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Biological Document

# Habitat Assessment

1016 Dunaweal Lane  
Calistoga, Napa County, CA 94515

July 28, 2015

*Prepared for*

Rich & Carolyn Czapleski  
Canard Vineyard  
1016 Dunaweal Lane  
Calistoga, CA 94515  
707-906-1060

RECEIVED

JUL 29 2015

Napa County Planning, Building  
& Environmental Services

*Prepared by*

Wildlife Research Associates  
1119 Burbank Avenue  
Santa Rosa, CA 95407  
707-544-6273

*And*

Jane Valerius Environmental Consulting  
2893A Scotts Right of Way  
Sebastopol, CA 95472  
707-824-1463

**Habitat Assessment**

**1016 Dunaweal Lane, Calistoga**

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## SUMMARY

The 1016 Dunaweal Lane proposed project includes development of a new winery, as depicted on the Use Permit Application Drawings (Delta Consulting & Engineering 2015). Of the 24.68-acre parcel, development will occur in northern central portion of the parcel, on approximately 20,000 sf or 0.46 acres.

This Habitat and Site Assessment presents the findings of our review of scientific literature and reports detailing previous studies conducted in the area, and the California Department of Fish and Wildlife's (CDFW) Natural Diversity Data Base (CNDDDB) for reported occurrences of special-status vegetation communities, plants and animals.

Two non-native vegetation community types occur on the property: vineyard and landscaped yard. The proposed project will involve removing a portion of the existing vineyard to install an 800 square foot covered outdoor crush pad and a 1,280 square foot pad for wine fermentation and storage, including loading and unloading of supplies. A 460 square foot outdoor tasting area is also included along with widening the existing access road to 20 feet.

As part of this Habitat Assessment, we conducted a site visit on July 15, 2015, of all habitats on the site to evaluate the potential for occurrence of 26 special-status plant species, and 19 special-status wildlife species. All vegetation and structures were assessed for potentially suitable bird habitat, although no surveys for occupancy were conducted.

Based on the conditions of the site, an active winery, no special status communities, plants or wildlife will be impacted from the proposed project.



## INTRODUCTION

Rich and Carolyn Czapleski of Canard Vineyard contracted with Jane Valerius Environmental Consulting and Wildlife Research Associates to conduct a Habitat Assessment of a 0.46- acre proposed winery development within their 24.68-acre parcel. The 1016 Dunaweal Lane parcel (APN: 020-150-026) is located in the eastern portion of the City of Calistoga, in the northern portion of Napa County, California. This habitat assessment was conducted to determine the potential for special-status vegetation communities, plant and animal species to occur within the proposed project and to identify the limitations to potential development of the project.

This Habitat Assessment is part of the preliminary analysis of both the existing environment and potential impacts from the proposed project as required under the California Environmental Quality Act (CEQA) for new projects. Federal and state agencies that have purview over biological resources include the following:

- U.S. Army Corps of Engineers (USACE),
- U.S. Fish and Wildlife Service (USFWS),
- National Marine Fisheries Service (NMFS),
- California Regional Water Quality Control Board (RWQCB), and the
- California Department of Fish and Wildlife (CDFW).

The USACE regulates the discharge of dredged or fill material into waters of the United States. Waters of the U.S. are defined as waters that are hydrologically connected to waters with interstate or foreign commerce, and includes tributaries to any of these waters, and wetlands, which are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support vegetation typically adapted to life in saturated soil conditions. The USFWS has regulatory authority over federally listed plant and animal species. The NMFS, a division of the National Oceanic and Atmospheric Administration (NOAA), has regulatory authority over essential fish habitat, which is habitat necessary to maintain sustainable fisheries in the United States. The California RWQCB protects all waters with special responsibility for wetlands, riparian areas, and headwaters. The CDFW has regulatory authority over state listed plants and animals as well as streams and lakes within the State.

### Site Location

The polygon-shaped parcel is located at the intersection of Dunaweal Lane and Silverado Trail, in the eastern portion of the City of Calistoga, east of Hwy 29 and at the north end of Dunaweal Lane, south of Silverado Trail. The northern end of Napa Valley is characterized by a narrowing of the sides of the Valley on three sides of Calistoga. The City of Calistoga is located to the west; relatively steep slopes and the palisades with Mt. St. Helena beyond are located to the north, and more arid slopes with visible palisades are located to the east.

The parcel is located on the floor of the Napa Valley, north of the Napa River, with an unnamed tributary that flows from north to south along the western boundary. Silverado Trail is the northern boundary and Dunaweal lane is the eastern boundary.

### *Proposed Project*

This project is an application by owners Rich and Carolyn Czapleski of Canard Vineyard to establish a new winery on the 24.68 parcel, of which approximately 22 acres are currently planted to vineyard. There is an existing primary residence occupied by the owners, a wine storage building accessory to the residence, a barn/office accessory to the residence, a large barn, two wells and a water storage tank.

Located within the central portion of the parcel, the proposed 0.46-acre project includes constructing an 800-square foot (sf) covered outdoor crush pad and a 1,280 sf pad for wine fermentation and storage tanks and for loading and unloading of supplies and materials. A 460 sf outdoor tasting area is also include. The vineyard

application is for 10,000 gallons of annual production. Of the amount produced each year, a minimum of 90% will come from grapes grown on site.

The total area of development will be approximately 20,000 sf. This includes expanding the existing 10-12 foot driveway to 20-feet wide. No trees will be removed as a result of the project. Placement of all buildings will be within the existing vineyard rows.

