

MOORE BIOLOGICAL CONSULTANTS

August 8, 2012

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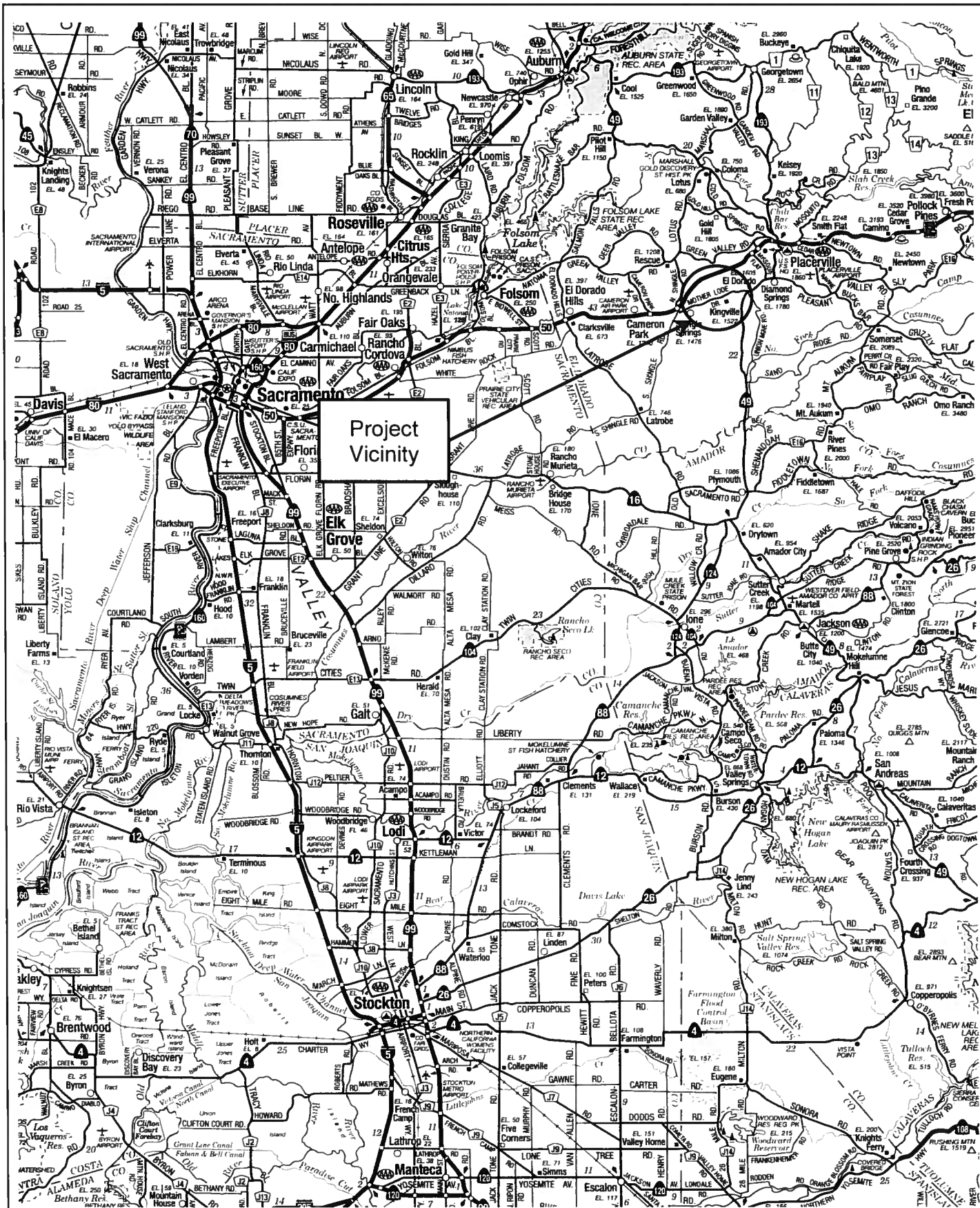
Subject: MONTESSORI SCHOOL PROJECT, SHINGLE SPRINGS, CALIFORNIA:
BASELINE BIOLOGICAL RESOURCES ASSESSMENT

Dear Rob:

Thank you for asking Moore Biological Consultants to conduct a baseline biological resources assessment of the Shingle Springs Montessori School site (Figures 1 and 2). The focus of our work was to document existing biological resources, delineate potentially jurisdictional Waters of the U.S. and/or wetlands, and search for suitable habitat for or presence of special-status species at the site that could be potentially impacted by the proposed project. This report details the methodology and results of our investigation.

