

Appendix G-3
CESA Species Evaluation



Date: April 15, 2022

To: Bibiana Sparks-Alvarez, Project Manager
Acorn Environmental
5170 Golden Foothill Parkway
El Dorado Hills, CA 95762

From: Claire Buchanan, Project Manager
Sequoia Ecological Consulting, Inc.

RE: **CESA-Listed Species Evaluation for the Shiloh Resort and Casino Project**

1.0 INTRODUCTION

The purpose of this memorandum is to acknowledge and assess potential impacts to California Endangered Species Act- (CESA) listed species in support of National Environmental Policy Act (NEPA) compliance documentation for the proposed Shiloh Resort and Casino Project (Project) in Windsor, California (Figures 1 and 2). The Project site is located at 222 East Shiloh Road (Assessor's Parcel Number 059-300-003) in the Larkfield-Wikiup area of unincorporated Sonoma County and is bordered by Old Redwood Highway to the west, East Shiloh Road to the north, vineyards to the east, and residential homes and the Santa Rosa Mineral Gem Society to the south (Figure 2; Google Earth 2022). The remainder of the Project site includes vineyards and associated infrastructure, a private home on the east side of the property, and multiple dirt roads that bisect the vineyards.

As detailed below, Sequoia Ecological Consulting, Inc. (Sequoia) performed a literature and desktop review for CESA-listed species known from the region and conducted a site assessment on the Project site. This memorandum discusses findings of the desktop review and field visit and evaluates potential impacts, as well as mitigation opportunities and constraints for, CESA-listed species on the Project site and within a zone of influence.

2.0 ANALYSIS

2.1 Literature and Desktop Review

Sequoia reviewed the Draft Constraints Report (ESA 2021) and updated the associated desktop review to better evaluate state listed species with potential to occur on the Project site. The review included the following sources: California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2022) and RareFind 5; California Native Plant Society's (CNPS 2022) database; U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI; USFWS 2022a); Information



for Planning and Consultation (IPaC; USFWS 2022b) and U.S. Geological Survey (USGS 2022) topographic maps. The results of this desktop analysis were used to focus the subsequent on-site reconnaissance survey.

2.2 Site Assessment

Sequoia biologists, Ari Rogers and Claire Buchanan, conducted surveys on the Project site on February 23 and 24, 2022, to record biological resources and to assess potential impacts to CESA-listed species as a result of the proposed Project. Surveys involved searching all habitats on the site and recording all plant and animal species observed. Sequoia cross-referenced the habitats occurring on the Project site with the habitat requirements of regional special-status species to determine if the proposed Project could directly or indirectly impact these species. Any CESA-listed species or suitable habitat was documented.

Tables 1 and 2 present the potential for occurrence of CESA-listed plant and animal species known to occur in the vicinity of the Project site, along with their habitat requirements, potential to occur on the Project site, and basis for occurrence classification. Tables 3 and 4 provide plant and wildlife species observed on the Project site.

3.0 RESULTS OF BACKGROUND RESEARCH AND SITE ASSESSMENT

3.1 Topography and Hydrology

The Project site is located within the Santa Rosa Plain, and as such the topography is fairly uniform with elevation ranging from 135 feet above mean sea level (MSL) along the western property boundary to 160 feet MSL in the northeast corner of the property. Pruitt Creek flows southwesterly through the Project site and is a fourth order tributary to the Russian River. Pruitt Creek terminates at Pool Creek which flows into Windsor Creek, then into Mark West Creek, and finally into the Russian River. At the time of the February 2022 site visit, Pruitt Creek was wetted throughout. Flow was minimal, less than one cubic foot per second, with an average depth of eight inches and indicators of a high flow event (leaf litter and riparian vegetation scattered throughout). Water temperature was 52°F. Water temperature was measured at 1000 hours at a depth of approximately five inches in the shade. Comparing the observations from the Draft Constraints Report (ESA 2021) and observations from Sequoia's February 2022 survey, it is likely that Pruitt Creek is an intermittent stream that flows from late fall to spring and begins to dry up by early summer and remains dry through the fall.

3.2 Plant Communities and Wildlife Habitats

On February 23 and 24, 2022, Sequoia biologists conducted a survey of the Project site and characterized vegetation present (Figure 7). During the survey, Sequoia also documented plant and wildlife species observed on the Project site (Tables 3 and 4). Nomenclature used for plant names



follows *The Jepson Manual Second Edition* (Baldwin 2012), while nomenclature used for wildlife follows CDFW's *Complete list of amphibian, reptile, bird, and mammal species in California* (2016).

3.2.1 Vineyards

The Project site is predominately an active vineyard with ruderal (weedy) vegetation growing in between the grape rows. Vineyard infrastructure is also present including dirt roads, piping, propane tanks, wash station, and electrical power poles. While the grape rows themselves are weeded and maintained, ruderal and annual vegetation grows between rows and around the vineyard perimeter; ruderal species are adapted to endure intense and/or long-term disturbance.

The vineyard land cover type occupies approximately 59.3 acres within the Project site (Figure 7).

3.2.2 Ornamental/Landscaping

Landscaped vegetation consisting of ornamental trees and shrubs surround the private residence and other structures on the Project site. There are olive trees and a variety of fruit trees on the north side of the private residence. Ruderal species occur between the landscape and orchard plantings. Large trees (primarily valley oaks [*Quercus lobata*]) line the property boundary.

The ornamental land cover type occupies approximately 6.9 acres within the Project site (Figure 7).

3.2.3 Aquatic Features

Pruitt Creek is mapped as “Riverine, Intermittent, Streambed, Seasonally Flooded (R4SBC)” and “Palustrine, Forested, Emergent, Persistent, Seasonally Flooded (PFO/EM1C) Freshwater Forested/Shrub Wetland” in the NWI (USFWS 2022a; Figure 3). The NWI layer indicates a freshwater emergent wetland is present in the central northern portion of the Project site (Figure 3). Sequoia staff did not detect any wetted habitat or indications of wetland presence in that portion of the Project site while surveying for CESA-listed species.

3.2.4 Riparian Corridor

There is a narrow buffer of non-native annual grassland between the riparian corridor and the vineyards. Valley oaks dominate the riparian corridor with some smaller eucalyptus (*Eucalyptus* sp.) trees also present. Understory vegetation is composed of both native and non-native species of grasses and shrubs. The understory communities observed had distinct segments heavily dominated by native species alternating with areas dominated by non-native species. Some native species observed include California buckeye (*Aesculus californica*), California bay laurel (*Umbellularia californica*), willow (*Salix* sp.), poison oak (*Toxicodendron diversilobum*), valley oak, and coast live oak (*Quercus agrifolia*). Non-native species observed include Himalayan blackberry (*Rubus armeniacus*), eucalyptus, and black mustard (*Brassica nigra*), among others.

The riparian land cover type occupies approximately 5.2 acres within the Project site (Figure 7).



4.0 POTENTIALLY OCCURRING CESA-LISTED SPECIES

CESA-listed plant and animal species known to occur in the vicinity of the Project site are discussed below. CESA-listed plant species known to occur within 3 miles of the Project site are listed in Table 1. CESA-listed animal species known to occur within 3 miles of the Project site are listed in Table 2. We also discuss those CESA-listed species that could be impacted as a result of the proposed Project.