## METHODS

Information on special-status plant species was compiled through a review of the literature and database search. Database searches for known occurrences of special-status species focused on the Calistoga U.S. Geologic Service 7.5-minute topographic quadrangle, which provided a three mile radius around the proposed project area. The following sources were reviewed to determine which special-status plant and wildlife species have been documented in the vicinity of the project site:

- U.S. Fish and Wildlife Service (USFWS) quadrangle species lists (USFWS 2015)
- USFWS list of special-status animals for Napa County (USFWS 2015)
- California Natural Diversity Database records (CNDDDB) (CDFW 2015)
- California Department of Fish and Wildlife's (CDFW) Special Animals List (CDFW 2015)
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2015)
- California Native Plant Society (CNPS) Electronic Inventory records (CNPS 2015)
- California Department of Fish and Game (CDFG) publication "California's Wildlife, Volumes I-III" (Zeiner, *et al.*, 1990)

Botanical nomenclature used in this report conforms to Baldwin, *et al.* (2012) for plants and to Sawyer, *et al.* (2009) for vegetation communities. Nomenclature for special-status animal species conforms to CDFW (2014).

*Site Survey:* Trish Tatarian, wildlife biologist of Wildlife Research Associates, and Jane Valerius, botanist and wetland specialist of Jane Valerius Environmental Consulting, conducted a daytime survey on July 15, 2015, between the hours of 1030 and 1130.

The proposed development area, or study area, was walked and all plant species identifiable at the time of the site survey were noted (Appendix D). The survey was conducted outside of the flowering period for some special status plant species, all of which would not occur due to lack of potential or suitable habitat on site. Vegetation communities present in the study area were recorded and evaluated for their potential to support any special status plants that have the potential to occur in the area.

The project area was evaluated for suitable bird nesting habitat using 8 x 42 roof-prism binoculars, noting presence of old bird nests and cavities in trees. The reconnaissance-level site visit was intended only as an evaluation of on-site and adjacent habitat types; no special-status species surveys were conducted as part of this effort.

All buildings on the site were individually surveyed for potential openings and suitable cavity or crevice roost habitat using 8 x 40 binoculars. The exteriors were surveyed for suitable openings, staining, and accumulated bat fecal pellets.

All trees were assessed for suitable potential habitat for colonial bat species, consisting of cavities, crevices and exfoliating bark. Additionally, foliage habitat suitable for use by obligate tree-roosting, solitary bat species was also assessed. The assessment was conducted using 8 x 42 roof-prism binoculars. Presence/absence surveys were not conducted.

## EXISTING CONDITIONS

The project area is located within the San Francisco Bay Coastal Bioregion (Welsh 1994). This bioregion is located within central California and encompasses the San Francisco Bay and the Sacramento Delta, extending from the Pacific Ocean to the eastern portion of the tule marsh zone, which is defined by Highway 99 (Welsh 1994). Habitats within this bioregion include both mesic (moist) habitats, such as freshwater marsh, and xeric (dry) habitats, such as chaparral, and are typical of a Mediterranean type climate.

The project area is located in unsectioned portion of the Carne Humana Rancheria in the northwestern portion of the Calistoga 7.5-minute topographic quadrangle, within Township 8N and Range 6W. Surrounding land uses consist of mainly ranches and vineyards.

### Vegetation Communities

Two vegetation communities occur within the project study area: vineyard and landscaped areas. Most of the property has been planted to grapes (*Vitis vinifera*) and this is the dominant vegetation type. There are some weedy and non-native grasses and forbs that grow within the vineyard rows including wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), prickly lettuce (*Lactuca serriola*), Queen Anne's lace (*Daucus carota*), bindweed (*Convolvulus arvensis*), and mallow (*Malva* sp.).

Landscape ornamental species have been planted around the residence and include sycamore trees (*Platanus racemosa*), locust trees (*Gleditsia triacanthos*), olive trees (*Olea europea*), lavender (*Lavendula* sp.), artichoke (*Cynara cardunculus*), and euphorbia (*Euphorbia* sp.). These are non-native vegetation communities. No wetlands, creeks or drainages were observed within the project study area.

### Wildlife Habitats

Wildlife habitat classifications for this report is based on the California Department of Fish and Game's Wildlife Habitat Relationships (WHR) System (CDFG 1988) which places an emphasis on dominant vegetation, vegetation diversity and physiographic character of the habitat. The value of a site to wildlife is influenced by a combination of the physical and biological components of the immediate environment, and includes such features as type, size, and diversity of vegetation communities present and their degree of disturbance. As a plant community is degraded by loss of understory species, creation of openings, and a reduction in canopy area, a loss of structural diversity generally results. Degradation of the structural diversity of a community typically diminishes wildlife habitat quality, often resulting in a reduction of wildlife species diversity.

Wildlife habitats are typically distinguished by vegetation type, with varying combinations of plant species providing different resources for use by wildlife. The following is a discussion of existing habitats found on site and the wildlife species they support.

Vineyards and orchards offer the least overall habitat value of all agricultural crops, mostly because of farming practices and the monoculture structure. Most vineyards spray pesticides between rows to control pests and herbicides to control weeds. Although some wildlife use vineyards, these fields are thought to be a "second choice" for most and are unusable by some species, such as larger mammalian predators. Small mammals, such as rabbits and rodents, forage on the leaves and grasses of vineyards and, in turn, may attract small predators, such as hawks (*Buteo* sp.) or feral cats. Other mammalian species known to use agricultural areas include coyote (*Canis latrans*), raccoon (*Procyon lotor*), skunks (*Mephitis mephitis*), and opossum (*Didelphis virginiana*).

### Movement Corridors

Wildlife movement includes migration (i.e., usually one way per season), inter-population movement (i.e., long-term genetic flow) and small travel pathways (i.e., daily movement corridors within an animal's



territory). While small travel pathways usually facilitate movement for daily home range activities such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations.