Methods

Prior to the field surveys, we conducted a search of California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDDB, 2012). The CNDDDB search was conducted on the USGS 7.5-minute Shingle Springs topographic quadrangle, which contains the site. This CNDDDB search area encompasses approximately 60+/- square miles surrounding the project site that are at similar elevations and habitat types as those in the site. The United States Fish and Wildlife Service (USFWS) list of Federally Threatened and Endangered species that may occur in or be affected by projects in the same topographic quadrangle (Appendix A) was also reviewed. This information was used to



Source: Calif. State Automobile Association

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**Figure 1.
Project Vicinity**

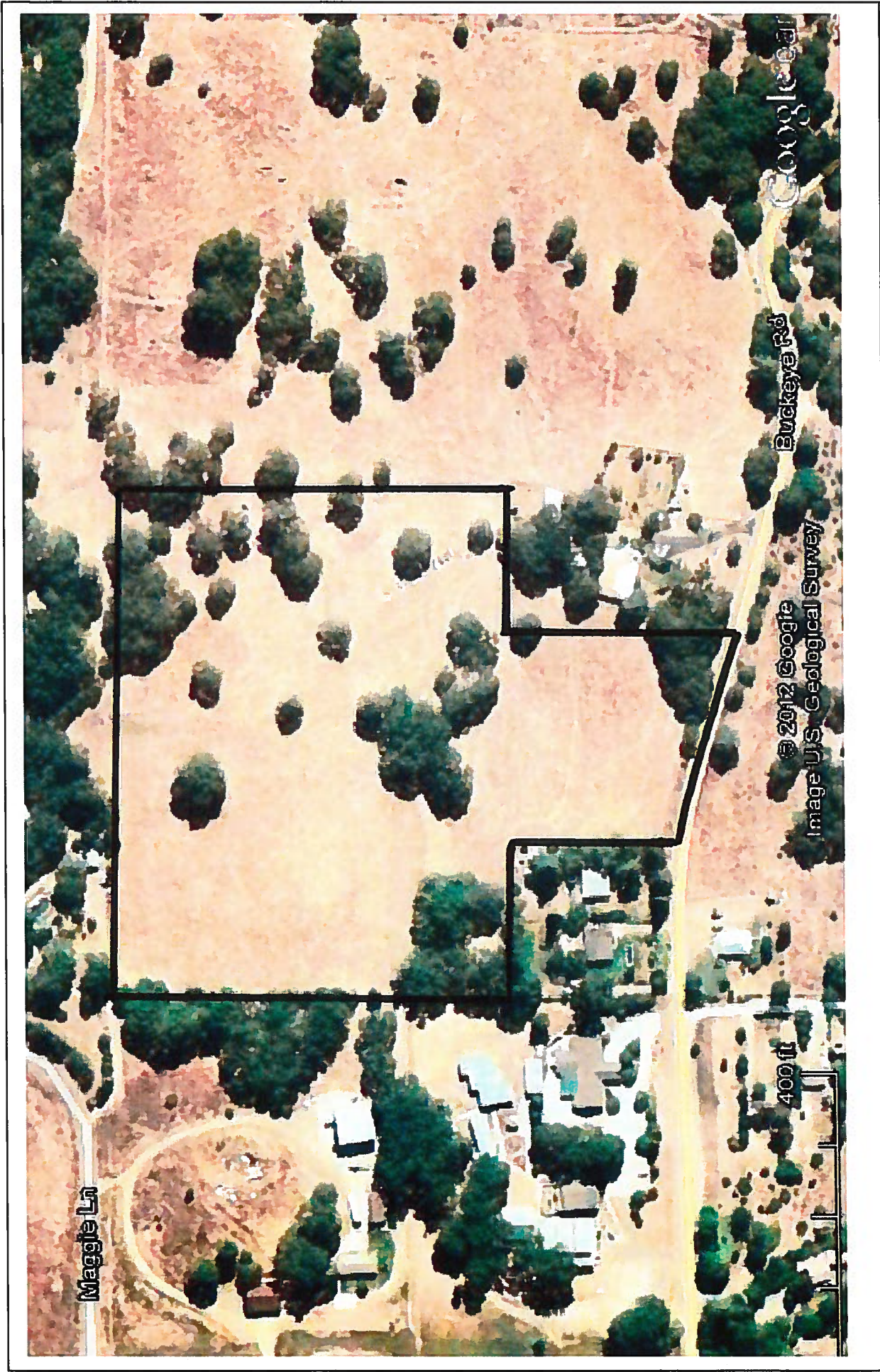
identify special-status wildlife and plant species that have been previously documented in the vicinity or have the potential to occur based on suitable habitat and geographical distribution. Additionally, the CNDDDB depicts the locations of sensitive habitats.

