related activity such as storage and vehicle parking.*

b) *Exert every reasonable effort to preserve undisturbed the natural ground within protected zones.*

c) *If it is absolutely necessary to trench within a protected zone, if boring or drilling would not be feasible, excavate by hand under the supervision of a certified arborist. Do not cut any root larger than two inches in diameter; keep the exposed root moist and cover with soil as quickly as feasible. Sever small roots neatly, trim and cover quickly.*

d) *Make no grade changed within the protected zone unless specifically indicated in the approved plans.*

5.27.6 Mitigation EDHCSD Tree Preservation Fund, Public Education

In the event the owner of property with protected trees removed or significantly damages one or more of them without approval, the DRC, at its discretion, may require mitigation by planting a proportionate number of diameter inches of replacement oak trees on the owner's property or by assessing a fee at the rate of $200 per diameter inch (amount tripled for unapproved removal of a landmark tree) to compensate for the expense of planting a proportionate number of diameter inches of oak trees on public property or by a combination of these alternatives.

In the event the owner of the property with protection trees applies for approval of a protect that will damage protected trees, and the DRC determines they could be reasonably be preserved, the DRC, at its sole discretion, may offer the applicant the option of an approval in exchange for on-site mitigation or payment of a mitigation fee based upon the number of diameter inches that applicant would remove.

Mitigation fees paid by property owners are held by the EDHCSD in a Tree Preservation Fund until used to cover the expense of mitigation planting or for related purposes. It is widely recognized that the loss of oak tree is partly the result of the lack of public awareness on oak preservation. A portion of the funds collected for mitigation may be used to establish and promote educational programs to improve this situation.

Regulatory Status Legend

FE = Federal endangered FT = Federal threatened FC = Federal candidate PT = Federal proposed threatened FPD = Federal proposed for delisting FD = Federal delisted FSC = Federal Species of Concern	CE = California state endangered CT = California state threatened CFP = California fully protected CSC = California Species of Special Concern CSA = California Special Animals List CR = California state rare CC = California candidate	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

