

**BIOLOGICAL RESOURCES ASSESSMENT
3051 CAYENTE WAY, CAMERON PARK, CALIFORNIA**

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INTRODUCTION

This report provides a biological and wetlands assessment of the ±5-acre 3051 Cayente Way property (Project Site) in Cameron Park, near the intersection of Meder Road and Auburn Hills Drive in eastern El Dorado County, California (Figure 1). We describe the biological resources on the Project Site and discuss issues that may either require permitting and/or consultation with state and/or federal resource agencies and/or CEQA-level mitigation for adverse impacts to existing biological resources from subdivision and residential development of this property.

This biological assessment addresses wetlands and “other waters of the U.S.” that could fall under the jurisdiction of the U.S. Army Corps of Engineers (Corps), pursuant to Section 404 of the U.S. Clean Water Act. Potential jurisdictional wetlands or “other waters” include vernal pools, seasonal wetlands, swales, seeps, or ditches that exhibit standing water or saturation, hydrophytic vegetation, topographic depressions, or evidence of surface scouring. The assessment also determines whether the Project Site contains habitat with the potential to support special-status plant or animal species.

METHODS

A reconnaissance-level field survey was conducted by Dr. Bruce Barnett and Mr. Christopher Bronny on October 15, 2006. All portions of the Project Site were examined on foot to identify and map vegetation types, assess habitat suitability for special-status species, and record observed plants and wildlife. Prior to the field survey, the California Natural Diversity Database (CNDDDB)¹ was queried for any recorded occurrences of special-status plant or wildlife species in the vicinity of the Project Site. A CNDDDB list of special-status plant, animal, and sensitive natural communities in the project vicinity can be found in Appendix A.

A query of the California Native Plant Society’s (CNPS) *Inventory of Rare and Endangered Vascular Plants of California*² was also conducted for recorded occurrences of special-status plants. The CNPS maintains four species lists of varying rarity. Although plants on these lists have no formal legal protection (unless they are also listed state or federal species), the California Department of Fish and Game (CDFG) requests the inclusion of List 1 species in environmental documents. In addition, other state and local agencies may request the inclusion of species on other lists as well. List 1 species have the highest priority: List 1A species are thought to be extinct and List 1B species are known to still exist. List 2 species are

¹ California Department of Fish and Game. *California Natural Diversity Database (CNDDDB)*. 2006

² CNPS Electronic Inventory available online at: www.cnps.org/inventory
Cayente Way Biological Assessment

Figure 1 – Project Location



rare in California, but more common elsewhere. Lists 3 and 4 contain species, about which there is some concern, and are on review and watch lists, respectively. 1B species are those species that CNPS considers threatened or endangered in California and elsewhere³. All of the plants constituting List 1B meet the definitions of Sections 1901, 2062, and 2067 of the California Department of Fish and Game Code (see below), and are eligible for State listing.

REGULATORY BACKGROUND

A number of federal and state statutes and local county policies provide the regulatory structure that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological and wetland resources that may potentially occur on the Project Site.

U.S. Fish and Wildlife Service (USFWS) – The U.S. Fish and Wildlife Service (USFWS) implements the Migratory Bird Treaty Act (16 USC Section 703-711), Bald and Golden Eagle Protection Act (16 United States Code (USC) Section 668), and Federal Endangered Species Act (FESA; 16 USC' 153 *et seq*).

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

The federal definition of take includes to harass, harm, pursue, hunt, shoot, would, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Candidate species do not have the full protection of FESA. However, the USFWS advises that project applicants address these species since they could be elevated to listed status prior to completion of projects with long planning or development schedules.

U.S. Army Corps of Engineers (Corps) – Under Section 404 of the U.S. Clean Water Act (CWA), the Corps has authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The Corps

³ Recent modifications to the CNPS Ranking System include the addition of a new Threat Code extension to listed species (e.g., List 1B.1, List 2.2, etc.). A Threat Code extension of .1 signifies that a species is seriously endangered in California; .2 is fairly endangered in California; and .3 is not very endangered in California.

implements the federal policy embodied in Executive Order 11990, which is intended to preserve wetland values or acres. In achieving the goals of the CWA, the Corps seeks to avoid adverse impacts and to offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands could require a permit from the Corps prior to the start of work. Typically, permits issued by the Corps condition a project with mitigation to offset unavoidable impacts on wetlands and "other waters" of the United States in a manner that achieves the goal of "no net loss" of wetland acres or values.