These linkages among habitat types can extend for miles between primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement among populations located in discrete areas and populations located within larger habitat areas. The mosaic of habitats found within a large-scale landscape results in wildlife populations that consist of discrete sub-populations comprising a large single population, which is often referred to as a meta-population. Even where patches of pristine habitat are fragmented, such as occurs with coastal scrub, the movement between wildlife populations is facilitated through habitat linkages, migration corridors and movement corridors. Depending on the condition of the corridor, genetic flow between populations may be high in frequency, thus allowing high genetic diversity within the population, or may be low in frequency. Potentially low frequency genetic flow may lead to complete isolation, and if pressures are strong, potential extinction (McCullough 1996; Whittaker 1998).

The project location is considered to be within the southern portion of the North Coast Ecoregion of the California Essential Habitat Connectivity Project (Spencer, *et al.* 2010). No Natural Landscape Blocks (i.e., large, relatively natural habitat blocks that support native biodiversity), or Essential Connectivity Areas (i.e., areas essential for ecological connectivity between Natural Landscape Blocks) are identified in this portion of Napa County (Spencer, *et al.* 2010). Although the Napa River is identified as a Riparian Connection that provides both terrestrial and aquatic connectivity (Spencer, *et al.* 2010), the 1016 Dunaweal Lane project site is not hydrologically connected to the river.

Wildlife connectivity of this site to other open lands in the area occurs throughout the parcel. The proposed buildings to be located on the eastern portion of the parcel will not impede small (i.e., gray squirrels), medium (i.e., raccoon, and skunk) or large wildlife (i.e., black-tailed deer).

## **SPECIAL-STATUS BIOLOGICAL RESOURCES**

Certain vegetation communities, and plant and animal species are designated as having special-status based on their overall rarity, endangerment, restricted distribution, and/or unique habitat requirements. In general, special-status is a combination of these factors that leads to the designation of a species as sensitive. The Federal Endangered Species Act (FESA) outlines the procedures whereby species are listed as endangered or threatened and established a program for the conservation of such species and the habitats in which they occur. The California Endangered Species Act (CESA) amends the California Fish and Wildlife Code to protect species deemed to be locally endangered and essentially expands the number of species protected under the FESA.

### **Special-Status Vegetation Communities**

No special status vegetation communities as defined by CDFW and the CNDDDB occur on the project site.

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

Special-status plant species are those species that are legally protected under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA) as listed or proposed for listing as threatened or endangered, as well as species that are considered rare by the scientific community. For example, the California Native Plant Society (CNPS) has identified some species as List 1 or 2 species and may be considered rare or endangered pursuant to Section 15380(b) of the State CEQA Guidelines. The CDFW has compiled a list of "Special Plants" (CDFW 2015), which include California Special Concern species. These designations are given to those plant species whose vegetation communities are seriously threatened. Although these species may be abundant elsewhere they are considered to be at some risk of extinction in California. Although Special Concern species are afforded no official legal status under FESA or CESA, they may receive special consideration during the planning stages of certain development projects and adverse impacts may be deemed significant under the California Environmental Quality Act (CEQA).

A total of 26 special-status plant species have been reported occurring on the Calistoga 7.5-minute USGS topographic quadrangles (CNDDDB 2015). Please refer to Appendix B for a list of these species and their potential for occurrence. Many species were considered to have no potential to occur either because these species are restricted to areas with serpentinite, rhyolitic, sandy or clay soils and these substrates are lacking within the study area, or the species occurs in habitats not present within the study area such as chaparral, lower montane coniferous forest, closed-cone coniferous forest, North Coast coniferous forest, coastal bluff scrub, marshes and swamps, meadows and seeps, and vernal pools.

No special status plants were observed during the July 15, 2015 site visit and none are expected as the proposed site does not support any natural plant communities and is dominated by vineyard and landscaped ornamental plants.

### **Special-status Animal Species**

Special-status animal species include those listed by the USFWS (2015) and the CDFW (2015). The USFWS officially lists species as either Threatened or Endangered, and as candidates for listing. Additional species receive federal protection under the Bald Eagle Protection Act (*e.g.*, bald eagle, golden eagle), the Migratory Bird Treaty Act (MBTA), and state protection under CEQA Section 15380(d). In addition, many other species are considered by the CDFW to be species of special concern; these are listed in Remsen (1978), Williams (1986), and Jennings and Hayes (1994). Although such species are afforded no official legal status, they may receive special consideration during the planning and CEQA review stages of certain development projects. The CDFW further classifies some species under the following categories: "fully protected", "protected fur-bearer", "protected amphibian", and "protected reptile". The designation "protected" indicates that a species may not be taken or possessed except under special permit from the CDFW; "fully protected" indicates that a species can be taken for scientific purposes by permit only.

Of the 19 special-status animal species identified as potentially occurring in the vicinity of the project area, including a 3 mile radius (CNDDDB 2015), several additional species were evaluated for their potential to occur within the study area, based on: 1) review of the CNDDDB, 2) the "Special Animals" list (CDFW 2015) that includes those wildlife species whose breeding populations are in serious decline, and 3) the habitat present on site. See Appendix C for a list of the 19 species evaluated.

Based on the proposed project area currently being planted, no special-status wildlife species have the potential to occur within the vineyards. As a result, no impacts will occur from the proposed project.

## IMPACTS AND MITIGATION MEASURES

This section summarizes the potential temporary biological impacts from construction activities within the study area. The analysis of these impacts is based on a single reconnaissance-level survey of the study area, a review of existing databases and literature, and personal professional experience with biological resources of the region.