Table 1 — Legally Protected Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Boggs Lake hedge-hyssop *Gratiola heterosepala*	CE; 1B	Annual herb found on clay soils in vernal pools and along the lake margins of marshes and swamps from 10 to 2,375 meters.	Blooming period: April – August	**None**; the riverine perennial marsh within the Study Area provides marginal habitat for this species. but it was not found during focused protocol surveys during the bloom period (Foothill Associates 2016c).
El Dorado bedstraw *Galium californicum* ssp. *sierrae*	FE; CR; 1B	Perennial herb found on gabbroic substrate in chaparral, cismontane woodland, and lower montane coniferous forest from 100 to 585 meters.	Blooming period: May – June.	**None**; there is no suitable soil for this species within the Study Area.
Layne's butterweed (=ragwort) *Packera layneae*	FT; CR; 1B	Perennial herb found on serpentine or gabbroic, rocky substrate in cismontane woodland or chaparral from 200 to 1,085 meters.	Blooming period: April – August.	**None**; there is no suitable soil for this species within the Study Area.
Legenere *Legenere limosa*	CT; 1B	Annual herb found in vernal pools from 1 to 880 meters.	Blooming period: April – June.	**None**; there is no vernal pool habitat within the Study Area.
Pine Hill ceanothus *Ceanothus roderickii*	FE; CR; 1B	Perennial evergreen shrub found on serpentinite or gabbroic substrate in chaparral or cismontane woodland from 245 to 1,090 meters.	Blooming period: April – June.	**None**; there is no suitable soil for this species within the Study Area.
Pine Hill flannelbush *Fremontodendron decumbens*	FE; CR; 1B	Perennial evergreen shrub found in chaparral and cismontane woodland on rocky gabbroic or serpentinite soils from 425 to 760 meters.	Blooming period: April-July	**None**; there is no suitable soil for this species within the Study Area.
Sacramento orcutt grass *Orcuttia viscida*	FE; CE; 1B	Annual herb found in vernal pools from 30 to 100 meters.	Blooming period: April – September.	**None**; the Study Area does not provide suitable habitat for this species.
Slender orcutt grass *Orcuttia tenuis*	FT; CE; 1B	Annual herb found in vernal pools that are often gravelly, from 35 to 1,760 meters.	Blooming period: May – October.	**None**; the Study Area does not provide suitable habitat for this species.
Stebbins' morning glory *Calystegia stebbinsii*	FE; CE; 1B	Perennial rhizomatous herb found occasionally in openings of chaparral and cismontane woodland on gabbro or serpentinite soils from 185 to 1,090 meters.	Blooming period: April – July.	**None**; there is no suitable soil for this species within the Study Area.
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT	Blue elderberry shrubs usually associated with riparian areas.	Adults emerge in spring until June. Exit holes visible year – round.	**Low**; small elderberry shrubs were observed in the Study Area but no exit holes were observed.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	Vernal pools, swales, and ephemeral freshwater habitat.	USFWS protocol-level wet-season sampling and/or dry season cyst identification.	**None**; the Study Area does not provide suitable habitat for this species.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE	Vernal pools, swales, and ephemeral freshwater habitat.	USFWS protocol-level wet-season sampling and/or dry season cyst identification.	**None**; the Study Area does not provide suitable habitat for this species.
Fish				
Central Valley steelhead *Oncorhynchus mykiss*	FT	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	Spawn in winter and spring.	**None**; the Study Area does not provide suitable habitat for this species.
Delta smelt *Hypomesus transpacificus*	FT; CE	Found in estuarine waters. Majority of life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta.	December – July (Spawn) Year-round (Present in delta)	**None**; the Study Area does not provide suitable habitat for this species.
Amphibians/ Reptiles				
California red-legged frog *Rana draytonii*	FT; CSC	Requires a permanent water source and is typically found along quiet, slow-moving streams, ponds, or marsh communities with emergent vegetation. Believed extirpated from the Central Valley floor since 1970s.	Aquatic surveys of breeding sites between January and September. Optimally after April 15.	**None**; the riverine perennial marsh and perennial drainage within the Study Area provide marginal habitat for this species, but no evidence of CRLF was observed during protocol breeding and non-breeding surveys (Foothill Associates 2016a).
California tiger salamander *Ambystoma californiense*	FT; CT	Required ponded water for breeding. Adults spend summer in small mammal burrows. This species is not known to occur within El Dorado County. There are no recorded instances of CTS north of the Cosumnes River and east of the Sacramento River despite extensive surveys.	March – June	**None**; the Study Area occurs outside of the known extant geographic range for this species.
Foothill yellow-legged frog *Rana boylii*	CC	Typically found in shaded, shallow, slow moving streams or channels with rocky or muddy bottoms. Typically stays within ~150' of water.	Breeds from mid-March to early June. Most active diurnally. Hibernates and aestivates.	**Low**; perennial drainage provides potential habitat for this species, but there are no known occurrences within 5 miles.