California Department of Fish and Game (CDFG) – The California Department of Fish and Game (CDFG) derives its authority from the Fish and Game Code of California, which implements the California Endangered Species Act (CESA; Fish and Game Code Section 2050 *et seq*). CESA prohibits the "take" of listed threatened or endangered species. Take under CESA is restricted to the direct killing of a listed species and does not prohibit indirect harm by way of habitat modification.

California Species of Special Concern (CSC) is a category conferred by CDFG for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of special concern are not necessarily afforded protection under the code unless they are also identified as California Fully Protected Species. The CSC category is intended by the CDFG for use as a management tool to take these species into special consideration when decisions are made concerning the development of natural lands.

The CDFG also has the authority to administer the Native Plant Protection Act (NPPA; Fish and Game Code Section 1900 *et seq*). The NPPA requires the CDFG to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913©) of the Act, the owner of land where a rare or endangered native plant is growing is required to notify the CDFG at least 10 days in advance of changing the land use to allow for salvage of rare or endangered plants.

Perennial or intermittent streams also fall under the jurisdiction of the CDFG pursuant to Sections 1601-1607 of the Fish and Game Code (Lake and Streambed Alteration Agreement). CDFG jurisdiction over work within the stream zone or lake shore includes, but is not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake.

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation

made pursuant thereto. Fish and Game Code Section 3503.5 protects all birds of prey (i.e., raptors, such as hawks, eagles, and owls) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treat Act. These regulations could require that elements of the Proposed Project (particularly vegetation removal) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nest, eggs, or nesting birds will not be disturbed, subject to approval by CDFG and/or USFWS. Disturbance that causes nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) is considered take.

California Environmental Quality Act (CEQA) – CEQA requires review of projects to determine their environmental effects and to identify mitigation for significant effects. The CEQA Guidelines state an effect may be significant if it affects rare, threatened, and endangered species. In addition to state and federally listed species, Section 15380 of the CEQA Guidelines identify rare species as those that may not be presently threatened with extinction, but exist in such small numbers throughout all or a significant part of it's range that it may be endangered if its environment worsens, or any species that is likely to become endangered in the foreseeable future, on this basis, plants designated as rare by non-regulatory organizations (i.e., California Native Plant Society), species of special concern (CDFG), Candidate species (USFWS) and other designations may need to be considered in CEQA analyses.

State Water Resources Control Board – The State Water Resources Control Board (SWRCB) also has the authority over wetlands and waters of the U.S. through Section 401 of the CWA. The CWA requires a Clean Water Act, Section 404 permit applicant to also obtain certification from the appropriate State agency that the 404 permit is consistent with the State's water quality standards. In California, this certification authority is delegated by the SWRCB to nine Regional Water Quality Control Boards (RWQCB). A request for certification is submitted to the appropriate RWQCB at the same time that a Section 404 application is filed with the Corps. The RWQCB has 60 days to review the act on the application. Because no Corps permit is valid under the CWA unless certified by the State, these boards may effectively deny or add conditions to any Corps permit.

El Dorado County General Plan – Certain goals, policies, and objectives of the El Dorado County General Plan address impacts to biological resources that may pertain to the Project Site:

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 7.4.1.5 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).

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 7.4.2.6 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.

Objective 7.4.4: Forest and Oak Woodland Resources: Protect and conserve forest and woodland resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.4 For all new development projects (not including agricultural cultivation and actions pursuant to an approved Fire Safe Plan necessary to protect existing structures, both of which are exempt from this policy) that would result in soil disturbance on parcels that (1) are over an acre and have at least 1 percent total canopy cover or (2) are less than an acre and have at least 10 percent total canopy cover by woodlands habitats as defined in this General Plan and determined from base line aerial photography or by site survey performed by a qualified biologist or licensed arborist, the County shall require one of two mitigation options: (1) the project applicant shall adhere to the tree canopy retention and replacement standards described below; or (2) the project applicant shall contribute to the County's Integrated Natural Resources Management Plan (INRMP) conservation fund described in Policy 7.4.2.8

Option A - The County shall apply the following tree canopy retention standards:

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

Under Option A, the project applicant shall also replace woodland habitat removed at 1:1 ratio. Impacts on woodland habitat and mitigation requirements shall be addressed in a Biological Resources Study and Important Habitat Mitigation Plan as described in Policy 7.4.2.8. Woodland replacement shall be based on a formula, developed by the County, that accounts for the number of trees and acreage affected.

Option B – The project applicant shall provide sufficient funding to the County's INRMP conservation fund, described in Policy 7.4.2.8, to fully compensate for the impact to oak woodland habitat. To compensate for fragmentation as well as habitat loss, the preservation mitigation ratio shall be 2:1 and based on the total woodland acreage onsite directly impacted by habitat loss and indirectly impacted by habitat fragmentation. The costs associated with acquisition, restoration, and management of the habitat protected shall be included in the mitigation fee. Impacts on woodland habitat and mitigation requirements shall be addressed in a Biological Resources Study and Important Habitat Mitigation Plan as described in Policy 7.4.2.8.