Field surveys were conducted on July 13 and 27, 2012. The surveys consisted of walking throughout the site making observations of habitat conditions and noting surrounding land uses, general habitat types, and plant and wildlife species. The fieldwork included delineation of potentially jurisdictional Waters of the U.S. (a term that includes wetlands) as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008), and a search for special-status species and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools). Trees in and near the site were assessed for the potential use by nesting raptors.

Results

GENERAL SETTING: The 10+/- acre project site is located near Shingles Springs, in El Dorado County, California (Figure 1). The site is within Section 5, Township 9 North, Range 10 East of the USGS 7.5-minute Shingle Springs topographic quadrangle (Figure 2). The site consists of rolling hills that slope generally south and west, and is at elevations of approximately 1,400 to 1,480 feet above mean sea level.

Surrounding land uses in this part of El Dorado County are primarily open space, with scattered residences on relatively large parcels. The existing Montessori School campus and a residential parcel bounds the site on the west (Figure 3). There are also residential parcels to the north of the site and to the east and west of the south “panhandle” portion of the site. Oak woodland and grassland similar to that in the site occurs to the east of the site and to the south of the site, across Buckeye Road.



Source (Basemap): Google Earth

Scale: 1 inch = 200+/- feet

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FIGURE 3

AERIAL PHOTOGRAPH

VEGETATION: Mixed oak series and California annual grassland series (Sawyer and Keeler-Wolf, 1995) best describe the habitat types in the site and adjacent lands (Figure 3 and photographs in Appendix B). Annual grasslands cover most of the site, interspersed with a few small patches of oak woodlands. There has been disturbance at the site from grazing and construction and maintenance of fences; a small ditch that runs along the hill in the northeast part of the site appears to be a remnant of an irrigation or mining ditch.

Blue oaks (*Quercus douglasii*) are the most common trees throughout the site; valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*) and scrub oaks (*Quercus berberidifolia*) are much less common. Many of the oaks are relatively large, with trunk diameters in excess of 30 inches diameter-at-breast-height (DBH). The oak woodland understory is annual grassland vegetation; there are no shrubs or vines in the site.

Native and non-native grasses including oats (*Avena fatua*), foxtail barley (*Hordeum murinum*), Medusa head grass (*Taeniatherum caput-medusae*), soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), barbed goat grass (*Aegilops triuncialis*), and perennial ryegrass (*Lolium perenne*) are dominant in the on-site grasslands and oak woodland understory. Other grassland species such as prickly lettuce (*Lactuca serriola*), rose clover (*Trifolium hirtum*), torilis (*Toirilis nodosa*), bull thistle (*Cirsium vulgare*), vetch (*Vicia* spp.), and filaree (*Erodium botrys*) are intermixed with the grasses. Table 1 is a list of plant species observed in the site.

WILDLIFE: A limited variety of wildlife species were observed in the site. Turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), northern flicker (*Colaptes auratus*), acorn woodpecker (*Melanerpes formicivorus*), western kingbird (*Tyrannus verticalis*), mourning dove (*Zenaida macroura*), western scrub jay (*Aphelocoma coerulescens*), western bluebird (*Sialia mexicana*), Brewer's blackbird (*Euphagus cyanocephalus*), and house finch (*Carpodacus mexicanus*) are some of the more common birds observed at the site (Table 2).

TABLE 1
PLANT SPECIES OBSERVED IN THE SITE

<i>Aegilops triuncialis</i>	barbed goat grass
<i>Amsinckia menziesii</i>	fiddleneck
<i>Avena</i> sp.	oat
<i>Brassica nigra</i>	black mustard
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus hordeaceus</i>	soft chess brome
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Centaurea solstitialis</i>	yellow star-thistle
<i>Cirsium vulgare</i>	bull thistle
<i>Cynosurus echinatus</i>	dogtail
<i>Deschampsia danthonioides</i>	annual hairgrass
<i>Eleocharis</i> sp.	spikerush
<i>Eremocarpus setigerus</i>	dove weed
<i>Erodium botrys</i>	filaree
<i>Holocarpha virgata</i>	tarweed
<i>Hordeum marinum</i>	Mediterranean barley
<i>Hordeum murinum</i>	foxtail barley
<i>Hypochaeris glabra</i>	smooth cat's ear
<i>Juncus bufonius</i>	toad rush
<i>Lactuca serriola</i>	prickly lettuce
<i>Leontodon taraxacoides</i>	long-beaked hawk-bit
<i>Lolium perenne</i>	perennial ryegrass
<i>Lythrum hyssopifolia</i>	Hyssop's loosestrife
<i>Mimulus guttatus</i>	seep-spring monkey flower
<i>Quercus berberidifolia</i>	scrub oak
<i>Quercus douglasii</i>	blue oak
<i>Quercus lobata</i>	valley oak