4.1 Potential to Occur

Potential for CESA-listed species to occur on the Project site was evaluated according to the following criteria:

- *No Potential.* Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- *Unlikely.* Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- *Moderate Potential.* Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- *High Potential.* All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- *Present.* Species is observed on the site or has been recorded (i.e., CNDDDB, other reports) on the site recently.

4.2 CESA-listed Plants

For the purpose of this document, CESA-listed plant species are plant species that meet one of the following criteria;

- Plant species listed as Threatened or Endangered under CESA, the laws and regulations for implementing CESA as defined by California Fish and Game Code (CFGC §2050 et seq.) and the California Code of Regulations (CCR) 14 CCR §670.1 et seq., and candidates for listing under the statute (CFGC §2068) or plants listed . These species are protected from unauthorized "take" (that is, harass, pursue, hunt, shoot, trap) of that species. If it is necessary to "take" a state Threatened or Endangered species as part of an otherwise lawful activity, it would be necessary to receive permission from CDFW prior to initiating the "take."



- Species meeting the definition of ‘Rare’ or ‘Endangered’ under California Environmental Quality Act Guidelines 14 CCR §15125 (c) and/or 14 CCR §15380, including plants listed on CNPS Lists 1A, 1B, 2A, and 2B (CNPS 2001) Rank 1 and 2 species are defined below:
 - Rank 1A: Presumed extinct in California;
 - Rank 1B: Rare, threatened, or endangered in California and elsewhere;
 - Rank 2A: Plants presumed extirpated in California, but more common elsewhere;
 - Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere.

Figure 4 provides a graphical illustration for CESA-listed plant species CNDDDB occurrences within 3 miles of the Project site. Table 1 provides an assessment of the potential of CESA-listed plant species to occur on the Project site. Fourteen CESA-listed plants have been previously documented within 3 miles of the Project site; however, no CESA-listed plants have been observed or mapped on the site itself. Sequoia analyzed the potential to occur for these plant species, as well as species included in CNPS and IPaC resource lists (USFWS 2022b) during the desktop review (Table 1). A number of these species require specialized habitats such as vernal pools, mesic meadows, seeps, cismontane woodland, and serpentinite soils that are not found on the Project site. Due to lack of suitable habitat and/or lack of known/recent occurrences in the Project vicinity, all 14 of these CESA-listed plant species are not expected to occur and are therefore not discussed further in this analysis. These species are: Baker’s navarretia (*Navarretia leucocephala* ssp. *bakeri*), Jepson’s leptosiphon (*Leptosiphon jepsonii*), Napa false indigo (*Amorpha californica* var. *napensis*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), dwarf downingia (*Downingia pusilla*), narrow-anthered brodiaea (*Brodiaea leptandra*), oval-leaved viburnum (*Viburnum ellipticum*), pappose tarplant (*Centromadia parryi* ssp. *parryi*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Burke’s goldfields (*Lasthenia burkei*), many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*), Pitkin marsh lily (*Lilium pardalinum* ssp. *pitkinense*), sebastapool meadowfoam (*Limnanthes vinculans*), and Sonoma sunshine (*Blennosperma bakeri*) (CNDDDB 2022; CNPS 2022).

The Project site’s history of prolonged and intense disturbance through agricultural and residential uses has resulted in habitat conditions that are not suitable for CESA-listed plant species. These conditions, coupled with the lack of suitable habitat and/or lack of known/recent occurrences on or in the immediate vicinity of the Project site, indicate that CESA-listed plant species are not expected to occur and therefore are not discussed further in this analysis. Furthermore, per the USFWS 2005 *Santa Rosa Plain Conservation Strategy*, which was designed to ensure the conservation of the California tiger salamander (*Ambystoma californiense*) and listed plants and contribute to their recovery (USFWS 2005), the Project site is located within a designation of the Conservation Strategy that determined the presence of California tiger salamander is not likely and “no listed plants [occur] in this area.”



4.3 CESA-listed Animals

For the purpose of this document, CESA-listed animal species are species that meet one of the following criteria;

- Fish, and wildlife species listed as Threatened or Endangered under CESA; and the laws and regulations for implementing CESA as defined in CFGC §2050 et seq. and CCR 14 CCR §670.1 et seq., and candidates for listing under the statute (CFGC §2068);
- Fully Protected species, as designated by the CDFW (CFGC § 3511, 4700, 5050, and 5515).

Figure 5 provides a graphical illustration for CESA-listed animal species occurrences within 3 miles of the Project site. Table 2 provides an assessment of potential to occur for CESA-listed animal species on the Project site. One CESA-listed animal species occurrence has been previously documented within 3 miles of the Project site (CNDDDB 2022). Sequoia analyzed the potential to occur for this animal species, as well as species included in the IPaC resource list (USFWS 2022b) during the desktop review (Table 2). A number of these species require specialized habitat such as dense forests and woodlands, vernal pools, large bodies of water, and perennial freshwater streams. Due to lack of suitable habitat and/or lack of recent occurrences in the project vicinity, five CESA-listed wildlife species are not expected to occur and are therefore not discussed further in this analysis. These five species are: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), northern spotted owl (*Strix occidentalis caurina*), California tiger salamander (*Ambystoma californiense*) - Sonoma County Distinct Population Segment (DPS) and California freshwater shrimp (*Syncaris pacifica*). Descriptions and potential for occurrence of the remaining CESA-listed wildlife species—coho salmon (*Oncorhynchus kisutch*)—central California coast Evolutionary Significant Unit (ESU) is provided in more detail below.

4.3.1 Coho Central California Coast ESU

The coho salmon is an anadromous fish that spends two years in the ocean and returns to perennial freshwater streams during the spring to spawn. Adult coho salmon enter fresh water from September through January in order to spawn. In the short coastal streams of California, migration usually begins between mid-November and mid- January. Coho salmon in northern California coastal streams are typically associated with low gradient reaches of tributary streams, which provide suitable spawning areas and good juvenile rearing habitat. Juvenile coho salmon typically rear in low-gradient coastal streams, sloughs, side channels, alcoves, estuaries, low-gradient tributaries, large rivers, beaver ponds, and large slack waters. In general salmonids require cold, well-oxygenated water for respiration and gravels with low quantities of fine sediment for spawning and egg development. Due to their early life history requirement for one year of freshwater residency, coho salmon are relatively more vulnerable to stressors that change water quality parameters such as dissolved oxygen, temperature, and turbidity over hot summer months where cold water rearing habitat is already limited. The most productive juvenile habitats are found in smaller streams with low-gradient alluvial channels containing abundant pools formed by large woody debris. Coho salmon are now absent from all tributaries of San Francisco



Bay and many streams south of the Bay; this is likely associated with adverse effects from increased urbanization and other human developments on watersheds and fish habitat (CDFG 2004).

Critical habitat includes all river reaches accessible to listed coho salmon from Punta Gorda in northern California south to the San Lorenzo River in central California, including Arroyo Corte Madera Del Presidio and Corte Madera Creek, tributaries to San Francisco Bay (NOAA 1999). Critical habitat consists of the water, substrate, and adjacent riparian zone of estuarine and riverine reaches, including off-channel habitats, in specified hydrologic units in Mendocino, Sonoma, Napa, Marin, San Mateo and Santa Cruz counties. Accessible reaches are those within the historical range of the ESU that can still be occupied by any life stage of coho salmon. Inaccessible reaches are those above dams or longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years) (NOAA 1999).