Policy 7.4.4.5 Where existing individual or a group of oak trees are lost within a stand, a corridor of oak trees shall be retained that maintains continuity between all portions of the stand. The retained corridor shall have a tree density that is equal to the density of the stand.

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.

BIOLOGICAL BACKGROUND

Pine Hill Formation and Gabbro Soils – Several unique soil formations provide important habitat for special-status (i.e., listed as threatened or endangered) plant species in portions of El Dorado County. A soil complex known as the “gabbro soil intrusion,” covering approximately 30,000 acres and centered on Green Valley Road in El Dorado County, is often referred to as the “Pine Hill Formation.” This unique parent material constitutes the various soil types that support a unique assemblage of endemic plants (i.e., plants restricted to a certain habitat type) found almost exclusively in El Dorado County, including: Stebbins’ morning-glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodendron decumbens*), El Dorado bedstraw (*Galium californicum* ssp. *sierrae*), Layne’s butterweed (*Packera* [*Senecio*] *layneae*), El Dorado mule-ears (*Wyethia reticulata*), and Red Hills soaproot (*Chlorogalum grandiflorum*). Pine Hill endemics are most commonly associated with the Rescue soil series, which is generally red, mildly acidic, rich in iron and magnesium, and often contains other heavy metals such as chromium. Outcrops of another unusual soil type, serpentinite, also occur in the Pine Hill area. The soils that result from weathering are known as serpentinite soils, which are similar to gabbro soils and support some of the same species. This creates a very limited growing environment for many plant species that cannot tolerate the soil chemistry found within these soils.

Endangered Species Recovery Plan – The USFWS (Region 1) issued the *Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills* in August, 2002 to address a strategy for protecting the unique biodiversity of the Pine Hills Formation. The four key elements of Recovery, Habitat Protection, Monitoring and Research, and Habitat Management are addressed in this document. Detailed accounts of the rare plants occurring in the region are presented in the Plan, along with the distribution of known plant occurrences within the Pine Hill Formation. The objectives of this Recovery Plan are to protect and restore sufficient habitat and to ameliorate past and current threats to existing populations, with the eventual goal of down- or de-listing the six species. Preserve recommendation maps were generated by the USFWS, and by the Rare Plant Advisory Committee (RPAC).

SURVEY RESULTS

The five-acre Project Site lies within Section 34, Township 10 North, and Range 9 East of the Shingle Springs USGS 7.5 minute topographic Quadrangle (UTM NAD27.) The center of the Project Site is at approximately N 38° 41' 07.35" and W 120° 58' 27.34". The topography of the Project Site is nearly level throughout, with a gentle sloping toward the south, from

approximately 1,448' msl at the northern end of the site to approximately 1,438' msl at the southern end.

Plant Communities and Associated Wildlife Habitat

The Project Site supports primarily a mixed oak woodland, with scattered rock outcroppings in the northern half of the site⁴ (see site photos in Appendix B). Similar habitats surround the Project Site along the northern, western, and eastern boundaries, with small patches of remnant chaparral visible across the fenceline along the western boundary. Low-density "ranchette"-type residences embedded within these habitats occur along the northern and eastern boundaries; medium-density residences lie along the southern boundary, south of Cayente Way (Figure 2). A single-family residence and outbuildings are located in the southern portion of the Project Site. The herbaceous understory around the single-family residence consists of a maintained seeded lawn, while ruderal (weedy) species occupy disturbed areas around the outbuildings.

Mixed Oak Woodland – Blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizenii*), and California black oak (*Quercus kelloggii*) are the dominant tree species, with a single, mature ponderosa pine (*Pinus ponderosa*) at the southern end of the site near the existing residence. The majority of the oak trees present are multi-stemmed, with average diameter at breast height (dbh) ranging from eight to 10 inches for blue oak, four to 16 inches for interior live oak, and five to 12 inches for California black oak. A single, multi-stemmed California buckeye (*Aesculus californica*) occurs along the eastern boundary of the Project Site. The shrub understory is fairly diverse, consisting of toyon (*Heteromeles arbutifolia*), white-leaf manzanita (*Arctostaphylos viscida*), chamise (*Adenostoma fasciculatum*), California coffeeberry (*Rhamnus californica*), scrub oak (*Quercus berberidifolia*), poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), buckbrush (*Ceanothus cuneatus*), honeysuckle (*Lonicera hispidula* var. *vacillans*), and sticky monkeyflower (*Mimulus aurantiacus*). The herbaceous groundlayer is extremely degraded, dominated primarily by hedgehog dogtail (*Cynosurus echinatus*), a non-native grass species. Other herbaceous species observed included silver hairgrass (*Aira caryophyllea*), soft chess (*Bromus hordeaceus*), creeping wild rye (*Leymus triticoides*), field hedge parsley (*Torilis arvensis*), creeping sage (*Salvia sonomensis*), pitcher sage (*Lepechinia calycina*), Klamathweed (*Hypericum perforatum*), climbing bedstraw (*Galium porrigens*), California cudweed (*Gnaphalium californicum*), horkelia (*Horkelia* sp.), and vetch (*Vicia* sp.).