TABLE 1 (Continued)
PLANT SPECIES OBSERVED IN THE SITE

<i>Quercus wizlisenii</i>	interior live oak
<i>Ranunculus muricatus</i>	prickleseed buttercup
<i>Raphanus sativus</i>	wild radish
<i>Silybum marianum</i>	milk thistle
<i>Toirilis nodosa</i>	torilis
<i>Trifolium hirtum</i>	rose clover
<i>Triteleia laxa</i>	lthuriel's spear
<i>Wyethia</i> sp.	mule's ears

A few nests were observed in trees in the site; some of the nests were in good shape and may have been used in 2012, while others were tattered and were likely from prior nesting seasons. The survey was conducted toward the end of the avian nesting season and no active nests were located in the site. A pair of red-tailed hawks was calling over the woodlands just west of the site during both surveys, suggesting they may have nested in the area this year. Given the presence of oaks and other trees in and near the site, it is considered likely that one or more pairs of raptors, plus a variety of songbirds, nest in trees and shrubs in or near the site each year. A variety of other protected migratory birds (mostly songbirds) likely nest in the on-site shrubs and grasslands during most years.

While none were observed, a few mammals are expected to use habitats in or move through the site on occasion. A dead raccoon (*Procyon lotor*) was observed in the site and a dead striped skunk (*Mephitis mephitis*) was observed on Buckeye Road south of the site. Mule (black-tail) deer (*Odocoileus hemionus*), coyote (*Canis latrans*), black-tailed hare (*Lepus californicus*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the area. Mountain lions (*Felis concolor*) and bobcats (*Felis rufus*) are known to exist in the

TABLE 2
WILDLIFE SPECIES OBSERVED IN THE SITE

Birds

Turkey vulture	<i>Cathartes aura</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
Wild turkey	<i>Meleagris gallopavo</i>
Mourning dove	<i>Zenaida macroura</i>
Barn owl	<i>Tyto alba</i>
Acorn woodpecker	<i>Melanerpes formicivorus</i>
Northern flicker	<i>Colaptes auratus</i>
Western kingbird	<i>Tyrannus verticalis</i>
Black phoebe	<i>Sayornis nigricans</i>
Western scrub jay	<i>Aphelocoma coerulescens</i>
Western bluebird	<i>Sialia mexicana</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
House finch	<i>Carpodacus mexicanus</i>

Mammals

Raccoon	<i>Procyon lotor</i>
Striped skunk	<i>Mephitis mephitis</i>

Reptiles and Amphibians

Western fence lizard	<i>Sceloporus occidentalis</i>
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low Sierra Nevada foothills and may occur in the area; however, no evidence of either of these species was observed during the recent surveys. A number of species of small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also likely occur.

Based on habitat types present and absence of perennial water throughout the site, only a few species of amphibians and reptiles are expected to occur on-site. Western fence lizard (*Sceloporus occidentalis*) was the only reptile observed in the site; no amphibians were observed. The site is within the range of Pacific chorus frog (*Pseudacris regilla*), common king snake (*Lampropeltis getulus*), western rattlesnake (*Crotalis viridis*), and common garter snake (*Thamnophis sirtalis*); these and other common amphibian and reptile species may also occur on-site.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies including CDFG and ACOE, and California Regional Water Quality Control Board (RWQCB) have jurisdiction over these habitats.

“Waters of the U.S.” are drainage features or water bodies as described in 33 CFR 328.4. Waters of the U.S. encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their tributaries. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the “ordinary high water mark”. The ordinary high water mark is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional Supplement (ACOE, 1987; 2008). Jurisdictional wetlands are usually adjacent to or hydrologically associated with Waters of the U.S. Isolated wetlands are outside federal jurisdiction, but may still be regulated by state agencies including CDFG and RWQCB.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

The body of the site consists of upland annual grasslands and oak woodlands. The only potential jurisdictional Waters of the U.S. in the site are an ephemeral creek and a seasonal wetland swale (Figure 4 and photographs in Appendix B). A total of 0.21 acres of potential waters of the U.S. and wetlands were delineated within the project site; this acreage consists of two sections of ephemeral creek (0.05 acres total) and a seasonal wetland swale (0.16 acres).