Pruitt Creek is within the designated range of the state and federally endangered Central California Coast (CCC) coho salmon evolutionary significant unit (ESU; CDFW 2021). The Project site is located within the Russian River Watershed, which is designated critical habitat for CCC coho below Coyote Dam and Warm Springs Dam; however, Pruitt Creek is not part of the mapped critical habitat for CCC coho (NOAA 2005, Figure 6). There is a CNDDDB occurrence for CCC coho salmon in Mark West Creek (recorded in 2015; CNDDDB Occurrence No. 25; Figure 5), approximately 0.75-air-miles south of the Project site. Mark West Creek is hydrologically connected to Pruitt Creek at times of moderate flow, historically with highest potential for connectivity from November to April (USGS 2022). At moderate flows, the habitat in Pruitt Creek would have the depth, cover, and predation opportunities to accommodate adult CCC coho salmon but there is very little spawning and rearing habitat available on the Project site.

For CCC coho salmon to occur in Pruitt Creek, large rain events and associated increases in water flow and decreases in water temperature have to align with the CCC coho salmon's migration event. Additionally, all higher order tributaries to the Russian River connected to Pruitt Creek would need to have sufficient flow and provide uninhibited access to Pruitt Creek. There is no potential for CCC coho salmon to occur on the Project when the creek is dry. There is a moderate potential for occurrence when Pruitt Creek has sufficient connection to higher order tributaries and wetted habitat. Therefore, impacts to the CCC Coho salmon are possible as a result of the proposed Project, depending on final design plans and construction methods. Individuals are not likely to be directly impacted by physical construction methods but may be indirectly affected if Project activities modify water quality parameters (e.g., increased temperature or turbidity, lowered dissolved oxygen) within Pruitt Creek. Potential project activities that could contribute to indirect effects include removal of riparian vegetation, grading and sediment transport from uplands to the waterway, and unintentional releases (spills) of hazardous materials to surface waters.



5.0 REGULATORY SETTING

Regulatory authority over biological resources is shared by federal, state, and local agencies under a variety of laws, ordinances, regulations, and statutes. Under each law we discuss their pertinence to the proposed development. As part of the Proposed Action, the Project site would be taken into federal trust for the benefit of the Koi Nation prior to any construction activities. Land that is held for trust on behalf of tribes is subject to federal and tribal law exclusively.

While this Project would not fall under jurisdiction of the CESA once the Project site is taken into federal trust, avoidance of impacts to all species should be considered to protect the natural resources on the Project site pursuant to NEPA procedures for due diligence. Typically, within their jurisdictional lands CDFW is responsible for administering CESA and issuing incidental take permits for a state listed threatened and/or endangered species only if specific criteria are met (i.e., the effects of the authorized take are minimized and fully mitigated). Accordingly, mitigation measures that are required are typically commensurate with the impact on each species. Consequently, should impacts to a species be expected, listed under CESA and/or the federal Endangered Species Act, it is prudent to acknowledge these potential impacts and find ways to minimize or avoid the impacts completely during the NEPA process. While no additional requirements exist for CESA-listed species, impacts to federally-listed species and/or designated critical habitat would require permitting with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (NMFS) separately from the NEPA process.

6.0 SUMMARY OF CONSTRAINTS AND OTHER RECOMMENDATIONS

Based on Sequoia's assessment, there is potential for impacts to occur to species covered under the CESA. Any work plans involving Pruitt Creek and the associated riparian corridor have a possibility for directly and/or indirectly affecting the habitat. These impacts may not rise to the standard of 'take' under the CESA; however, they should still be considered during environmental review. Impacts to the creek and riparian habitat would likely require permitting and consultation with the U.S. Army Corps of Engineers, which may place avoidance and minimization measures on the riparian area.

Suitable habitat for adult CCC coho salmon exists on the Project site when flows are sufficient. There are no documented occurrences of this species on the Project site; however, occurrences have been documented in Mark West Creek, a higher order tributary to the Russian River that is assumed to be hydrologically connected to Pruitt Creek during periods of sufficient flow. The intermittent flow of Pruitt Creek is likely a determining factor for the lack of access and associated occurrences in the creek. For this anadromous species, the connectivity of tributaries in their natal watershed at the time of migration determines where they will occur. Pruitt Creek is disconnected from Mark West Creek for extended times throughout the year, but there is potential for CCC coho salmon to reach Pruitt Creek at sufficient flows. There is potential for occurrence on the Project site and potential for direct and indirect impacts to this species from Project activities. Due to the federal status of the CCC coho salmon and the presence of Essential Fish Habitat, a formal Section 7 and Essential Fish Habitat consultation will be



initiated with the NMFS by the Bureau of Indian Affairs to evaluate impacts to CCC coho at a federal level. CESA-level concerns acknowledged in this memorandum will be addressed thoroughly in that process.

If you have any questions or concerns, please do not hesitate to contact me at the email or phone number listed below. Thank you for the opportunity to support you on this Project.

Sincerely,

Claire Buchanan | Project Manager

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7.0 REFERENCES

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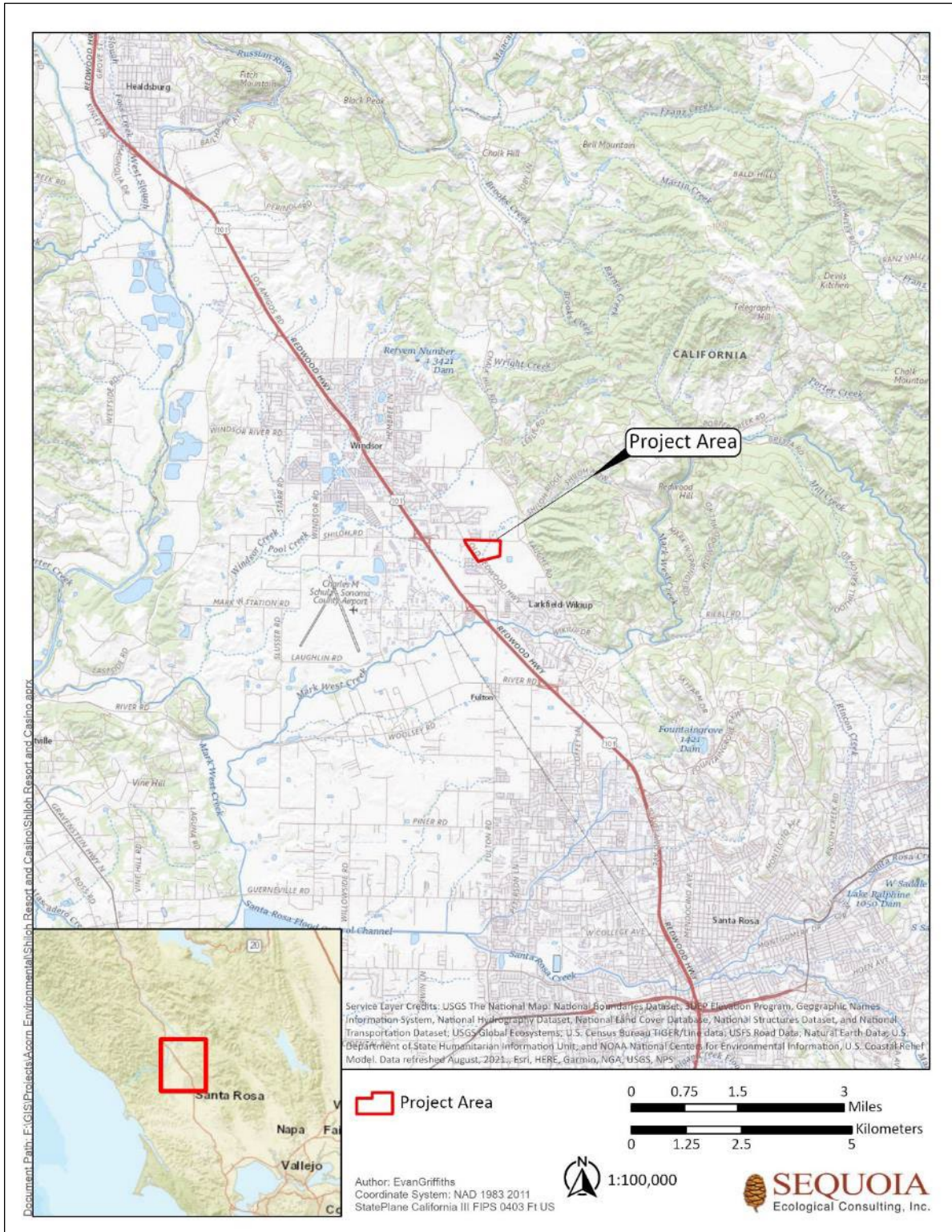