From the presence of numerous brushpiles, it appears that the shrub understory has been periodically cleared in the past, and the occurrence of certain plants (e.g., chamise, white-leaf manzanita) indicate that the northern half of the site may have had at one time a more

⁴ Holland, R.F. 1986. Preliminary Descriptions of Terrestrial Natural Communities of California. California Department of Fish and Game.

prominent chaparral community component. However, repeated thinning of the shrub layer, lack of periodic fire since Euro-American settlement of the area (essential in maintaining chaparral communities) and secondary succession by woody tree species has resulted in a permanent shift in overall species composition towards a mixed oak woodland vegetative community.

Ruderal Communities – The majority of species found along the southern portion of the Project Site near the residence and outbuildings are typically short-lived, annual and biennial plants that thrive on continued disturbance regimes (e.g., plowing, spraying, grading, mowing), and are generally able to out-compete the longer lived perennial native species. Ruderal species observed included field hedge parsley, hedgehog dogtail, soft chess, rip-gut brome (*Bromus diandrus*), barbed goat grass (*Aegilops triuncialis*), rattail fescue (*Vulpia myuros*), Harding grass (*Phalaris aquatica*), Bermuda grass (*Cynodon dactylon*), Italian ryegrass (*Lolium multiflorum*) yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), curly dock (*Rumex crispus*), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), English plantain (*Plantago lanceolata*), cheeseweed (*Malva parviflora*), and white horehound (*Marrubium vulgare*).

Wildlife – There is a moderate diversity of wildlife species associated with the oak woodland habitat found at the site. Oak woodland communities provide local wildlife populations with numerous foraging, cover, and nesting opportunities. Wildlife species (or their sign, including scat, tracks, and feathers) observed at the Project Site included mule deer (*Odocoileus hemionus*), Botta's pocket gopher (*Thomomys bottae*), raccoon (*Procyon lotor*), grey squirrel (*Sciurus griseus*), coyote (*Canis latrans*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), great horned owl (*Bubo virginianus*), American crow (*Corvus brachyrhynchos*), wild turkey (*Meleagris gallopavo*), and western scrub jay (*Aphelocoma coerulescens*). Anecdotal wildlife observations by the current resident indicate the presence of mountain lion (*Felis concolor*), skunk (*Mephitis mephitis*), hummingbird (*Calypte* spp.), western bluebird (*Sialia mexicana*), western rattlesnake (*Crotalus viridis*), gopher snake (*Pituophis catenifer*), valley garter snake (*Thamnophis elegans elegans*), Pacific chorus frog (*Pseudacris regilla*), and monarch butterfly (*Danaus plexippus*).

Hydrology

The Project Site is nearly level throughout, and either equal to, or slightly higher in elevation than the surrounding landscapes of the adjacent properties found along the northern, eastern, and western boundaries. Water enters the Project Site in the form of direct precipitation during the rain season. Runoff from surrounding uplands is intercepted in the southern portion of the

Project Site near the existing residence; any excess sheetflows drain southward towards Cayente Way.

Wetlands and Other Waters of the U.S.

According to the parameters established by the U.S. Army Corps of Engineers, wetlands consist of areas that are dominated by hydrophytic plant species (i.e., those species adapted to growing in wetlands). Wetlands must also exhibit hydric soils (i.e., soils that are characterized by reduced conditions), and they must exhibit hydrology (i.e., evidence of short or long-term soil saturation or inundation)⁵ (Corps 1987). If all three parameters (vegetation, soils, and hydrology) are met by an area, they would be regulated by the Corps and/or the Regional Water Quality Control Board (RWQCB). Based on the vegetation and soils present on the property and lack of hydrologic indicators, no waters of the U.S., including wetlands, were identified within the boundaries of the Project Site.