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Giant garter snake *Thamnophis gigas*	FT; CT	Found in agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November – mid March). This species is known from Sacramento, Sutter, Butte, Colusa, and Glenn counties.	Active outside of dormancy period November-mid March	**None**; the Study Area occurs outside of the known geographic range for this species.
Birds				
Bald eagle *Haliaeetus leucocephalus*	FD; CFP, CE	Breeding habitat most commonly includes areas within 2.5 miles (4.0 kilometers) of coastal areas, bays, rivers, lakes, and reservoirs. Nests usually are in tall trees or on pinnacles or cliffs near water.	Winter	**None**; there is no potential habitat for this species within the Study Area.
Bank swallow *Riparia*	CT	Nests in riverbanks and forages over riparian areas and adjacent uplands.	April – July	**None**; there is no potential nesting habitat for this species within the Study Area.
California black rail *Laterallus jamaicensis coturniculus*	CT	Saltwater, brackish, and freshwater marshes that remain shallowly inundated year-round.	Year – round	**None**; the Study Area occurs outside of the geographical range for this species.
Golden eagle *Aquila chrysaetos*	CFP (nesting and wintering)	Open and semi-open areas up to 12,000 feet in elevation. Builds large stick nests on cliffs, in trees, or on man-made structures.	Year – round	**Low**; although the Study Area provides foraging habitat, there is no breeding habitat present within the Study Area and no nests have been observed.
Swainson's hawk *Buteo swainsoni*	CT	Nest peripherally to Valley riparian systems lone trees or groves of trees in agricultural fields. Valley oak, Fremont cottonwood, walnut, and large willow trees, ranging in height from 41 to 82 feet, are the most commonly used nest trees in the Central Valley.	March – October	**None**; the Study Area occurs outside of the known geographical range for this species.
Tricolored blackbird *Agelaius tricolor*	CC; CSC (nesting colony)	Nests in dense blackberry, cattail, tules, bulrushes, sedges, willow, or wild rose within freshwater marshes. Nests in large colonies of at least 50 pairs (up to thousands of individuals). May forage up to 4 miles from nest site.	Year – round	**Low**; the riverine perennial marsh is not large enough to support breeding colonies, but colonies are recorded within 4 miles of the Study Area so the area may be used for foraging.
White-tailed kite *Elanus leucurus*	CFP (nesting)	Nests in isolated trees or woodland areas with suitable open foraging habitat.	February 15 – August 31	**High**; the riparian habitat and isolated trees within the annual grassland provide breeding habitat for this species.
Mammals				
Fisher *Martes pennanti*	PT; CSC	Occurs in intermediate to large-tree stages of coniferous and deciduous forests.	Year – round	**None**; there is no habitat for this species within the Study Area.

Table 1 includes federal threatened or endangered species and eagles, and State threatened, endangered, or fully protected species.

Table 2 — Species Subject to CEQA Review

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	1B	Annual herb found in mesic areas in valley and foothill grasslands from 30 to 229 meters.	Blooming period: April – August.	**None**; the Study Area does not provide habitat for this species.
Big-scale balsamroot *Balsamorhiza macrolepis*	1B	Perennial herb found in chaparral, cismontane woodland, valley and foothill grassland, sometimes on serpentinite soils from 90 to 1,555 meters in elevation.	Blooming period: March – June	**None**; the annual grassland within the Study Area provides marginal habitat for this species. but it was not found during focused protocol surveys during the bloom period (Foothill Associates 2016c).
chaparral sedge *Carex xerophila*	1B	Perennial herb found on gabbroic or serpentine soils in chaparral, woodlands, and coniferous forest between 440 and 770 meters.	Blooming period: March – June	**None**; there is no suitable soil for this species within the Study Area.