Figure 1. Regional Map of the Shiloh Resort and Casino Project Site.

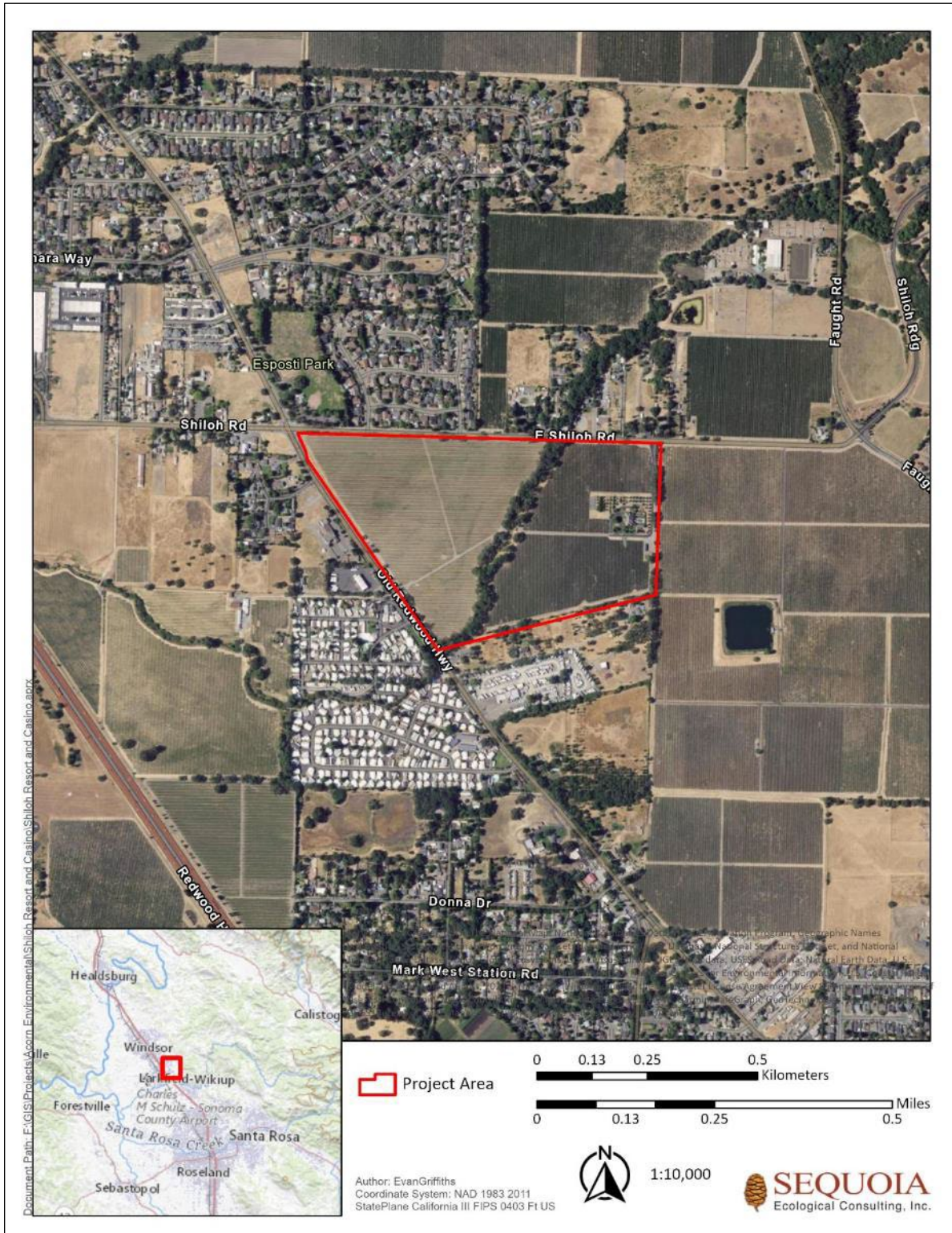


Figure 2. Location Map of the Shiloh Resort and Casino Project Site.