Soils - There are two soil types found at the Project Site mapped by the Natural Resource Conservation Service (NRCS)⁶. Rescue sandy loam, 2 to 9 percent slopes and Rescue very stony sandy loam, 3 to 15 percent slopes. The Rescue series consists of well-drained soils that are underlain by gabbrodiorite rocks at a depth of more than 40 inches. These soils are undulating to steep in the foothills of El Dorado County. Slopes are typically 2 to 50 percent. Classification (taxonomic subgroup) of the Rescue series are Mollic Haploxeralfs.

Rescue sandy loam, 2 to 9 percent slopes (ReB) – Permeability of the Rescue sandy loam soils is moderately slow; surface runoff is slow to medium, and the erosion hazard is slight to moderate. The thickness of the A horizon ranges from 6 to 10 inches.

Rescue very stony sandy loam, 3 to 15 percent slopes (RfC) – This soil is similar to Rescue sandy loam, 2 to 9 percent slopes except that 1 to 3 percent of the surface is covered with stones. Surface runoff is slow to medium, and the erosion hazard is slight to moderate.

SPECIAL STATUS SPECIES

⁵ Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, MS.

⁶ U.S. Department of Agriculture - Soil Conservation Service (USDA-SCS). Issued April, 1974. *Soil Survey of El Dorado Area, California*.

From a query of the CNDDDB 9-quad search for the Pilot Hill, Coloma, Garden Valley, Clarksville, Shingle Springs, Placerville, Folsom SE, Latrobe, and Fiddletown quads, there are a total of 34 recorded occurrences of special-status plant, wildlife, and natural community types present in the vicinity of the Project Site, including 15 plant species, 18 wildlife species, and one sensitive natural community type. This list was reviewed, and special-status species that could be supported by habitats present at the Project Site are discussed below.

Plants

Of the 15 special-status plant species present within the region of the Project Site, ten species associated with Gabbro and Serpentine soils could potentially occur at the Project Site: Stebbin's morning-glory, Pine Hill ceanothus, Red Hills soaproot, Pine Hill flannelbush, El Dorado bedstraw, Layne's butterweed, El Dorado County mule-ears, Jepson's onion (*Allium jepsonii*), Brandegees clarkia (*Clarkia biloba* ssp. *Brandegeeae*), and Bisbee Peak rush-rose (*Helianthemum suffrutescens*). The Project Site, however, does not contain suitable habitat to support the remaining special-status plant species that appeared on the CNDDDB 9-quad search, and are not addressed further in this report.

Jepson's onion (*Allium jepsonii*) – Jepson's onion is a CNPS List 1B.2 species. It is a member of the lily (*Liliaceae*) family that blooms from May to August. This perennial herb is 25 to 40 centimeters tall, and has white flowers with deep pink midveins. It occurs in open habitats (chaparral and cismontane woodland) throughout the north and central Sierra Nevada foothills on serpentine or volcanic soils at elevations ranging from 300 to 1,320 meters. There are no recorded occurrences of this species within one mile of the Project Site and, although potentially suitable soils and cismontane (oak) woodland habitat occurs at the Project Site, frequent clearing of the understory make its presence at the site unlikely. No evidence of this species occurrence at the site was observed during the field survey.

Stebbin's morning-glory (*Calystegia stebbinsi*) – Stebbin's morning-glory is a federally endangered, state endangered, and CNPS List 1B.1 species. It is a member of the morning glory (*Convolvulaceae*) family that blooms from April to July. It is a trailing to climbing perennial rhizomatous herb with deeply lobed linear palmate leaves. It has large, showy creamy-yellow pink-tinged flowers. It occurs in chaparral habitats closely associated with gabbroic soil substrates at elevations ranging from 185 to 730 meters. The plant is known from fewer than 15 occurrences and is threatened by development, off-road vehicles, road maintenance, and alteration of historic fire regimes. According to the CNDDDB, there are two occurrences of this species within one mile of the Project Site. Though suitable soil substrates occur at the Project Site, canopy shading by oak woodland due to secondary succession and lack of periodic fire

regimes, make it unlikely that this species would occur here. No evidence of this species occurrence at the site was observed during the field survey.

Pine Hill ceanothus (*Ceanothus roderickii*) – Pine Hill ceanothus is a federally endangered, state rare, and CNPS List 1B.2 species. It is a member of the buckthorn (*Rhamnaceae*) family that blooms from May to June. It is a perennial, prostrate evergreen shrub with blue-tinged white flowers. It prefers dry stony soil habitats derived from serpentine or similar rocks at elevations ranging from 260 to 630 meters. It is known from only ten occurrences within the Sierra Nevada foothills and is threatened by residential development and alteration of historic fire regimes. According to the CNDDDB, there are recorded occurrences of this species within one mile of the Project Site. Though suitable soil substrates exist at the Project Site, canopy shading by oak woodland due to secondary succession and lack of periodic fire regimes, make it unlikely that this species would occur here. No evidence of this species occurrence at the site was observed during the field survey.