Dwarf downingia *Downingia pusilla*	2	Annual herb found occasionally in mesic areas within valley and foothill grassland and vernal pools from 1 to 445 meters.	Blooming period: March – May.	**None**; the annual grassland within the Study Area provides marginal habitat for this species. but it was not found during focused protocol surveys during the bloom period (Foothill Associates 2016c).
El Dorado bedstraw *Galium californicum* ssp. *sierrae*	FE; CR; 1B	Perennial herb found on gabbroic substrate in chaparral, cismontane woodland, and lower montane coniferous forest from 100 to 585 meters.	Blooming period: May – June.	**None**; there is no suitable soil for this species within the Study Area.
Jepson's onion *Allium jepsonii*	1B	Perennial bulbiferous herb found on serpentine or volcanic soils in chaparral, lower montane coniferous forest, and cismontane woodland from 300 to 1,320 meters.	Blooming period: April – August.	**None**; there is no suitable soil for this species within the Study Area.
Parry's horkelia *Horkelia parryi*	1B	Perennial herb found on Ione formation in chaparral and cismontane woodland from 80 to 1,070 meters.	Blooming period: April – September	**None**; there is no suitable soil for this species within the Study Area.
Pincushion navarretia *Navarretia myersii*	1B	Annual herb found in vernal pools, which are often acidic, from 20 to 330 meters.	Blooming period: April – May.	**None**; there is no vernal pool habitat within the Study Area.
Red Hills soaproot *Chlorogalum grandiflorum*	1B	Perennial bulbiferous herb found on gabbro, serpentine, or other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 245 to 1,240 meters.	Blooming period: May - June	**None**; original site surveys were conducted within the evident and identifiable bloom period for this species and this species was not observed within the Study Area.
Sanford's arrowhead *Sagittaria sanfordii*	1B	Perennial rhizomatous herb found in marshes and swamps in assorted shallow freshwater areas from 0 to 650 meters.	Blooming period: May – October.	**None**; the riverine perennial marsh within the Study Area provides marginal habitat for this species. but it was not found during focused protocol surveys during the bloom period (Foothill Associates 2016c).
Starved daisy *Erigeron miser*	1B	Perennial herb found on rocky ground in upper montane coniferous forest from 1,840 to 2,620 meters.	Blooming period: June – October.	**None**; the Study Area does not provide habitat for this species and is outside the known elevational range.
Tuolumne button-celery *Eryngium pinnatisectum*	1B	Annual to perennial herb found in mesic areas in cismontane woodland, lower montane coniferous forest, and vernal pools from 70 to 915 meters.	Blooming period: May – August	**None**; original site surveys were conducted within the evident and identifiable bloom period for this species and this species was not observed within the Study Area.
Amphibians/ Reptiles				
Blainville's (Coast) horned lizard *Phrynosoma blainvillii*	CSC	Inhabits open areas of sandy soils and low vegetation in valleys, foothills, and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose sandy soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills.	Year – round (excluding extended periods of low temperatures or extreme heat).	**Low**; the Study Area provides marginal habitat within the annual grassland. However, the Study Area lacks suitable sandy washes and low scattered bushes or shrubs.
Western pond turtle *Emys marmorata*	CSC	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	Active outside of dormancy period November – February	**High**; the perennial drainage and riverine perennial marsh within the Study Area provide habitat for this species.
Western spadefoot *Spea hammondii*	CSC	Found in open grasslands and woodlands. Breeds in seasonal ponds and vernal pools.	Year – round	**Low**; there is minimal potential breeding habitat for this species in the Study Area in the depressional seasonal wetlands.