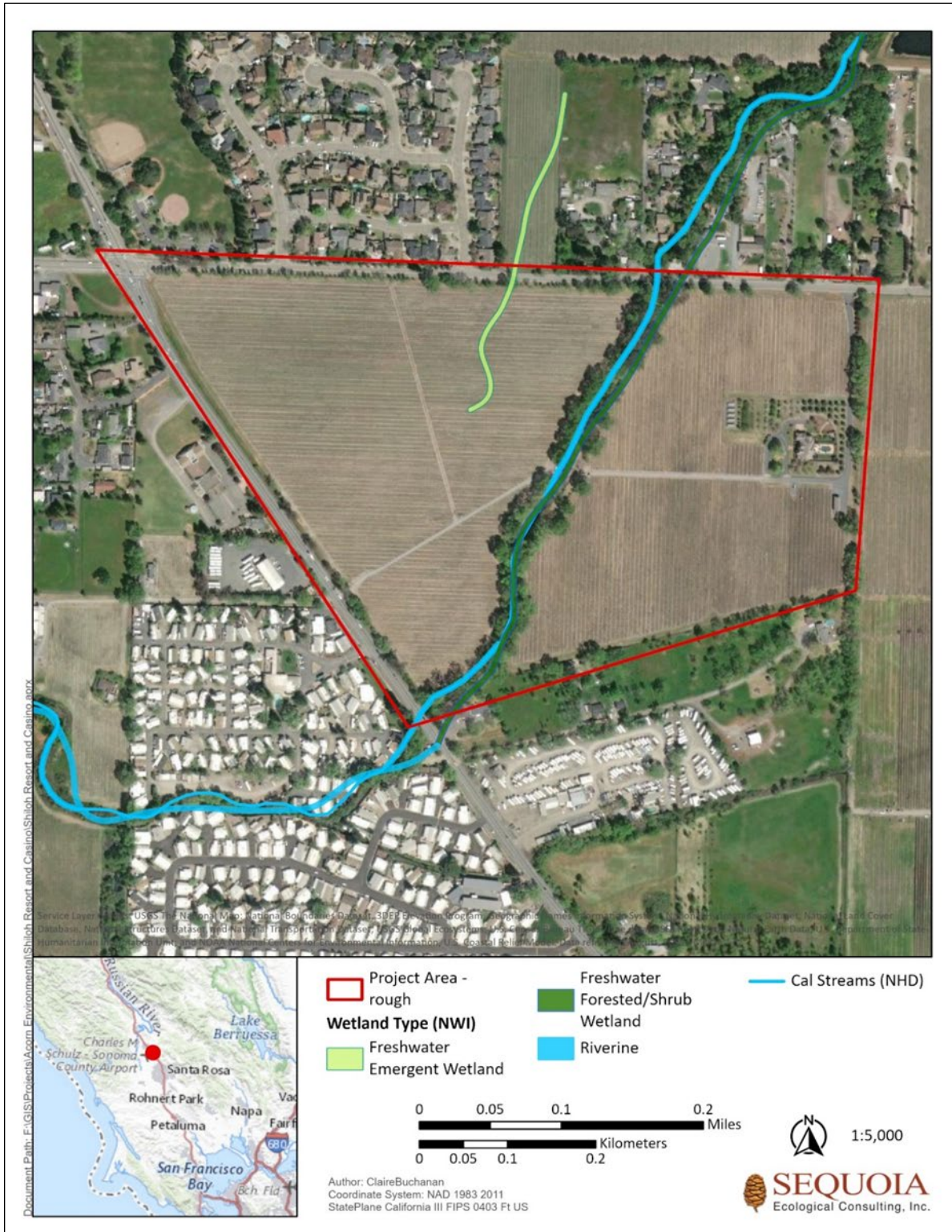


Figure 3. USFWS National Wetland Inventory Within the Vicinity of the Project Site.

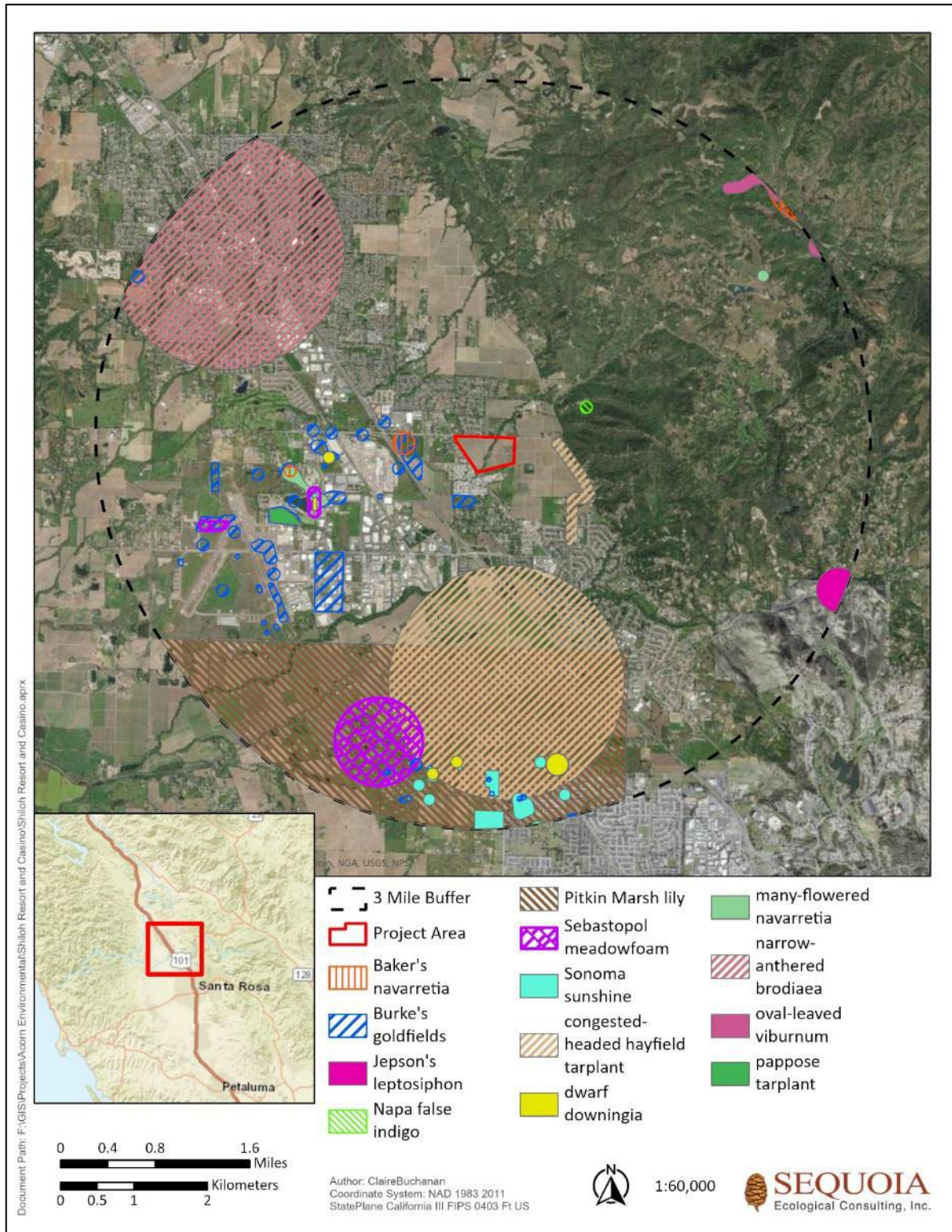


Figure 4. CESA-Listed Plant Species Occurrences Within 3 Miles of the Project Site.