Red Hills soaproot (*Chlorogalum grandiflorum*) – Red Hills soaproot is a CNPS List 1B.2 species. It is a member of the lily (*Liliaceae*) family and blooms from May to June. It grows from a perennial bulb, and has strongly wavy basal leaves. The inflorescence (flowering stalk) is 30 to 100 centimeters tall, and the recurved flower is white with purplish midveins. It grows in chaparral and cismontane woodland habitats on gabbroic or serpentine soils at elevations ranging from 245 to 1,170 meters. It is threatened by mining, residential development, and off-road vehicles. According to the CNDDDB, there are two recorded occurrences of this species within one mile of the Project Site. While suitable habitat and soils are present at the Project Site, no evidence of this species occurrence at the site was observed during the field survey.

Brandegee's clarkia (*Clarkia biloba* ssp. *Brandegeae*) – Brandegee's clarkia is a CNPS List 1B.2 species. It is a member of the evening primrose (*Onagraceae*) family and blooms from May to July. This annual plant grows less than 1 meter tall, has linear to lanceolate leaves, and lavender-colored petals. It is threatened by road maintenance and fire suppression. According to the CNDDDB, there are no recorded occurrences of this species within one mile of the Project Site, and although potentially suitable open oak woodland habitat is present at the site, no evidence of this species occurrence at the site was observed during the field survey.

Pine Hill flannelbush (*Fremontodendron decumbens*) – Pine Hill flannelbush is a federally endangered, state rare, and CNPS List 1B.2 species. It is a member of the cacao (*Sterculiaceae*) family and blooms from April to July. It is an erect perennial shrub less than 1 meter tall, palmately lobed leaf blades, and orange, coppery, or reddish sepals. It occurs in rocky habitats within chaparral and cismontane woodland on gabbro or serpentinite soils within

the Pine Hill Formation at elevations ranging from 425 to 760 meters. It is threatened by development and alteration of historic fire regimes. According to the CNDDDB, there are no recorded occurrences of this species within one mile of the Project Site. Though potentially suitable habitat and soil substrates are present at the Project Site, frequent clearing of the understory make its presence unlikely. No evidence of this species occurrence at the site was observed during the field survey.

El Dorado bedstraw (*Galium californicum* ssp. *sierrae*) – El Dorado bedstraw is a federally endangered, state rare, and CNPS List 1B.2 species. It is a member of the madder (*Rubiaceae*) family and blooms from May to June. It is a weakly slender perennial herb 7 to 14 centimeters tall with leaves in whorls of four, with yellowish, solitary flowers. It occurs in chaparral and cismontane woodland habitat on gabbroic soils at elevations ranging from 100 to 585 meters. It is known from fewer than ten occurrences within El Dorado County and is threatened by development, vehicles, and recreational activities. According to the CNDDDB, there are two recorded occurrences of this species within one mile of the Project Site. Though potentially suitable habitat and soil substrates are present at the Project Site, frequent clearing of the understory make its presence unlikely. No evidence of this species occurrence at the site was observed during the field survey.

Bisbee Peak rush-rose (*Helianthemum suffrutescens*) – Bisbee Peak rush-rose is a CNPS List 3.2 species. It is a member of the rock-rose (*Cistaceae*) family and blooms from April to June. It is low-growing evergreen plant 12 to 45 centimeters tall with yellow flowers. It occurs in chaparral habitats on gabbroic, serpentine, or fine clay soils at elevations ranging from 45 to 840 meters. It is threatened by mining, development, and vehicles. According to the CNDDDB, there are four recorded occurrences within one mile of the Project Site. While suitable soil substrates occur at the Project Site, a lack of suitable chaparral habitat makes it unlikely that this species would occur. No evidence of this species occurrence at the site was observed during the field survey.

Layne's butterweed (*Packera* [*Senecio*] *layneae*) – Layne's butterweed is a federal threatened, state rare, and CNPS List 1B.2 species. It is a member of the sunflower (*Asteraceae*) family and blooms from April to July. It is a perennial, herbaceous species 40 to 70 centimeters tall with lanceolate, unevenly shallow-toothed leaves with orange-yellow ray flowers. It is restricted to rocky gabbroic or serpentinite soil habitats along the western Sierra Nevada foothills at elevations ranging from 200 to 1,000 meters. It is threatened by urbanization, grazing, road construction, off-road vehicles, and fire suppression. According to the CNDDDB, there are numerous recorded occurrences of this species within one mile of the Project Site. While potentially suitable soil substrates occur at the Project Site, canopy shading by oak

woodland due to secondary succession and lack of periodic fire regimes makes it is unlikely that this species would occur. No evidence of this species occurrence at the site was observed during the field survey.