The ephemeral creek flows generally east to west through the central portion of the site; the two sections of the creek are connected by the seasonal wetland swale (Figure 4). The ephemeral creeks have poorly- to moderately well-defined "bed and banks" with variably discernible ordinary high water marks. Substrates in the drainages range from grasses to gravels and cobbles. The mean widths of the drainages are approximately 4 to 5 feet.

The seasonal wetland swale originates on a steep hillside where a minor amount of water appears to seep out of the ground in a 100+/- ft² area and flows downslope. The swale spreads out in the open grassland area, where it is vegetated with seasonal wetland species including perennial ryegrass, Mediterranean barley (*Hordeum marinum*), toad rush (*Juncus bufonius*), seep-spring monkey flower (*Mimulus guttatus*), annual hairgrass (*Deschampsia danthonioides*), and Hyssop's loosestrife (*Lythrum hyssopifolia*). Soils in the seasonal wetland swale exhibit low chroma and mottles, evidencing saturation during parts of the year.

The on-site creek and associated seasonal wetland swale drain into Sawmill Creek a few hundred feet west of the site. Sawmill Creek is a "blue-line" stream



Figure 4

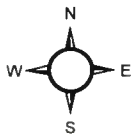
Data Disclaimer:
The delineation has been done in accordance with the 1987 Wetlands Delineation Manual, US Army Corps of Engineers and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. The boundaries and jurisdictional status of all waters shown on this map are preliminary and subject to verification by the U.S. Army Corps of Engineers.

Source Data: Moore Biological Consultants, & Warren Consulting Engineers, Inc.
Aerial Photo: (c) 2010 Microsoft Corporation/Bing Map

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LEGEND

Study Area (±10 acres)



0 50 100
FT

**Potential Waters of the U.S.
and Wetlands**

**Shingle Springs
Montessori**

Shingle Springs, El Dorado County, CA

on the USGS topographic map (Figure 2). Approximately 10 miles south of the site, Sawmill Creek drains into the Cosumnes River, by way of French Creek and then Big Canyon Creek. The Cosumnes River is a navigable water of the U.S. and the tributary relationship of the on-site creek and associated seasonal wetland swale to the Cosumnes River forms the basis for them being jurisdictional waters of the U.S.

Beyond the on-site creek and associated seasonal wetland swale, we observed no potential jurisdictional wetlands or Waters of the U.S. in the site. No other areas appear to have any potential to fall under ACOE jurisdiction. Specifically, we observed no vernal pools, seasonal wetlands, marshes, ponds, or lakes of any type within the site.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized “take” (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish.

Special-status plants include species that are designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS). Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2010). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 3 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the project area. This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

SPECIAL-STATUS PLANTS: Nine (9) species of special-status plants were identified in the CNDDDB (2012) search: Jepson's onion (*Allium jepsonii*), Stebbin's morning-glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), Red Hills soaproot (*Chlorogalum grandiflorum*), Pine Hill flannelbush (*Fremontodendron decumbens*), El Dorado bedstraw (*Galium californicum* ssp. *sierrae*), Bisbee Peak rush-rose (*Helianthemum suffrutescens*), Layne's ragwort (*Senecio layneae*), and El Dorado County mule ears (*Wyethia reticulata*) (Table 3 and CNDDDB search results in Appendix A).

All of the special-status plants identified in the CNDDDB (2012) query in the greater project vicinity (Table 3) occur in relatively undisturbed areas within vegetation communities such as chaparral or cismontane woodland with unique