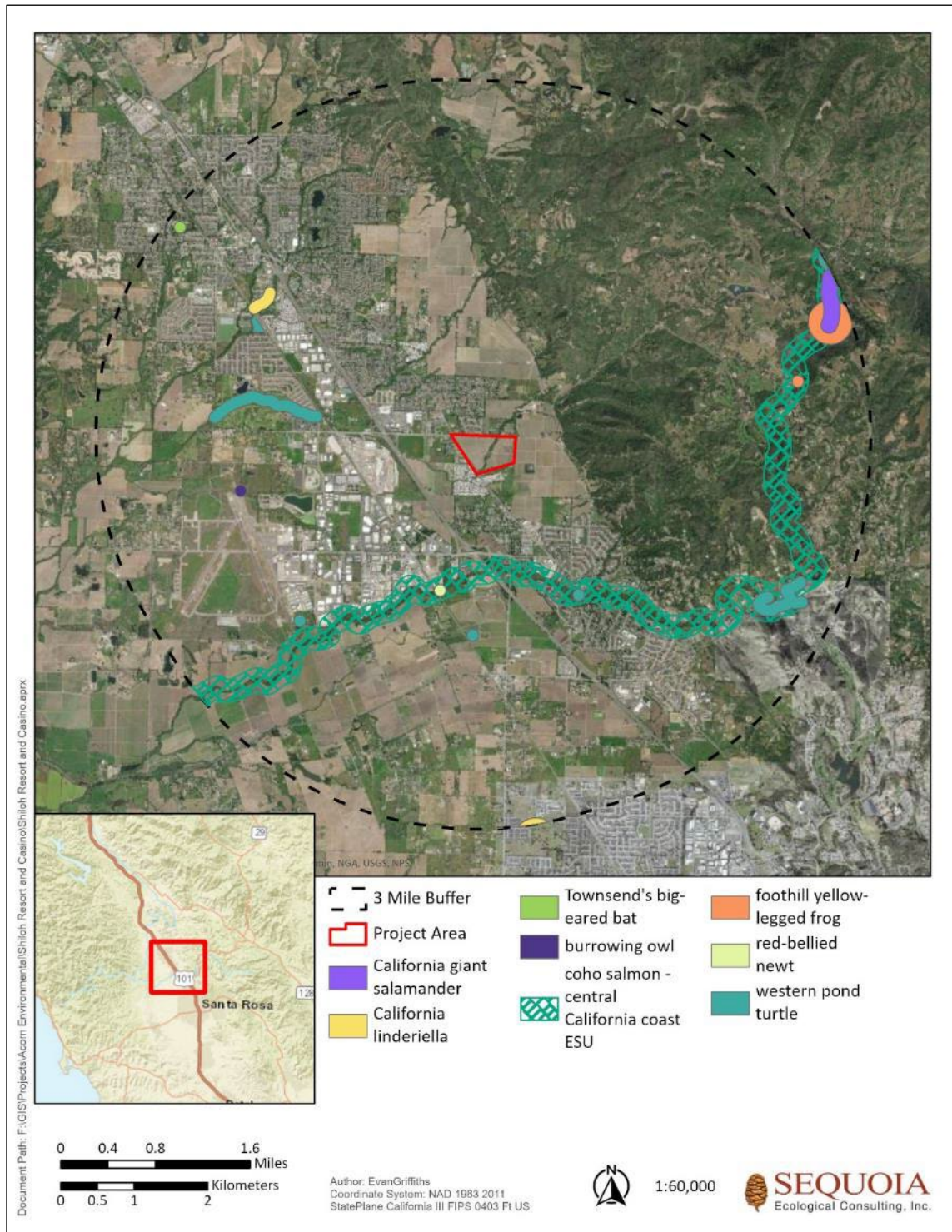


Figure 5. Special-Status Wildlife Species Occurrences Within 3 Miles of the Project Site (Note: only California tiger salamander and coho salmon are CESA-listed).

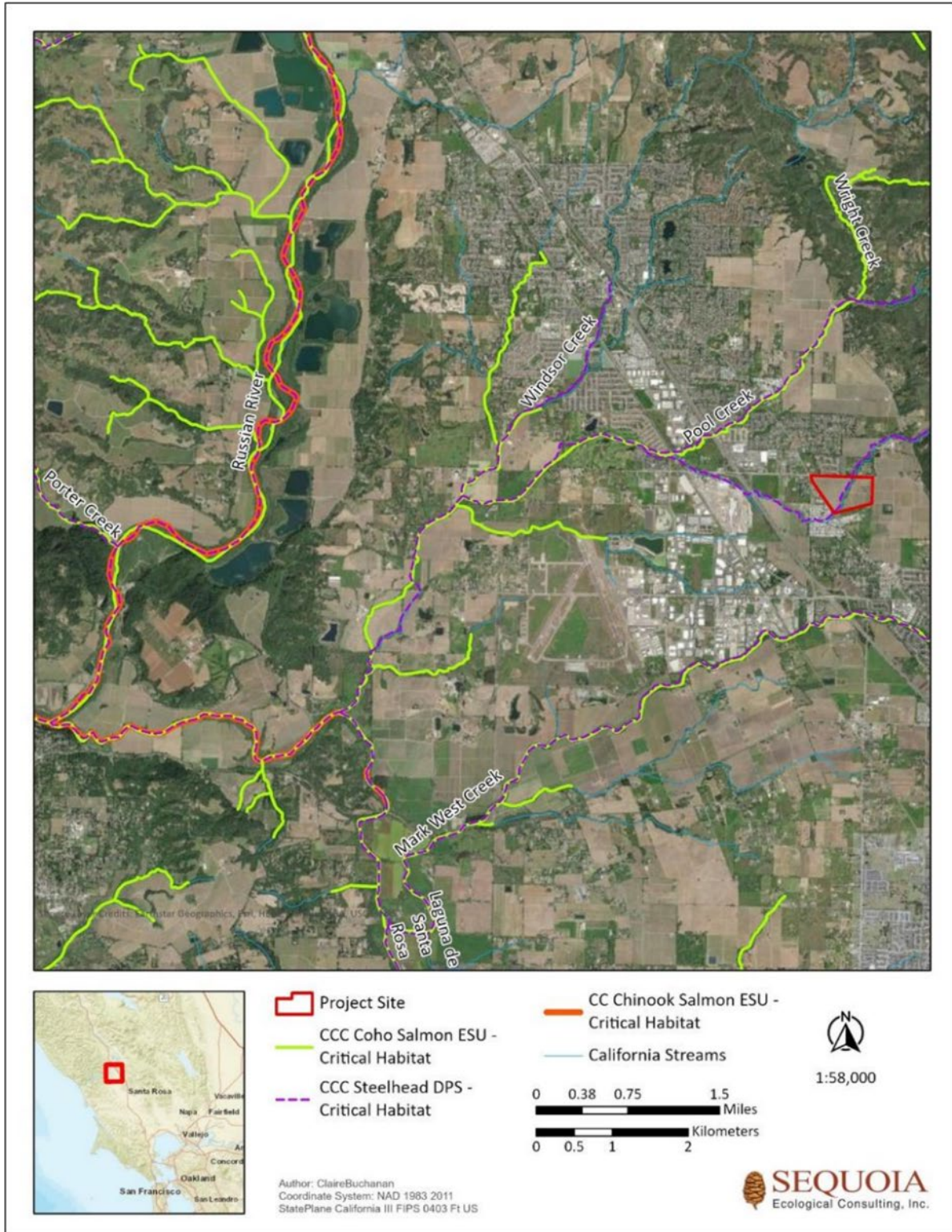


Figure 6. NMFS Critical Habitat in the Vicinity of the Proposed Shiloh Resort and Casino Project Site.