El Dorado County mule-ears (*Wyethia reticulata*) – El Dorado County mule-ears is a CNPS List 1B.2 species. It is a member of the sunflower (*Asteraceae*) family and blooms from May to July. It is a perennial herbaceous species that grows from 40 to 70 centimeters tall. It has lanceolate to triangular-shaped leaves covered with soft sticky hairs; the inflorescence is born on a single flowering stalk with orange ray flowers. It is found in chaparral and woodland habitats containing suitable gabbroic or clay substrate soils at elevations ranging from 185 to 630 meters. It is threatened by development and off-road vehicles, and is found only in El Dorado County. According to the CNDDDB, there are three recorded occurrences of this species within one mile of the Project Site. Though potentially suitable habitat and soil substrates are present at the Project Site, frequent clearing of the understory make its presence unlikely. No evidence of this species occurrence at the site was observed during the field survey.

Wildlife

The oak woodland at the Project Site does not provide potentially suitable habitat for any special-status animal species that could occur in the region. Although no nests were observed during the October 15th field survey conducted at the Project Site, the oak woodland may provide suitable nesting habitat for red-tailed hawk or other nesting raptors, which are “fully protected” species under Section 3511 of the California Fish and Game Code, and protected under the U.S. Migratory Bird Treaty Act.

RECOMMENDATIONS

Based on our reconnaissance-level survey conducted on October 15, 2006, there was no evidence of any low-growing, prostrate *Ceanothus* shrubs that could potentially be Pine Hill *ceanothus*, nor where there any low-growing shrubs that were not readily identifiable that could be Pine Hill flannelbush, so the likelihood of these species occurring at the Project Site is extremely unlikely. However, late-season decay and senescence of aerial stems observed during our October survey could potentially mask the presence of certain herbaceous species (e.g., Jepson’s onion, Red Hills soaproot) at the Project Site. Due to the presence of gabbro soils on the site and its location less than one mile east and north of the Cameron Park Unit of the Pine Hill Preserve (Figure 2), we would highly recommend appropriately-timed special-status plant surveys during the spring 2007 flowering period to confirm the absence of special-status plant

species associated with the Pine Hill Formation.