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status ¹	State Status ²	CNPS List ³	Habitat	Potential for Occurrence within the Project Site
PLANTS						
Jepson's onion	<i>Allium jepsonii</i>	None	None	1B	Cismontane woodland or lower montane coniferous forest; in serpentine or volcanic soils.	Unlikely: this species was not observed in the site; the woodland and grassland habitats in the site are not suitable for Jepson's onion; no serpentine or volcanic soils were observed. The nearest occurrence of this species in the CNDDB (2012) search area is approximately 5 miles northwest of the site.
Stebbin's morning-glory	<i>Calystegia stebbinsii</i>	E	E	1B	Chaparral or cismontane woodland; red clay soils of the Pine Hill formation, or gabbroic or serpentine soils.	Unlikely: this species was not observed in the site; the woodland and grassland habitats in the site are not suitable for Stebbin's morning-glory; no gabbroic or serpentine soils were observed and the site is not in the Pine Hill formation. The nearest occurrence of this species in the CNDDB (2012) search area is approximately 1.5 miles southwest of the site.
Pine Hill ceanothus	<i>Ceanothus roderickii</i>	E	R	1B	Chaparral or cismontane woodland; in gabbroic soils.	Unlikely: this easily-recognized perennial shrub was not observed in the site; the woodland and grassland habitats in the site are not suitable for Pine Hill ceanothus; no gabbroic soils were observed in the site. The nearest occurrence of this species in the CNDDB (2012) search area is approximately 3 miles northwest of the site.
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	None	None	1B	Chaparral, cismontane woodland, or lower montane coniferous forest; in serpentine or gabbroic soils.	Unlikely: there is no suitable habitat within the site for Red Hills soaproot; no serpentine or gabbroic habitats were observed in or near the site. The nearest occurrence of this species in the CNDDB (2012) search area is approximately 1 mile east of the site.
Pine Hill flannelbush	<i>Fremontodendron decumbens</i>	E	R	1B	Chaparral, cismontane woodland, or openings in lower montane coniferous forest; in serpentine or gabbroic soils.	Unlikely: this easily-recognized perennial shrub was not observed in the site; there is no suitable habitat within the site for Pine Hill flannelbush; no serpentine or gabbroic habitats were observed in or near the site. The nearest occurrence of this species in the CNDDB (2012) search area is approximately 5.5 miles northwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status ¹	State Status ²	CNPS List ³	Habitat	Potential for Occurrence within the Project Site
El Dorado bedstraw	<i>Galium californicum ssp. sierrae</i>	E	R	1B	Chaparral, cismontane woodland, or lower montane coniferous forest; gabbroic soils.	Unlikely: the woodland and grassland habitats in the site are not suitable for El Dorado bedstraw; no gabbroic soils were observed in the site. The nearest occurrence of this species in the CNDDDB (2012) search area is approximately 2 miles west of the site.
Bisbee Peak rush-rose	<i>Helianthemum suffrutescens</i>	None	None	3	Chaparral or cismontane woodland; serpentine, gabbroic, or lone formation soils.	Unlikely: this easily-recognized perennial shrub was not observed in the site; there is no suitable habitat within the site for Bisbee Peak rush-rose; no serpentine, gabbroic, or lone formation soils were observed in or near the site. The nearest occurrence of this species in the CNDDDB (2012) search area is approximately 3 miles west of the site.
Layne's ragwort	<i>Senecio layneae</i>	T	R	1B	Chaparral or cismontane woodland; serpentine or gabbroic soils	Unlikely: this easily-recognized perennial shrub was not observed in the site; there is no suitable habitat within the site for Layne's ragwort; no serpentine or gabbroic soils were observed in or near the site. The nearest occurrence of this species in the CNDDDB (2012) search area is approximately 1.25 miles southwest of the site.
El Dorado County mule ears	<i>Wyethia reticulata</i>	None	None	1B	Chaparral, cismontane woodland, or lower montane coniferous forest; clay or gabbroic soils.	Unlikely: the woodland and grassland habitats in the site are not suitable for El Dorado County mule ears; no gabbroic or clay soils were observed in the site. The nearest occurrence of this species in the CNDDDB (2012) search area is approximately 1.5 miles west of the site.
WILDLIFE						
Birds						
Bank swallow	<i>Riparia riparia</i>	None	T	N/A	Nests in vertical banks or cliffs, primarily within riparian corridors.	Unlikely: there is no suitable habitat in the site for bank swallow. The only occurrence of this species in the CNDDDB (2012) search area is an observation in the late 1800's near Placerville. The exact location is unknown and the occurrence is mapped non-specifically near downtown Placerville.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status ¹	State Status ²	CNPS List ³	Habitat	Potential for Occurrence within the Project Site
Mammals						
Pacific fisher	<i>Martes pennanti pacifica</i>	C	SC	N/A	Coniferous forest; uses cavities, snags, logs and rocky areas for cover and denning.	Unlikely: No suitable habitat for this species was observed in the site; Pacific fisher are known from coniferous forests much higher in the Sierra Nevada mountains. The only occurrence of this species in the CNDDB (2012) search area is an observation in 1916 near Placerville. The exact location is unknown and the occurrence is mapped non-specifically near downtown Placerville
Reptiles & Amphibians						
California red-legged frog	<i>Rana aurora draytonii</i>	T	SC	N/A	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Unlikely: there is no suitable aquatic habitat for California red-legged frog in the project site. There are no occurrences of this species in the CNDDB (2012) search area. The site is not within designated critical habitat for California red-legged frog (USFWS, 2006).
Coast horned lizard	<i>Phrynosoma blainvillii</i>	None	SC	N/A	Valley-foothill hardwood, conifer, and annual grassland habitats; requires objects such as logs or rocks for cover.	Unlikely: the woodland and grassland habitats in the site are marginally suitable for coast horned lizard, although few rocks or logs providing cover were observed during the site surveys. The nearest occurrence of this species in the CNDDB (2012) search areas is approximately 2.25 miles southwest of the site.
Fish						
Delta smelt	<i>Hypomesus transpacificus</i>	T	T	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	Unlikely: there is no suitable aquatic habitat for fish in the site. There are no occurrences of delta smelt recorded in the CNDDB (2012) within the search area. The site is not within designated critical habitat for delta smelt (USFWS, 1994).
Central Valley steelhead	<i>Oncorhynchus mykiss</i>	T	None	N/A	Rifle and pool complexes with adequate spawning substrates within Central Valley drainages.	Unlikely: there is no suitable aquatic habitat for fish in the site. There are no occurrences of Central Valley steelhead recorded in the CNDDB (2012) within the search area. The site is not within designated critical habitat for Central Valley steelhead (NOAA, 2005).