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Birds				
Burrowing owl *Athene cunicularia*	CSC (burrow sites and some wintering sites)	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat. The burrows are found in dry, level, open terrain, including prairie, plains, desert, and grassland with low height vegetation for foraging and available perches, such as fences, utility poles, posts, or raised rodent mounds.	Year – round; Breeding season surveys between March and August.	**Low**; the annual grassland within the Study Area provides potential habitat for this species, however, few burrows that could be occupied by this species was observed and this species was not observed during the protocol level surveys conducted within the Study Area.
Cooper's hawk *Accipiter cooperii*	CSA (Nesting)	Found in cismontane woodland, riparian forest, riparian woodland, and upper montane coniferous forest.	Year – round	**Low;** the woodlands on site provide potential nesting and foraging habitat.
Double crested cormorant *Phalacrocorax auritus*	CSA (Nesting colony)	Breeds on ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines.	Migrate and winter non-breeding.	**None;** there is no suitable nesting habitat in the Study Area.
Ferruginous hawk *Buteo regalis*	CSA (Wintering)	Overwintering occurs in grasslands or deserts with abundant prey species (rabbits, pocket gophers, or prairie dogs).	Wintering	**Low**; the annual grassland habitat within the Study Area provides habitat for this species.
Grasshopper sparrow *Ammodramus savannarum*	CSC	Frequents dense, dry, or well drained grassland, especially native grassland. Nests at base of overhanging clump of grass.	April – July	**Low**; the annual grassland habitat within the Study Area provides habitat for this species.
Great blue heron *Ardea herodias*	CSA (Nesting colony)	Inhabits both freshwater and saltwater habitats and forages in grassland and agricultural field. Breeding colonies are located within 2 to 4 miles of feeding areas, often in isolated swamps or on islands, and near lakes and ponds bordered by forests.	Year – round	**None;** there is no suitable nesting habitat in the Study Area.
Great egret *Ardea alba*	CSA (Nesting colony)	Nests in colonies in large trees usually near water. Nesting colonies must be relatively isolated from human activities. Forages in shallow water in a variety of habitats.	Year – round	**None;** there is no suitable nesting habitat in the Study Area.
Merlin *Falco columbarius*	CSA (Wintering)	Winter in open and semi-open habitats that include estuaries, Great Basin grassland, and valley and foothill grasslands.	Wintering	**Low**; the annual grassland habitat within the Study Area provides habitat for this species.
Osprey *Pandion haliaetus*	CSA	Found in a variety of habitats nearby water sources.	Breeding	**None**; the Study Area does not provide suitable habitat for this species.
Purple martin *Progne subis*	CSC	Often nests in tall, old trees near body of water in woodland and conifer habitats. Feed in open areas near water and nest in tree cavities.	Year – round	**Low**; the Study Area does provide potential nesting habitat for this species.
Mammals				
American badger *Taxidea taxus*	CSC	Found in a variety of grasslands, shrublands, and open woodlands throughout California.	Year – round	**Low**; the annual grassland within the Study Area provides habitat, however, very few burrows that could be utilized by this species are present within the Study Area.
Pallid bat *Antrozous pallidus*	CSC	Most abundant in oak woodland, savannah, and riparian habitats. Roosts in crevices and hollows in trees, rocks, cliffs, bridges, and buildings.	Year – round	**Low**; the trees within the riparian habitat and isolated trees within the annual grassland provide roosting habitat for this species.
Silver-haired bat *Lasionycteris noctivagans*	CSA	Forests near water. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark. Forages in ~300' home range over water and open brushy areas.	Dusk between spring and fall.	**Low**; there is marginal habitat in the woodlands for this species on the Study Area