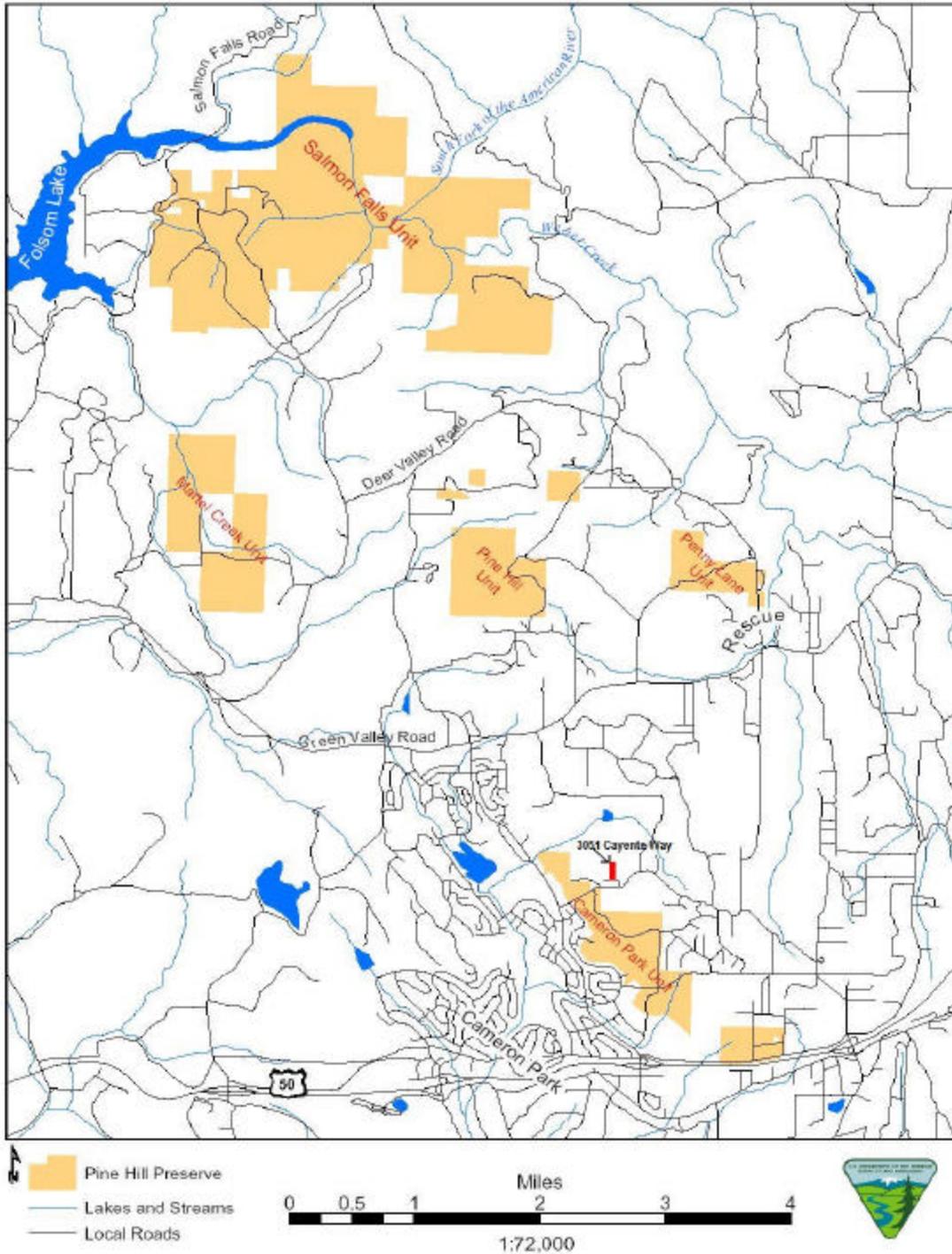
A certified arborist should conduct a tree survey to assess the number and size of oak trees greater than six inches diameter-at-breast-height (dbh) that could be adversely affected by any proposed development. Each tree greater than six inches dbh should be tagged, and the location of each oak tree will be mapped in the field using a GPS unit. Removal of oak trees greater than six inches dbh would require mitigation based on Policy 7.4.5.2 of the El Dorado County General Plan.

Prior to any development activity on the site, it should be surveyed for the presence of active raptor nests. This survey could coincide with the rare plant survey during the spring of 2007.

Figure 2 – Pine Hill Preserve

Pine Hill Preserve

January 2004



APPENDIX A
CNDDDB SPECIAL STATUS SPECIES LIST

Name (Scientific/Common)	CNDDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence	
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp
<i>Allium jepsonii</i> Jepson's onion	G1 S1.2	CNPS: 1B Code: 3-2-3	Fed: None Cal: None	18 S:1	0	0	0	0	0	1	0	1	1	0
<i>Calystegia stebbinsii</i> Stebbins's morning-glory	G1 S1.1	CNPS: 1B Code: 3-3-3	Fed: Endangered Cal: Endangered	19 S:8	1	2	1	2	2	0	2	6	6	0
<i>Ceanothus roderickii</i> Pine Hill ceanothus	G2 S2.1	CNPS: 1B Code: 3-2-3	Fed: Endangered Cal: Rare	17 S:14	0	5	3	0	1	5	6	8	13	0
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	G2 S2.2	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	46 S:8	3	3	0	0	0	2	0	8	8	0
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	G1 S1.2	CNPS: 1B Code: 3-2-3	Fed: Endangered Cal: Rare	11 S:6	1	1	1	0	0	3	4	2	6	0
<i>Galium californicum ssp. sierrae</i> El Dorado bedstraw	G5T1 S1.2	CNPS: 1B Code: 3-2-3	Fed: Endangered Cal: Rare	11 S:7	0	2	2	0	0	3	2	5	7	0
<i>Helianthemum suffrutescens</i> Bisbee Peak rush-rose	G2Q S2.2	CNPS: 3 Code: 2-2-3	Fed: None Cal: None	33 S:9	1	3	3	0	0	2	1	8	9	0
<i>Packera layneae</i> Layne's ragwort	G2 S2.1	CNPS: 1B Code: 2-2-3	Fed: Threatened Cal: Rare	47 S:21	2	3	2	0	1	13	13	8	20	0
<i>Phrynosoma coronatum (frontale population)</i> Coast (California) horned lizard	G4G5 S3S4	CDFG: SC	Fed: None Cal: None	70 S:2	0	0	1	0	0	1	0	2	2	0
<i>Wyethia reticulata</i> El Dorado County mule ears	G2 S2.2	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	29 S:19	2	4	1	1	0	11	8	11	19	0

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