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status ¹	State Status ²	CNPS List ³	Habitat	Potential for Occurrence within the Project Site
Winter-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	E	E	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates; currently known only from the Sacramento River system.	Unlikely: there is no suitable aquatic habitat for fish in the site. There are no occurrences of winter-run Chinook salmon recorded in the CNDDB (2012) within the search area.
Spring-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	T	T	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates; currently known only from the Sacramento River system.	Unlikely: there is no suitable aquatic habitat for fish in the site. There are no occurrences of spring-run Chinook salmon recorded in the CNDDB (2012) within the search area.
Invertebrates						
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	None	N/A	Elderberry shrubs within the Central Valley of California.	Unlikely: there are no blue elderberry shrubs in or adjacent to the site. There are no occurrences of valley elderberry longhorn beetle recorded in the CNDDB (2012) within the search area.

¹ T = Threatened; E = Endangered.

² T = Threatened; E = Endangered; SC= State of California Species of Special Concern.

³ CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes species that are rare, threatened, or endangered in California, but more common elsewhere.

soils (i.e., serpentine, gabbroic, or lone formation soils). None of these habitat types occur in the site and due to lack of suitable habitat, no special-status plant species are expected to occur in the site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the project site by special-status wildlife species is generally low. Special-status wildlife species that have been recorded in greater project vicinity in the CNDDDB (2012) include bank swallow (*Riparia riparia*), Pacific fisher (*Martes pennanti pacifica*), and coast horned lizard (*Phrynosoma blainvillii*). Although not included in the CNDDDB within the search area, California red-legged frog (*Rana aurora draytonii*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Central Valley steelhead (*Oncorhynchus mykiss*), winter-run Chinook salmon (*Oncorhynchus tshawytscha*), spring-run Chinook salmon, and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) were added to Table 3 because they are included in the USFWS Species List (Appendix A).

While surrounding areas may provide habitat for special-status wildlife species, few are expected to occur on-site on more than an occasional or transitory basis. The woodland and grassland habitats in the site are marginally suitable for coast horned lizard, although there are very few rocks or logs for cover. Pacific fisher are known from coniferous forests much higher in the Sierra Nevada mountains and there are no riparian corridors with sandy banks for bank swallow.

The site does not provide suitable aquatic habitat for any type of fish, or California red-legged frog. The site is not within designated critical habitat for California red-legged frog (USFWS, 2006), Central Valley steelhead (NOAA, 2005), or delta smelt (USFWS, 1994). There are no blue elderberry shrubs in the site, precluding the potential occurrence of valley elderberry longhorn beetle.

Conclusions and Recommendations

- The 10+/- acre site consists of annual grassland and oak woodlands that are biologically unremarkable other than for their oak woodland wildlife habitat values.
- There are a few notable oak trees in the site and future development will likely involve removal of some of these oaks. The relatively larger oaks should be retained and incorporated into the project design, if possible. Alternately, if relatively larger oaks (i.e., oaks greater than 30 inches DBH) need to be removed, on-site replacement plantings at a ratio of 2:1 are recommended.
- Due to a lack of suitable habitat, it is unlikely special-status plants occur in the site.
- The likelihood of occurrence of special-status wildlife species in the site is considered low. No special-status wildlife species are expected to occur at or near the site on more than a very occasional or transitory basis.
- The only potentially jurisdictional Waters of the U.S. in the site are an ephemeral creek and a seasonal wetland swale. No other areas were observed in the site appearing to meet the technical and regulatory criteria of jurisdictional waters of the U.S. or wetlands.
- Jurisdictional Waters of the U.S. should be avoided to the maximum extent practicable. The preliminary site lay-out depicts total avoidance of Jurisdictional Waters of the U.S., with a clear-span bridge over the seasonal wetland swale that has abutments in the upland grassland outside of the wetland.