CEQA Guidelines Sections 15206 and 15380 were used to determine impact significance. Impacts are generally considered less than significant if the habitats and species affected are common and widespread in the region and the state.

A species may be treated as rare or endangered even if it has not been listed under CESA or FESA. Species are designated endangered when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, disease or other factors.

For the purposes of this report, three principal components in the evaluation were considered:

- Magnitude of the impact (e.g., substantial/not substantial)
- Uniqueness of the affected resource (rarity)
- Susceptibility of the affected resource to disturbance (sensitivity)

The evaluation of significance must consider the interrelationship of these three components. For example, a relatively small-magnitude impact (e.g., disturbing a nest) to a state or federally listed species would be considered significant because the species is at low population levels and is presumed to be susceptible to disturbance. Conversely, a common habitat such as non-native grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact (e.g., removal of extensive vegetation) would be required for it to be considered a significant impact.

### **Special-Status Plants**

No special status plants were observed during the July 15, 2015 site visit and none are expected as the proposed site does not support any natural plant communities and is dominated by vineyard and landscaped ornamental plants.

### **Vegetation Community**

There are no special status vegetation communities within the project area.

### **Wildlife Movement Corridors**

The current conditions of the parcel allows for movement of wildlife without impedence. Placement of a structure within the vineyard rows will not impede movement of wildlife.

### **Special-Status Wildlife Species**

No special status wildlife species were observed during the July 15, 2015 site visit. The proposed project area is dominated by vineyard and landscaped ornamental plants. No special-status wildlife are expected to occur on the 0.46 acre project area.

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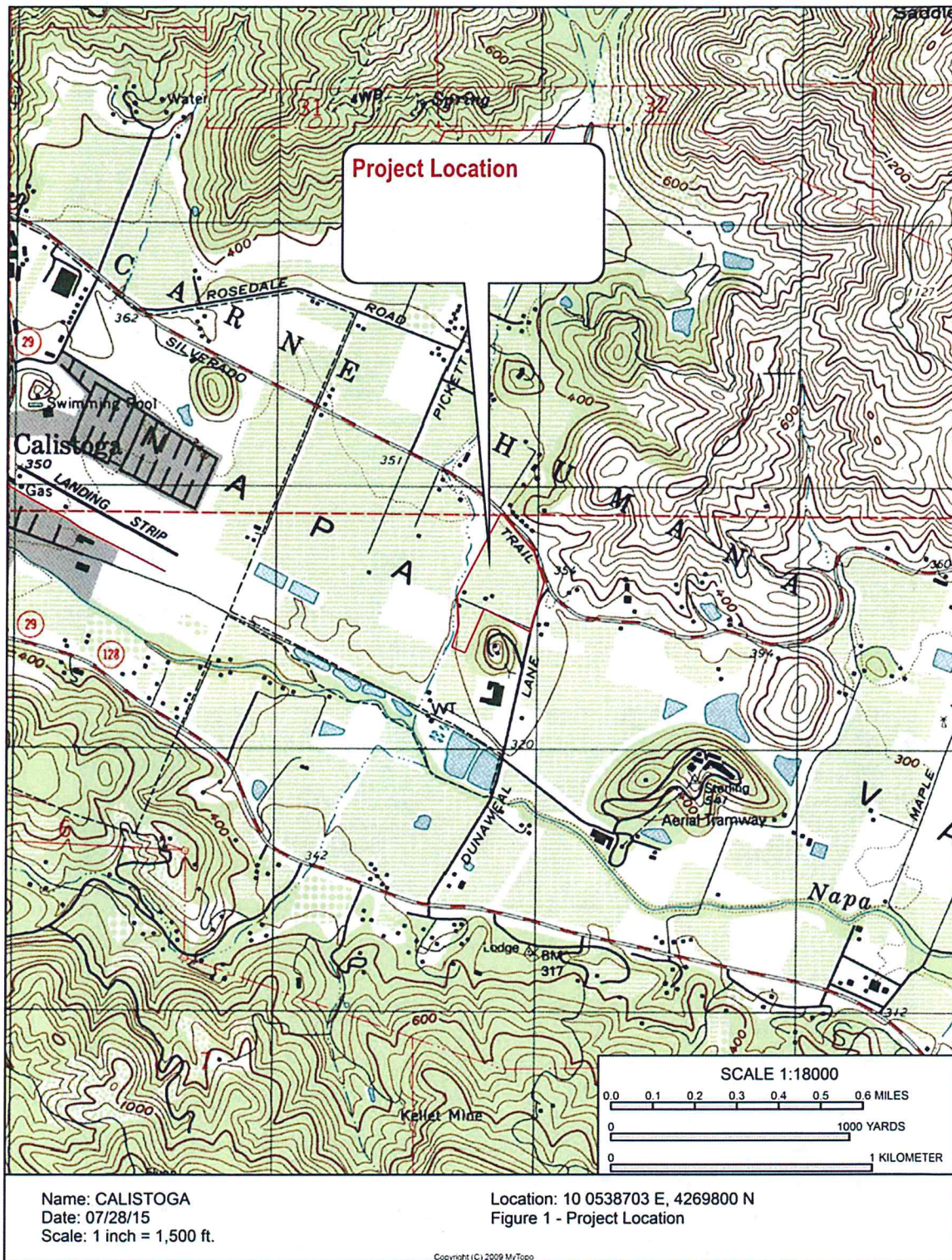


Figure 1-Project Location



Figure 2. Project area, looking north.



Figure 3. Project area, looking west.