Table 2 includes state and federal species of concern and Rank 1 and 2 CNPS species.

Table 3 — Other Species of Interest

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Bisbee Peak rush-rose *Crocanthemum suffrutescens*	3.2	Perennial evergreen shrub often found on gabbroic or lone soil and often in burned or disturbed areas within chaparral from 75 to 670 meters.	Blooming period: April – August.	**None**; the Study Area does not provide habitat for this species.
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeeae*	4	Annual herb found often in roadcuts within chaparral, cismontane woodland, and lower montane coniferous forest from 75 to 915 meters.	Blooming period: May – July.	**None**; the woodlands within the Study Area provide marginal habitat for this species. but it was not found during focused protocol surveys during the bloom period (Foothill Associates 2016c).
Brewer's calandrinia *Calandrinia breweri*	4	Annual herb found on sandy or loamy, disturbed sites and burns within chaparral and coastal scrub from 10 to 1,220 meters.	Blooming period: March – June.	**None**; the Study Area does not provide habitat for this species.
Fresno ceanothus *Ceanothus fresnensis*	4	Perennial evergreen shrub found occasionally in openings of cismontane woodland and lower montane coniferous forest from 900 to 2,103 meters.	Blooming period: May – July.	**None**; the Study Area occurs outside of the known elevation range for this species.
Hernandez bluecurls *Trichostema rubisepalum*	4	Annual herb found on volcanic or serpentinite, gravelly substrate within broad-leafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and vernal pools from 300 to 1,435 meters.	Blooming period: June – August.	**None**; there is no suitable soil for this species within the Study Area.
Humboldt lily *Lilium humboldtii* ssp. *humboldtii*	4	Perennial bulbiferous herb found in openings of chaparral, cismontane woodland, and lower montane coniferous forest from 90 to 1,280 meters.	Blooming period: May – July.	**None**; the woodlands within the Study Area provide marginal habitat for this species. but it was not found during focused protocol surveys during the bloom period (Foothill Associates 2016c).
Jepson's woolly sunflower *Eriophyllum jepsonii*	4	Perennial herb sometimes found on serpentinite substrate within chaparral, cismontane woodland, and coastal scrub from 200 to 1,025 meters.	Blooming period: April – June.	**None**; the Study Area does not contain the soils required for this species.
Sanborn's onion *Allium sanbornii* var. *sanbornii*	4	Perennial bulbiferous herb usually found on serpentinite, gravelly substrate within chaparral, cismontane woodland, and lower montane coniferous forest from 260 to 1,510 meters.	Blooming period: May – September.	**None**; there is no suitable soil for this species within the Study Area.
Streambank spring beauty *Claytonia parviflora* ssp. *grandiflora*	4	Annual herb found on rocky substrate within cismontane woodland from 250 to 1,200 meters.	Blooming period: February – May.	**None**; the Study Area does not provide habitat for this species and is outside of the known elevational range.
Invertebrates				
Alabaster Cave harvestman *Banksula californica*	CSA	Found in caves in the Sierra Nevada.	Year-round	**None**; there is no suitable habitat for this species in the Study Area.
Blennosperma vernal pool andrenid bee *Andrena blennospermaties*	CSA	Found in upland areas near vernal pools; dependent on populations of blennosperma flowers. Slender, dark-olive green bees with pale apical bands on the dorsum of the abdominal segments; females measure 8.5-9.5 mm, males 7-8 mm.	Year-round	**None**; there is no suitable habitat for this species in the Study Area.
California linderiella *Linderiella occidentalis*	CSA	Inhabits vernal pools, swales, and ephemeral freshwater habitat.	Wet-season sampling and/or dry season cyst identification.	**None**; the seasonal swales in the Study Area provide marginal habitat, but the Study Area is outside the locally recorded range of the species.
Cosumnes Stripetail *Cosumnoperla hypocrena*	CSA	Freshwater intermittent streams in the American River and Cosumnes River basins between 300 and 1500 meters.	Year – round	**None**; the Study Area is outside the geographic range of the species.
Hairy Water flea *Dumontia oregonensis*	CSA	Vernal pools, seasonal pools, and streams from Jackson County, Oregon to Sacramento and Solano Counties in California.	Wet Season	**None**; the Study Area is outside the geographic range of the species.
Mid-valley fairy shrimp *Branchinecta mesovallensis*	CSA	Inhabits vernal pools, swales, and ephemeral freshwater habitat.	Wet-season sampling and/or dry season cyst identification.	**None**; the Study Area is outside the geographic range of the species.
Ricksecker's water scavenger beetle *Hydrochara ricksecker*i	CSA	A small aquatic beetle known from pond habitats in the San Francisco Bay Area.	Year-round	**None**; there is no habitat for this species within the Study Area.
Western bumble bee *Bombus occidentalis*	CSA	Generally, nests underground in abandoned rodent burrows and bird nests. Forages on a wide variety of flowers. Found in Coast range north of Monterey County, Sierra mountain range north of Tuolumne County, and around the delta region of Contra Costa County.	New colonies established in spring. Overwinter in shallow burrows.	**None**; the Study Area is outside the geographic range of the species.