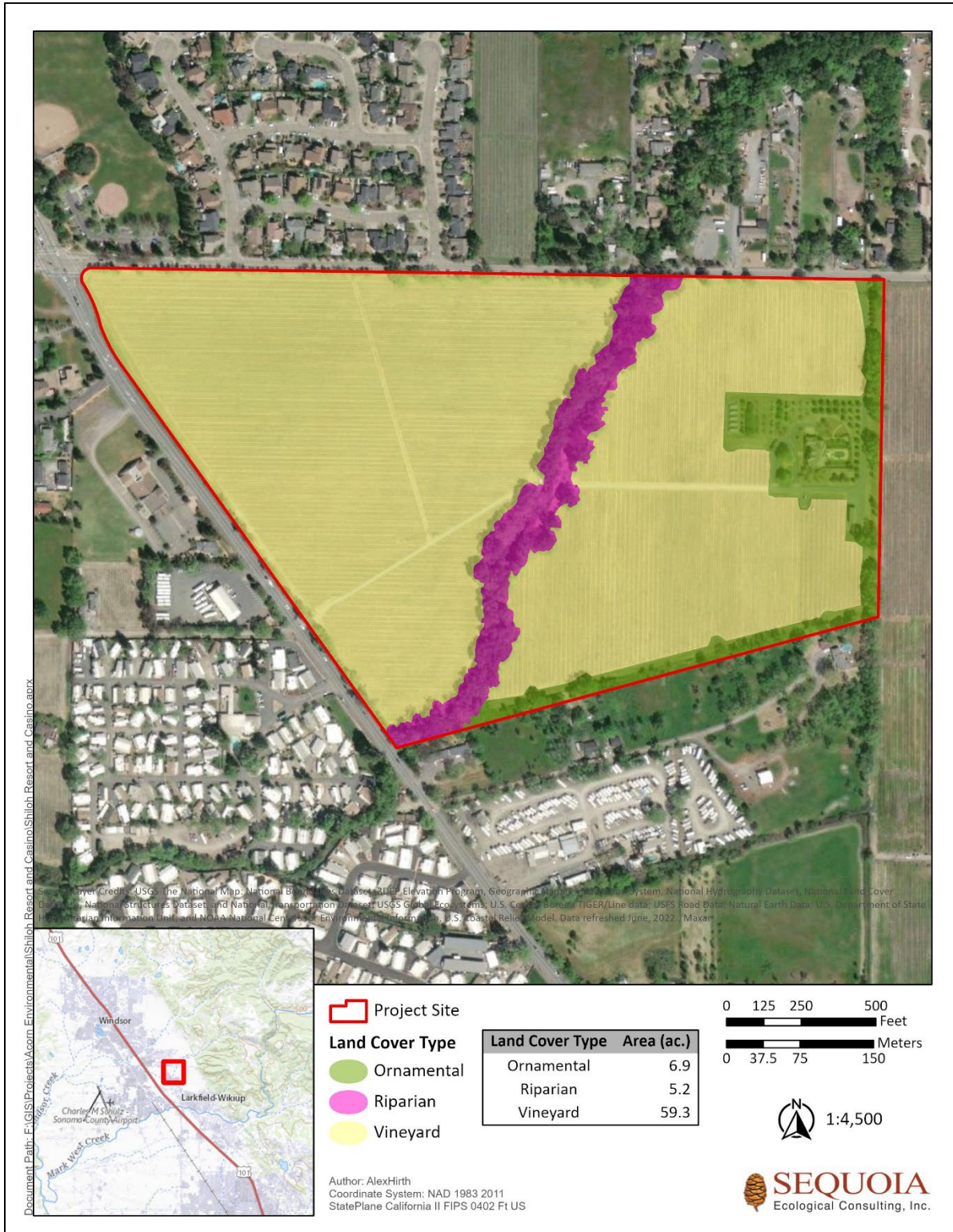


Figure 7. Land Cover Types within the Proposed Shiloh Resort and Casino Project Site.



Table 1. CESA-Listed Plant Species with Potential to Occur on the Project Site.

Scientific Name	Common Name	CESA Listing Status	Habitat Requirements	Potential for Occurrence
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo	1B.2	Occurs in chaparral at elevations below 2,600 feet.	No Potential. No chaparral occurs on the Project site.
<i>Blennosperma bakeri</i>	Sonoma sunshine	CE, 1B.1	Occurs in wet valley and foothill grasslands and vernal pools at elevations of 35 to 360 feet.	No Potential. No grassland or vernal pools occur on the Project site.
<i>Brodiaea leptandra</i>	Narrow-anthered brodiaea	1B.2	Occurs in open mixed-evergreen forest and chaparral at elevations of 130 to 4,000 feet.	No Potential. No evergreen forest or chaparral occurs on the Project site.
<i>Centromadia parryi</i> ssp. <i>parryi</i>	pappose tarplant	1B.2	Occurs in grassland, coastal salt marshes, alkaline springs, and seeps at elevations below 1,300 feet.	No Potential. No salt marshes or alkaline springs occur on the Project site. Grassland does not provide suitable habitat.
<i>Downingia pusilla</i>	dwarf downingia	2B.2	Occurs in vernal pools at elevations below 500 feet.	No Potential. No vernal pools occur on the Project site.
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	CE, 1B.2	Occurs in shallow water and along margins of vernal pools at elevations below 5,000 feet.	No Potential. No vernal pools occur on the Project site.
<i>Hemizonia congesta</i> ssp. <i>Congesta</i>	congested-headed hayfield tarplant	1B.2	Occurs in grassland, barrens, chaparral, and open woodland within serpentine substrates at elevations below 1,500 feet.	No Potential. No serpentine substrates occur on the Project site.
<i>Lasthenia burkei</i>	Burke's goldfields	CE, 1B.1	Occurs in mesic (wet) meadows, seeps, and vernal pools at elevations of 50 to 1,970 feet.	No Potential. No mesic meadows, seeps or vernal pools occur on the Project site.
<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	1B.2	Occurs in open or partially shaded grassland slopes at elevations below 1,600 feet.	No Potential. No grasslands occur on the Project site.



Scientific Name	Common Name	CESA Listing Status	Habitat Requirements	Potential for Occurrence
<i>Lilium pardalinum</i> ssp. <i>Pitkinense</i>	Pitkin Marsh lily	CE, 1B.1	Occurs in cismontane woodland, meadows and seeps, and freshwater marshes and swamps at elevations of 115 to 215 feet.	No Potential. No meadows, seeps, or cismontane woodland occurs on the Project site.
<i>Limnanthes vincularis</i>	Sebastopol meadowfoam	CE, 1B.1	Occurs in meadows and seeps, valley and foothill grasslands, and vernal pools at elevations of 50 to 1,000 feet.	No Potential. No mesic habitat or vernal pools occur on the Project site.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	1B.1	Occurs in vernal pools at elevations below 5,500 feet.	No Potential. No vernal pools occur on the Project site.
<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	many-flowered navarretia	CE, 1B.2	Occurs in vernal pools with volcanic ash substrates at elevations of 100 to 3,115 feet.	No Potential. No vernal pools occur on the Project site
<i>Viburnum ellipticum</i>	oval-leaved viburnum	2B.3	Occurs in chaparral and yellow-pine forests on north-facing slopes at elevations of 1,000 to 4,500 feet.	No Potential. No suitable habitat occurs on the Project site and outside of elevation range.

Key to status:

CT=California listed as threatened species

CE=California listed as endangered species

CNPS Rare Plant Rank

1A=Plants presumed extirpated in California, and either rare or extinct elsewhere

1B=Plants rare, threatened, or endangered in California, or elsewhere

2A=Plants presumed extirpated in California but common elsewhere

2B=Plants rare, threatened, or endangered in California but more common elsewhere

Note: CNPS ranks below 2B were excluded from this analysis.



Table 2. CESA-Listed Animal Species with Potential to Occur on the Project Site.