## **APPENDIX A: FEDERAL AND STATE AND POLICIES, REGULATIONS AND ORDINANCES**

### **Federal Endangered Species Act - U.S. Fish and Wildlife Service**

Pursuant to ESA, the U.S. Fish and Wildlife Service (USFWS) has regulatory authority over federally listed species. Under ESA, a permit to “take” a listed species is required for any federal action that may harm an individual of that species. Take is defined under Section 9 of ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Under federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Section 7 of ESA requires all federal agencies to consult with USFWS to ensure that their actions are not likely to “jeopardize the continued existence” of any listed species or “result in the destruction or adverse modification” of designated critical habitat. No federal approvals or other actions are anticipated as being required to implement the project at this time. Therefore, consultation under Section 7 of ESA is not expected. However, if USACE determines that wetlands and/or other waters of the United States on the project site are subject to protection under Section 404 of the CWA, or any other federal action becomes necessary, consultation under Section 7 of ESA would be required.

For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain a permit for incidental take under Section 10(a) of ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan (HCP) that includes components to minimize and mitigate impacts associated with the take. The permit is known as an incidental take permit. The project proponent must obtain a permit before conducting any otherwise-lawful activities that would result in the incidental take of a federally listed species.

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

The California Endangered Species Act (CESA) (FGC §§ 2050–2116) is administered by the California Department of Fish and Wildlife. The CESA prohibits the “taking” of listed species except as otherwise provided in state law. The CESA includes FGC Sections 2050–2116, and policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The CESA requires mitigation measures or alternatives to a proposed project to address impacts to any State listed endangered, threatened or candidate species, or if a project would jeopardize the continued existence of any endangered or threatened 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 consistent with conserving the species or its habitat which would prevent jeopardy. Section 86 of the FGC defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Unlike the ESA, CESA applies the take prohibitions to species under petition for listing (state candidates) in addition to listed species. Section 2081 of the FGC expressly allows DFG to authorize the incidental take of endangered, threatened, and candidate species if all of the following conditions are met:

- The take is incidental to an otherwise lawful activity.
- The impacts of the authorized take are minimized and fully mitigated.
- Issuance of the permit will not jeopardize the continued existence of the species.
- The permit is consistent with any regulations adopted in accordance with §§ 2112 and 2114 (legislature-funded recovery strategy pilot programs in the affected area).
- The applicant ensures that adequate funding is provided for implementing mitigation measures and monitoring compliance with these measures and their effectiveness.

The CESA provides that if a person obtains an incidental take permit under specified provisions of the ESA for species also listed under the CESA, no further authorization is necessary under CESA if the federal permit satisfies all the requirements of CESA and the person follows specified steps (FGC § 2080.1).

### **California Environmental Quality Act (CEQA)**

CEQA is a California statute passed in 1970, shortly after the United States federal government passed NEPA, to institute a statewide policy of environmental protection. CEQA does not directly regulate land



uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and adopt all feasible measures to mitigate those impacts.

The CEQA statute, California Public Resources Code § 21000 et seq., codifies a statewide policy of environmental protection. According to CEQA, all state and local agencies must give major consideration to environmental protection in regulating public and private activities, and should not approve projects for which there exist feasible and environmentally superior mitigation measures or alternatives.

### **Species Protection under California Department of Fish and Wildlife**

The CDFW is established under the Fish and Game Code (FGC) (FGC § 700) and states that the fish and wildlife resources of the state are held in trust for the people of the state by and through CDFW (FGC § 711.7(a)). All licenses, permits, tag reservations and other entitlements for the take of fish and game authorized by FGC are prepared and issued by CDFW (FGC § 1050 (a)).

Provisions of the FGC provide special protection to certain enumerated species such as:

- § 3503 protects eggs and nests of all birds.
- § 3503.5 protects birds of prey and their nests.
- § 3511 lists fully protected birds.
- § 3513 protects all birds covered under the federal Migratory Bird Treaty Act.
- § 3800 defines nongame birds.
- § 4150 defines nongame mammals.
- § 4700 lists fully protected mammals.
- § 5050 lists fully protected amphibians and reptiles.
- § 5515 lists fully protected fish species.

In addition, the Native Plant Protection Act (NPPA), directs the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." As a result, the NPPA allows the California Fish and Game Commission to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants.

### **California Native Plant Society (CNPS)**

The California Native Plant Society (CNPS) is a statewide non-profit organization dedicated to the monitoring and protection of sensitive species in California. The CNPS publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California, focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by the CDFW. The Inventory assigns plants to the following categories:

- A. Presumed Extinct in California
- B. Rare or endangered in California and elsewhere
- Rare or endangered in California, more common elsewhere
- Plants for which more information is needed
- Plants of limited distribution.

Additional rarity, endangerment, and distribution codes are assigned to each taxa.

Plants Ranked 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and the Department recommends they be addressed in CEQA projects (CEQA Guidelines Section 15380). However, a plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, the DFW recommends, and local governments may require, protection of plants which are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Rank 3 and 4.