Table 3 includes Rank 3 and 4 CNPS species and non-listed invertebrates, which may not be subject to CEQA review.

Appendix C — Plants and Wildlife Observed in the Study Area

Appendix C
Wildlife Observed in the Study Area

Species	Common Name
Birds	
Agelaius phoeniceus	Red-winged blackbird
Buteo jamaicensis	Red-tailed hawk
Callipepla californica	California quail
Carpodacus mexicanus	House finch
Cathartes aura	Turkey vulture
Euphagus cyanocephalus	Brewer's blackbird
Falco sparverius	American kestrel
Melanerpes formicivorus	Acorn woodpecker
Meleagris gallopavo	Wild turkey
Sayornis nigricans	Black phoebe
Sturnella neglecta	Western meadowlark
Sturnus vulgaris	European starling
Zenaida macroura	Mourning dove
Mammals	
Microtus agrestis	Vole
Lepus californicus	Black-tailed jackrabbit
Plestiodon skiltonianus	Western skink
Sceloporus occidentalis	Western fence lizard
Sylvilagus sp.	Cottontail rabbit

Appendix C
Plants Observed in the Study Area

Genus	Species	Common Name	Wetland Indicator Status
Adoxaceae	*Sambucus nigra* ssp. caerulea	Blue elderberry	FACU
Apiaceae	*Eryngium vaseyi*	Coyote-thistle	FACW
Apocynaceae	*Asclepias fascicularis*	Mexican whorled milkweed	FAC
Asteraceae	*Anaphalis margaritacea*	Pearly everlasting	FACU
Asteraceae	*Artemisia douglasiana*	California mugwort	FAC
Asteraceae	*Baccharis pilularis*	Coyote brush	NI
Asteraceae	*Carduus pycnocephalus* ssp. pycnocephalus	Italian thistle	NI
Asteraceae	*Holocarpha virgata*	Tarweed, tarplant	NI
Asteraceae	*Hypochaeris glabra*	Smooth cat's ear	NI
Asteraceae	*Lactuca serriola*	Prickly lettuce	FACU
Asteraceae	*Silybum marianum*	Milk thistle	NI
Boraginaceae	*Amsinckia menziesii*	Fiddleneck	NI
Boraginaceae	*Phacelia cicutaria*	Phacelia	NI
Boraginaceae	*Plagiobothrys fulvus*	Common popcornflower	NI
Brassicaceae	*Brassica napus*	Swede rape, rapeseed	NI
Brassicaceae	*Brassica nigra*	Black mustard	NI
Caryophyllaceae	*Spergularia bocconi*	Boccon's sand spurry	FACW
Cyperaceae	*Cyperus eragrostis*	Nutsedge	FACW
Cyperaceae	*Eleocharis macrostachya*	Spikerush	OBL
Cyperaceae	*Schoenoplectus acutus* var. occidentalis	Tule	OBL
Euphorbiaceae	*Croton setiger*	Turkey-mullein	NI
Fabaceae	*Trifolium hirtum*	Rose clover	NI
Fagaceae	*Quercus lobata*	Valley oak	FACU
Fagaceae	*Quercus wislizeni*	Interior live oak	NI
Gentianaceae	*Zeltnera muehlenbergii*	Muehlenberg's centaury	FAC
Geraniaceae	*Erodium botrys*	Broadleaf filaree	FACU
Geraniaceae	*Erodium cicutarium*	Cutleaf filaree	NI
Geraniaceae	*Geranium molle*	Crane's bill geranium	NI
Hypericaceae	*Hypericum perforatum*	St. John's wort	FACU
Lamiaceae	*Mentha pulegium*	Pennyroyal	OBL
Marsileaceae	*Pilularia americana*	American pillwort	OBL
Moraceae	*Ficus carica*	Edible fig	FACU
Myrsinaceae	*Lysimachia arvensis*	Scarlet pimpernel	FAC
Onagraceae	*Epilobium ciliatum*	Northern willow herb	FACW
Papaveraceae	*Eschscholzia californica*	California poppy	NI
Papaveraceae	*Eschscholzia casespitosa*	Foothill poppy	NI
Poaceae	*Aira caryophyllea*	Silver hair grass	FACU
Poaceae	*Avena fatua*	Wild oat	UPL
Poaceae	*Bromus diandrus*	Ripgut grass	NI
Poaceae	*Bromus hordeaceus*	Soft chess	FACU
Poaceae	*Deschampsia danthonioides*	Annual hair grass	FACW
Poaceae	*Elymus caput-medusae*	Medusa head	NI
Poaceae	*Festuca bromoides*	Brome fescue	FACU
Poaceae	*Festuca perennis*	Rye grass	FAC
Poaceae	*Hordeum murinum*	Foxtail	FACU
Poaceae	*Polypogon monspeliensis*	Annual beard grass, rabbitfoot grass	FACW
Poaceae	*Stipa pulchra*	Purple needle grass	NI
Poaceae	*Vulpia myuros*	Foxtail fescue	FACU
Polygonaceae	*Persicaria lapathifolia*	Common knotweed	FACW
Polygonaceae	*Rumex crispus*	Curly dock	FAC
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	FAC
Salicaceae	*Populus fremontii* ssp. fremontii	Alamo or Fremont cottonwood	NI
Salicaceae	*Salix* sp.	Willow	FACW
Scrophulariaceae	*Verbascum blattaria*	Moth mullein	UPL
Sonchus	*Sonchus asper*	Sow thistle, prickly sow thistle	FAC
Themidaceae	*Brodiaea elegans* ssp. elegans	Harvest brodiaea	FACU
Typhaceae	*Typha angustifolia*	Narrow-leaved cattail	OBL
Typhaceae	*Typha latifolia*	Common cattail, broadleaf cattail	OBL
Vicia	*Vicia villosa*	Hairy vetch	NI