Scientific Name	Common Name	CESA Listing Status	Habitat Requirements	Potential for Occurrence
<i>Ambystoma californiense</i>	California tiger salamander – Sonoma County DPS	CE	Occurs in grasslands and foothills with pools or ponds for breeding. Sonoma County DPS inhabits vernal pools and seasonal ponds, grasslands, and oak savannah.	No Potential. Project site does not provide suitable breeding aquatic habitat or upland grassland habitat and the Project site outside of known geographic range.
<i>Aquila chrysaetos</i>	golden eagle	FP	Occurs in grasslands, savannahs, oak and pine woodlands and agricultural fields. Nests on cliffs and in large trees in open areas.	No Potential. Project site’s main land use is agricultural and the habitat, including vineyards, is not suitable for the species.
<i>Haliaeetus leucocephalus</i>	bald eagle	FP	Occurs in forested areas adjacent to large bodies of water including lakes, reservoirs, rivers, estuaries, and the coast.	No Potential. No suitable habitat such as old-growth forests, freshwater lakes or marshes are present within or near the Project site
<i>Oncorhynchus kisutch</i>	coho salmon – central California coast ESU	CE	Anadromous fish species that spans and spends a portion of its life in fresh inland streams, maturing in the open ocean. Critical habitat is designated to include all river reaches accessible to listed coho within the range of the ESUs.	Moderate Potential. Pruitt Creek has suitable habitat for adult CCC Coho but lacks spawning and rearing habitat. Habitat is connected to known occurrences at moderate flows.
<i>Strix occidentalis caurina</i>	northern spotted owl	CT	Occurs in dense canopies of mature and old-growth forests. Nests in tree hollows.	No Potential. No suitable habitat is present within the Project site.
<i>Syncaris pacifica</i>	California freshwater shrimp	CE	Occurs in perennial freshwater streams with submerged undercut banks, overhanging plants, and exposed live roots of willow or alder.	No Potential. Pruitt Creek is dry at certain times of the year and therefore is not a perennial stream. The closest occurrence is over 6 miles to the northeast. This species is not expected to occur on the Project site.

Key to status:
 CE=California listed as endangered species

CT=California listed as threatened species
 FP=California listed as fully protected



Table 3. Plant Species Observed on the Project Site.

Scientific Name	Common Name	Family
<i>Aesculus californica</i>	California buckeye	Sapindaceae
<i>Agapanthus africanus</i>	African lily	Amarylidaceae
<i>Anthemis cotula</i>	stinking chamomile	Asteraceae
<i>Arum italicum</i>	Italian arum	Araceae
<i>Avena barbata</i>	slender oat	Poaceae
<i>Avena fatua</i>	wild oat	Poaceae
<i>Brassica nigra</i>	black mustard	Brassicaceae
<i>Briza minor</i>	little quaking grass	Poaceae
<i>Bromus diandrus</i>	ripgut brome	Poaceae
<i>Bromus hordeaceus</i>	soft chess	Poaceae
<i>Calandrinia menziesii</i>	red maids	Montiaceae
<i>Calendula arvensis</i>	field marigold	Asteraceae
<i>Cardamine hirsuta</i>	bittercress	Brassicaceae
<i>Carduus pycnocephalus</i>	Italian thistle	Asteraceae
<i>Carex</i> spp.	sedges	Cyperaceae
<i>Cerastium glomeratum</i>	mouse-ear chickweed	Monitaceae
<i>Chlorogalum pomeridianum</i>	soap plant	Agavaceae
<i>Claytonia perfoliate</i>	miner's lettuce	Montiaceae
<i>Cotoneaster</i> sp.	cotoneaster	Rosaceae
<i>Cyperus eragrostis</i>	tall flatsedge	Cyperaceae
<i>Elymus</i> sp.	wild rye	Poaceae
<i>Erodium botrys</i>	cranesbill	Geraniaceae
<i>Erodium cicutarium</i>	redstem filaree	Geraniaceae
<i>Eucalyptus globulus</i>	blue gum	Myrtaceae
<i>Festuca myuros</i>	six-weeks fescue	Poaceae
<i>Festuca perennis</i>	Italian ryegrass	Poaceae
<i>Fraxinus latifolia</i>	Oregon ash	Fagaceae
<i>Galium aparine</i>	bedstraw	Rubiaceae
<i>Genista monspessulana</i>	French broom	Fabaceae
<i>Geranium dissectum</i>	cutleaf geranium	Geraniaceae
<i>Geranium molle</i>	dove's-foot geranium	Geraniaceae
<i>Geranium robertianum</i>	Robert's geranium	Geraniaceae
<i>Hedera helix</i>	English ivy	Araliaceae
<i>Hirschfeldia incana</i>	shortpod mustard	Brassicaceae



Scientific Name	Common Name	Family
<i>Hordeum murinum</i>	mousetail barley	Poaceae
<i>Hypochaeris radicata</i>	rough cat's-ears	Asteraceae
<i>Juncus balticus</i>	Baltic rush	Juncaceae
<i>Juncus effusus</i>	bog rush	Juncaceae
<i>Juncus xiphioides</i>	iris-leaf rush	Juncaceae
<i>Lepidium nitidum</i>	shining pepperweed	Brassicaceae
<i>Lonicera hispidula</i>	pink honeysuckle	Caprifoliaceae
<i>Lysimachia arvensis</i>	scarlet pimpernel	Myrsinaceae
<i>Lythrum hyssopifolia</i>	hyssop loosestrife	Lythraceae
<i>Malva parviflora</i>	cheeseweed	Malvaceae
<i>Medicago polymorpha</i>	California burclover	Fabaceae
<i>Narcissus pseudonarcissus</i>	daffodil	Amaryllidaceae
<i>Nasturtium officinale</i>	watercress	Brassicaceae
<i>Oxalis pes-caprae</i>	Bermuda buttercup	Oxalidaceae
<i>Pinus sp.</i>	pine	Pinaceae
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae
<i>Poa annua</i>	annual bluegrass	Poaceae
<i>Polygonum aviculare</i>	yard knotweed	Polygonaceae
<i>Quercus agrifolia</i>	coast live oak	Fagaceae
<i>Quercus lobata</i>	valley oak	Fagaceae
<i>Ranunculus muricatus</i>	spiny fruit buttercup	Ranunculaceae
<i>Rubus armeniacus</i>	Himalayan blackberry	Rosaceae
<i>Rumex acetosella</i>	sheep sorrel	Polygonaceae
<i>Rumex crispus</i>	curly dock	Polygonaceae
<i>Rumex pulcher</i>	fiddle dock	Polygonaceae
<i>Schoenoplectus pungens</i>	three-square bulrush	Cyperaceae
<i>Senecio vulgaris</i>	common groundsel	Asteraceae
<i>Stachys bullata</i>	hedge nettle	Lamiaceae
<i>Symphoricarpos mollis</i>	creeping snowberry	Caprifoliaceae
<i>Torilis arvensis</i>	field hedge parsley	Apiaceae
<i>Toxicodendron diversilobum</i>	poison oak	Anacardiaceae
<i>Trifolium spp.</i>	clover	Fabaceae
<i>Typha spp.</i>	cattails	Typhaceae
<i>Umbellularia californica</i>	California bay laurel	Lauraceae



Scientific Name	Common Name	Family
<i>Vicia sativa</i>	common vetch	Fabaceae
<i>Vinca major</i>	periwinkle	Apocynaceae

Table 4. Wildlife Species Observed on the Project Site.

Scientific Name	Common Name
<i>Junco hyemalis</i>	dark-eyed junco
<i>Aphelocoma californica</i>	California scrub-jay
<i>Corvus brachyrhynchos</i>	American crow
<i>Cathartes aura</i>	turkey vulture
<i>Sitta carolinensis</i>	white-breasted nuthatch
<i>Pseudacris sierra</i>	Sierran treefrog (= Sierran chorus frog)