**Appendix B: Potentially Occurring Special-Status Plant Species in the Study Area**

<b>Scientific Name Common Name</b>	<b>Status USFWS/ CDFW/ CNPS list</b>	<b>Habitat Affinities and Blooming Period/Life Form</b>	<b>Potential for Occurrence</b>
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	-/-1B	Broadleafed upland forest (openings), chaparral, cismontane woodland. Blooms April-July. Elevation: 120-2000m.	<b>None.</b> No habitat on site.
<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> Rincon Ridge manzanita	-/-1B	Chaparral on rhyolitic soils and cismontane woodland. Blooms February to April (sometimes May). Elevation: 75-370m.	<b>None.</b> No habitat on site.
<i>Astragalus breweri</i> Brewer's milk-vetch	-/-1A	Meadows and seeps, valley and foothill grassland in open and often gravelly areas and often on serpentinite or volcanic soils. Blooms April-June. Elevation: 90-730m.	<b>None.</b> No habitat on site.
<i>Astragalus claranus</i> Clara Hunt's milk-vetch	FE/CT/1B	Openings in chaparral, cismontane woodland, valley and foothill grassland on serpentinite or volcanic, rocky or clay soils. Blooms March to May. Elevation: 75-275m.	<b>None.</b> No habitat on site.
<i>Brodiaea leptandra</i> Narrow-anthered brodiaea	-/-1B	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland on volcanic soils. Blooms May to July. Elevation: 110-915m.	<b>None.</b> No habitat on site.
<i>Ceanothus confusus</i> Rincon Ridge ceanothus	-/-1B	Closed-cone coniferous forest, chaparral, cismontane woodland on volcanic or serpentinite. Blooms February to June. Elevation: 75-1065m.	<b>None.</b> No habitat on site.
<i>Ceanothus divergens</i> Calistoga ceanothus	-/-1B	Chaparral on serpentinite or volcanic, rocky soils. Blooms February to April. Elevation 170-950m.	<b>None.</b> No habitat on site.
<i>Centromadia parryi</i> ssp. <i>parryi</i> Pappose tarplant	-/-1B	Chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, valley and foothill grassland on vernal mesic, often alkaline sites. May-November. Elevation: 2-420m.	<b>None.</b> No habitat on site.
<i>Clarkia breweri</i> Brewer's clarkia	-/-1A	Chaparral, cismontane woodland, coastal scrub, often on serpentinite. Blooms April to June. Elevation: 215-1115m	<b>None.</b> No habitat on site.
<i>Erigeron biolettii</i> Streamside daisy	-/-1B	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest on rocky and mesic sites. Blooms June-October. Elevation 30-1100m.	<b>None.</b> No habitat on site.
<i>Eryngium constancei</i> Loch Lomond button-celery	FE/CE/1B	Vernal pools. Blooms April-June. Elevation: 460-855m.	<b>None.</b> No habitat on site.
<i>Lasthenia burkei</i> Burke's goldfields	FE/CE/1B	Meadows and seeps (mesic), vernal pools. April-June. Elevation: 15-600m.	<b>None.</b> No habitat on site.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE/-1B	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools/ mesic. Blooms March-June. Elevation: 0-470m.	<b>None.</b> No habitat in study area.

<b>Scientific Name Common Name</b>	<b>Status USFWS/ CDFW/ CNPS list</b>	<b>Habitat Affinities and Blooming Period/Life Form</b>	<b>Potential for Occurrence</b>
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	-/-1B	Chaparral, cismontane woodland, on volcanics or the periphery of serpentinite substrates. Blooms March to May. Elevation: 100-500m.	<b>None.</b> No habitat on site.
<i>Lessingia hololeuca</i> Woolly-headed Lessingia	-/-3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentinite. Blooms June-October. Elevation: 15-305m.	<b>None.</b> No habitat on site.
<i>Limnanthes vinculans</i> Sebastopol meadowfoam	FE/CE/1B	Meadows and seeps, valley and foothill grassland, vernal pools/vernally mesic. April-May. Elevation: 15-305m.	<b>None.</b> No habitat on site.
<i>Lomatium repostum</i> Napa lomatium	-/-4	Chaparral, cismontane woodland on serpentinite. Blooms March-June. Elevation: 90-830m.	<b>None.</b> No habitat on site.
<i>Lupinus sericatus</i> Cobb Mountain lupine	-/-1B	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Blooms March-June. Elevation: 275-1525m.	<b>None.</b> No habitat on site.
<i>Monardella viridis</i> Green monardella	-/-4	Broadleafed upland forest, chaparral, cismontane woodland. June-September. Elevation: 100-1010m.	<b>None.</b> No habitat on site.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	-/-1B	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/mesic. Blooms April to July. Elevation: 5-1740m.	<b>None.</b> No habitat on site.
<i>Penstemon newberryi</i> var. <i>sonomensis</i> Sonoma beardtongue	-/-1B	Chaparral (rocky). Blooms April-August. Elevation: 700-1370m.	<b>None.</b> No habitat on site.
<i>Plagiobothrys strictus</i> Calistoga popcornflower	FE/CT/1B	Meadows and seeps, valley and foothill grassland, vernal pools/alkaline areas near thermal springs. Blooms March-June. Elevation 90-160m.	<b>None.</b> No habitat on site.
<i>Poa napensis</i> Napa bluegrass	FE/CE/1B	Meadows and seeps, valley and foothill grassland/alkaline, near thermal springs. Blooms May-August. Elevation: 100-200m.	<b>None.</b> No habitat on site.
<i>Ranunculus lobbii</i> Lobb's aquatic buttercup	-/-4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools/mesic. Blooms February to May. Elevation: 15-470m.	<b>None.</b> No habitat on site.
<i>Sidalcea hickmanii</i> ssp. <i>napensis</i> Napa checkerbloom	-/-1B	Chaparral on rhyolitic soils. Blooms April-June. Elevation: 415-610m.	<b>None.</b> No habitat in study area.
<i>Trifolium hydrophilum</i> Saline clover	-/-1B	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. April-June. Elevation: 0-300m.	<b>None.</b> No habitat in study area.
<b>SPECIAL STATUS/SENSITIVE NATURAL COMMUNITIES</b>			

<i>Scientific Name</i> Common Name	Status USFWS/ CDFW/ CNPS list	Habitat Affinities and Blooming Period/Life Form	Potential for Occurrence
Coastal and Valley Freshwater Marsh			None

NOTES:

**U.S. FISH AND WILDLIFE SERVICE**

- FE = federally listed Endangered
- FT = federally listed Threatened

**CALIFORNIA DEPT. OF FISH AND WILDLIFE**

- CE = California listed Endangered
- CR = California listed as Rare
- CT = California listed as Threatened

**CALIFORNIA NATIVE PLANT SOCIETY -**

- Rank 1B: Plants rare and endangered in California and elsewhere
- Rank 3: Plants about which additional data are needed- a review list.
- Rank 4: Plants of limited distribution- a watch list.