- If complete avoidance of jurisdictional Waters of the U.S. or wetlands is deemed impracticable, wetland permits and/or certification should be obtained from ACOE and RWQCB prior to mining within or placement of any fill (e.g., a culvert, fill dirt, rock) in jurisdictional Waters of the U.S.
- The on-site trees and grasslands may be used by nesting birds protected by the Migratory Bird Treaty Act of 1918 and Fish and Game Code of California. In order to avoid take of protected raptors and migratory birds, project construction should be scheduled for between September 1 and January 31, if possible. If project construction occurs between February 1 and August 31, a pre-construction nesting bird survey should be conducted by a qualified biologist. If active nests are found within the survey area, construction should be delayed until the biologist determines nesting is complete.

Thank you, again, for asking Moore Biological Consultants to assist with the project. Please call me at (209) 745-1159 with any questions.

Sincerely,



Diane S. Moore, M.S.
Principal Biologist

References

- ACOE (U.S. Army Corps of Engineers). 1987. Technical Report Y87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI.
- ACOE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. U.S. Army Engineer Research and Development Center, Vicksburg, MS. September.
- CNDDDB (California Natural Diversity Database). 2012. California Department of Fish and Game's Natural Heritage Program, Sacramento, California.
- CNPS (California Native Plant Society). 2010. On-line Inventory of Rare and Endangered Vascular Plants of California, 8th Edition. California Native Plant Society, Sacramento, California. www.rareplants.cnps.org
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game. Sacramento, California.
- Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento. California.
- National Oceanic and Atmospheric Administration (NOAA). 2005. Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule. Federal Register 70 (170): 52488-52585. September 2, 2005.
- Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento. California.

USFWS (United States Fish and Wildlife Service). 1994. Final Critical Habitat for the Delta Smelt (*Hypomesus transpacificus*). Federal Register Vol. 59, No. 242, December 19, 1994, pp. 65256 – 65279.

USFWS. 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. July 9.

USFWS. 2006. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for California Red-Legged Frog, and Special Rule Exemption Associated with Final Listing for Existing Routine Ranching Activities, Final Rule. Federal Register Vol. 71, No. 71, April 13.

Appendix A

USFWS Species List & CNDDB Summary Report

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested
Document Number: 120807010808
Database Last Updated: September 18, 2011

Quad Lists

Listed Species

Invertebrates

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Rana draytonii
California red-legged frog (T)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Senecio layneae
Layne's butterweed (=ragwort) (T)

Quads Containing Listed, Proposed or Candidate Species:

SHINGLE SPRINGS (510B)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or

injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 05, 2012.

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 <i>Allium jepsonii</i> Jepson's onion	PMLIL022V0			G1	S1.2	1B.2
2 <i>Calystegia stebbinsii</i> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
3 <i>Ceanothus roderickii</i> Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.2
4 <i>Chlorogalum grandiflorum</i> Red Hills soaproot	PMLIL0G020			G3	S3	1B.2
5 <i>Fremontodendron decumbens</i> Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
6 <i>Galium californicum ssp. sierrae</i> El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
7 <i>Helianthemum suffrutescens</i> Bisbee Peak rush-rose	PDCIS020F0			G2Q	S2.2	3.2
8 <i>Martes pennanti (pacifica) DPS</i> Pacific fisher	AMAJF01021	Candidate		G5	S2S3	SC
9 <i>Packera layneae</i> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
10 <i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100			G4G5	S3S4	SC
11 <i>Riparia riparia</i> bank swallow	ABPAU08010		Threatened	G5	S2S3	
12 <i>Wyethia reticulata</i> El Dorado County mule ears	PDAST9X0D0			G2	S2	1B.2

Appendix B

Photographs



Annual grassland in the northwest part of the site, looking northeast; 07/1312.



Annual grassland in the south part of the site, looking southeast; 07/1312.



Large valley oaks in the central part of the site, looking east; 07/1312.



Buckeye Road frontage along the south edge of the site, looking northwest; 07/1312.



Ephemeral creek near the west edge of the site, looking east; 07/1312.



Seasonal wetland swale in the central part of the site, looking west; 07/1312.

Note: the dashed line is the edge of the swale; areas to the right of the dashed line are uplands.