## Appendix C: Potentially Occurring Special-Status Animal Species in the Project Area

Common Name <i>Scientific Name</i>	Status USFWS/ CDFW	Habitat Affinities and Reported Localities in the Project Area	Potential for Occurrence
<b>FEDERAL</b>			
<b>Invertebrates</b>			
California freshwater shrimp <i>Syncaris pacifica</i>	FE/SE	Endemic to Napa, Sonoma and Marin Counties. Occurs in low elevation and low gradient streams with moderate to heavy riparian cover. Reported from Napa River (CNDDDB 2015).	None: no suitable habitat present.
<b>Fish</b>			
Delta smelt <i>Hypomesus transpacificus</i>	FT/-	Sacramento-San Joaquin delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay. Seldom found at salinities > 10ppt. Most often at salinities <2ppt.	None: no suitable habitat present.
steelhead - Central California Coast DPS <i>Onchorhynchus mykiss</i>	FT/-	Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen. Reported in Napa River (CNDDDB 2015).	None: no suitable habitat present.
<b>Amphibians</b>			
California red-legged frog <i>Rana draytonii</i>	FT/	Prefers permanent stream pools, and ponds with emergent and/or riparian vegetation. Species reported in Howell Mountain Road, 0.4 mi SW of Pope Valley (CNDDDB 2015).	None: no suitable habitat present.
<b>STATE</b>			
<b>Reptiles</b>			
western pond turtle <i>Emys marmorata</i>	-/SSC	Prefers permanent, slow-moving creeks, streams, ponds, rivers, marshes and irrigation ditches with basking sites and a vegetated shoreline. Requires upland sites for egg-laying. Species reported in Conn River on E side of Napa Valley (CNDDDB 2015).	None: no suitable habitat present.
<b>Birds (All Protected under Migratory Bird Treaty Act)</b>			
Sharp-shinned hawk <i>Accipiter striatus</i>	/WL	Dense canopy pine or mixed conifer forest and riparian habitats. Water within one mile required. Species reported 1 mile WSW of Calistoga (CNDDDB 2015)	None: no suitable habitat present.
Tri-colored blackbird <i>Agelaius tricolor</i>	BCC/SSC	Nests primarily in dense freshwater marshes with cattail or tules, but also known to nest in upland thistles. Forages in grasslands. Found along Butts Canyon Road (CNDDDB 2015)	None: no suitable nesting habitat within project area
Bell's sparrow <i>Amphispiza belli</i>	BCC/WL	Nests in dense stands of chamise and chaparral.	None: no suitable habitat present.
Short-eared owl <i>Asio flammeus</i>	BCC/SSC	Nests in open areas in grasslands, marshes, or dunes on the ground sheltered by tall grasses, reeds or bushes.	None: no suitable habitat present.

Common Name <i>Scientific Name</i>	Status USFWS/ CDFW	Habitat Affinities and Reported Localities in the Project Area	Potential for Occurrence
burrowing owl <i>Athene cunicularia hypugea</i>	BCC/SSC	Nests in open, dry grasslands, deserts, prairies, farmland and scrublands with abundant active and abandoned mammal burrows. Prefers short grasses and moderate inclined hills.	None: no suitable habitat present.
Oak titmouse <i>Baeolophus inornatus</i>	BCC/	Breeds in cavities in oak woodlands, gleaning insects from the bark. Occurs from southern Oregon to northern Mexico along the Central Valley and xeric coastal foothills.	None: no suitable habitat present.
Red-shouldered hawk <i>Buteo lineatus</i>	-/-	Nests in trees along riparian corridors and open fields.	None: no suitable habitat present.
Swainson's hawk <i>Buteo swainsoni</i>	BCC/ST	Nests in scattered trees in open areas, with nests usually high in the tree. Nests are reused annually and are made of sticks, with a diameter of 21-28 inches.	None: no suitable habitat present.
Costa's hummingbird <i>Calypte costae</i>	BCC/-	Resident of the Sonoran and Mojave Deserts.	Outside species range.
olive-sided flycatcher <i>Contopus borealis</i>	BCC/ SSC	Nests in open conifer or mixed oak woodland. Nests on horizontal branches, among a cluster of twigs and needles.	None: no suitable habitat present.
Prairie falcon <i>Falco mexicanus</i>	ML	Nests in cliffs and forages in open, arid and semi-arid habitats, hunting small birds and reptiles	None: no suitable habitat present.
Peregrine falcon <i>Falco peregrinus anatum</i>	BCC/FP	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers or marshes. Species reported on east side of Valley (CNDDDB 2014)	None: no suitable habitat present.
Bald Eagle <i>Haliaeetus leucocephalus</i>	BCC/SE	Nests in tall snags near open water and forages on fish in large bodies of water. Species reported at Lake Hennessey (CNDDDB 2014)	None: no suitable habitat present.
Least bittern <i>Ixobrychus exilis</i>	BCC/SSC	Nests in freshwater or brackish marshes with tall emergent vegetation. Creates nesting platform in dense stands of vegetation.	None: no suitable habitat present.
loggerhead shrike <i>Lanius ludovicianus</i>	BCC/SSC	Nests in woodland and scrub habitats at margins of open grasslands. Often uses lookout perches such as fence posts. Resident and winter visitor in lowlands and foothills throughout California.	None: no suitable habitat present.
Short-billed dowager <i>Limnodromus griseus</i>	BCC/-	Winters on coastal mud flats and brackish lagoons. In migration prefers saltwater tidal flats, beaches, and salt marshes. Found in freshwater mud flats and flooded agricultural fields.	None: no suitable habitat present.
Lewis's woodpecker <i>Melanerpes lewis</i>	BCC/SSC	Found in open forest and woodland, often logged or burned, including oak, coniferous forest, riparian woodland, orchards, less often pinyon-juniper. Closely associated with open ponderosa pine forest in western North America. Most commonly uses pre-made or natural cavities. Wintering areas must provide storage sites for grain or mast.	None: no suitable habitat present.

Common Name <i>Scientific Name</i>	Status USFWS/ CDFW	Habitat Affinities and Reported Localities in the Project Area	Potential for Occurrence
Fox sparrow <i>Passerella iliaca</i>	BCC/-	Nests in forests and chaparral on the ground or in low crotches of bushes or trees.	None: no suitable habitat present.
Nuttall's woodpecker <i>Picoides nuttallii</i>	BCC/-	Found primarily in oak woodlands and riparian woods. Cavity nester.	None: no suitable habitat present.
northern spotted owl <i>Strix occidentalis caurina</i>	FT, BCC/CT	Dense coniferous and hardwood forest, shaded, steep sided canyons.	None: no suitable habitat present.
Lesser yellowlegs <i>Tringa flavipes</i>	BCC/-	Breeds in open boreal forest with shallow wetlands. Winters in wide variety of shallow fresh and saltwater habitats.	None: no suitable habitat present.
<b>Mammals</b>			
pallid bat <i>Antrozous pallidus</i>	-/SSC	Day roosts include rock outcrops, mines, caves, buildings, bridges, and hollows and cavities in a wide variety of tree species.	None: no suitable habitat present.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	-/SSC	Roosting sites include caves, mine tunnels, abandoned buildings and other structures. Species reported at Old Stone Winery, 4 mi NE of St Helena (CNDDDB 2014).	None: no suitable habitat present.
Silver-haired bat <i>Lasionycteris noctivagans</i>	-/-	Primarily a coastal and montane forest dweller. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks.	None: no suitable habitat present.
Hoary bat <i>Lasiurus cinereus</i>	-/-	Roosts singly (except female-young association) in dense foliage of medium to large coniferous and deciduous trees. Highly migratory, but occurs year-round in California, overwintering in S.F. Bay Area. Forages over tree canopy, often high altitude, often long distances from day roost.	None: no suitable habitat present.
Fringed myotis <i>Myotis thysanodes</i>	-/-	Roosts in colonies in caves, cliffs and attics of old buildings. Will also use trees as day roosts. Species reported in Boethe State park in grist mill (CNDDDB 2015)	None: no suitable habitat present.

#### U.S. FISH AND WILDLIFE SERVICE

- FE = federally listed Endangered
- FT = federally listed Threatened
- FC = federal candidate for listing
- BCC = Birds of Conservation Concern
- MBTA = Migratory Bird Treaty Act.

#### CALIFORNIA DEPT. OF FISH AND WILDLIFE

- CE = California listed Endangered
- CT = California listed as Threatened
- FP = Fully protected
- SSC = Species of Special Concern

Appendix D: Plant species observed July 15, 2015.

Scientific Name	Common Name
<i>Amaranthus</i> sp.	Pigweed*
<i>Avena barbata</i>	Wild oats*
<i>Avena fatua</i>	Oats*
<i>Bromus diandrus</i>	Ripgut brome*
<i>Bromus hordaeceus</i>	Soft chess*
<i>Convolvulus arvensis</i>	Bindweed*
<i>Cynara cardunculus</i>	Artichoke*
<i>Daucus carota</i>	Queen Anne's lace*
<i>Erodium cicutarium</i>	Red-stemmed filaree*
<i>Euphorbia</i> sp.	Euphorbia*
<i>Festuca myuros</i>	Rattail fescue*
<i>Festuca perennis</i>	Rye grass*
<i>Geranium dissectum</i>	Cut-leaf geranium*
<i>Gleditsia triacanthos</i>	Honey locust*
<i>Helianthus</i> sp.	Sunflower*
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley*
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley*
<i>Hypochaeris radicata</i>	Rough cat's-ear*
<i>Kickxia elatine</i>	Fluellin*
<i>Lactuca serriola</i>	Prickly lettuce*
<i>Lavendula</i> sp.	Lavender*
<i>Malva</i> sp.	Mallow*
<i>Olea euorpea</i> .	Olive*
<i>Plantago lanceolata</i>	English plantain*
<i>Platanus racemosa</i>	Sycamore
<i>Polygonum aviculare</i>	Knotweed*
<i>Trifolium hirtum</i>	Rose clover*
<i>Vitis vinifera</i>	Wine grapes

\* = Non-native species



**Appendix E: Wildlife Species Observed July 15, 2015.**

<b><i>Scientific Name</i></b>	<b>Common Name</b>
<i>Calypte anna</i>	Anna's hummingbird
<i>Aphelocoma californica</i>	Western scrub jay
<i>Pipilo crissalis</i>	California towhee
<i>Turdus migratorius</i>	American robin
<i>Sturnus vulgaris</i>	European starling
<i>Odoicoileus hemionius californicus</i>	Black-tailed deer (sign)