



MEMORANDUM

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| | | | Hope Kingma, WRA Hope.kingma@wra-ca.com |
| DATE: | December 15, 2023 | | |
| SUBJECT: | 1501 Lucas Valley Road Biological Resources Constraints Analysis | | |

1.0 INTRODUCTION

1.1 Purpose

WRA, Inc. (WRA) has prepared this memorandum to summarize the methods, results, conclusions, and recommendations of a biological resources constraints assessment for a development proposed on 7 acres of an approximately 63-acre property (Property; APN164-280-35) located at 1501 Lucas Valley Road in San Rafael, Marin County (County), California (**Attachment A - Figure 1**). The proposed project involves the demolition of existing structures and the construction of a new 7-acre residential development (Project).

1.2 Study Area

The Study Area of this assessment is the proposed 7-acre grading envelope for the proposed development located in the far eastern portion of the 63-acre Property. The Study Area is comprised of rolling hills with gentle to steep slopes, which have been previously graded/levelled for development in some areas. The Study Area is located 150 to 300 feet above sea level. The existing development includes a dilapidated barn and a meandering fire road that provides access to an unoccupied residence on the Property to the west. Neither are in use. The road is partly paved and partly gravel but has been recolonized by grasses in many areas. Undeveloped areas within the Study Area consist of grasslands and a mix of both oak and bay woodlands. Detailed land cover type descriptions are included in Section 3.0 below.

The Study Area borders dense residential development to the north and a larger private residence on an adjacent property immediately to the south. Both the Property and neighboring residence occur at the margins of the Terra Linda Sleepy Hollow Open Space Preserve, which provides a network of public multi-use trails and comprises the larger surrounding area to the southeast and southwest.

2.0 METHODS

On November 28, 2023, WRA biologists traversed the Study Area and the immediate surrounding areas as needed to document existing conditions. The potential for special-status species to occur within the Study Area was evaluated by first determining which special-status species are known to occur in the vicinity of the Study Area through a literature and database search. Resources reviewed included the following:

- California Department of Fish and Wildlife (CDFW) Natural Diversity Database records (CNDDDB; CDFW 2023a),
- CDFW Biogeographic Information and Observation System (BIOS; CDFW 2023b),
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation Species Lists (IPaC; USFWS 2023a),
- California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2023a),
- National Wetland Inventory (NWI; USFWS 2023b)
- A Manual of California Vegetation, Online Edition (CNPS 2023b),
- Consortium of California Herbaria 2 (CCH2 2023),
- SoilWeb (CSRL 2023),
- Contemporary aerial photographs (Google Earth 2023), and
- Historical aerial photographs (NETR 2023).

During the site visit, land cover types within the Study Area were characterized and later classified as sensitive or non-sensitive. The Study Area was also examined for indicators of wetlands, non-wetland waters, and riparian habitat potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (RWQCB), and/or CDFW.

Finally, the Study Area was assessed for potential constraints that could affect any potential development proposed within this property. This analysis was performed to a level of detail necessary to understand what types of biological constraints may be associated with the Project. The conclusions of this report are based on conditions observed at the time of the site visit and the regulatory policies and practices in place at the time the report was prepared; changes that may occur in the future regarding conditions, policies, or practices may affect the conclusions presented in this assessment.

3.0 RESULTS

3.1 Site Description

The Study Area contains four land cover types: developed, coast live oak woodland, California bay woodland, and wild oats and annual brome grasslands (**Attachment A – Figure 2**). The California bay woodland and coast live oak woodland are considered sensitive land cover types. **Attachment B** provides a list of the plant and wildlife species observed in the Study Area during the November 2023 site visit. **Attachment C** provides photographs of the Study Area.



3.2 Non-Sensitive Land Cover Types

3.2.1 Wild Oats and Annual Brome Grasslands

Wild oats and annual brome grassland (*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance) is the dominant land cover within the Study Area. Grassland within the Study Area occurs on gentle to steep slopes in the eastern portion of the Study Area. The tree and shrub layer within the grassland is nearly absent, except for sparse cover by coyote brush (*Baccharis pilularis*). The land cover type is dominated by the non-native herbs and grasses, including wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*), Italian rye grass (*Festuca perennis*), barley (*Hordeum murinum*), medusa head (*Elymus caput-medusae*), yellow star thistle (*Centaurea solstitialis*), fennel (*Foeniculum vulgare*), and rattlesnake grass (*Briza maxima*). Limited sections of the grasslands contain native species, such as blue wildrye (*Elymus glaucus*), California poppy (*Eschscholzia californica*), Hayfield tarweed (*Hemizonia congesta* ssp. *lutescens*) and Harding grass (*Phalaris aquatica*). Non-native grasslands are not considered sensitive by CDFW or any other regulatory agency.

3.3 Sensitive Land Cover Types

Sensitive communities are given special protection under CEQA and other applicable federal, state, and local laws, regulations, and ordinances. Two sensitive land cover types were mapped within the Study Area and are described in detail below.

3.3.1 Coast Live Oak Woodland

Coast live oak woodlands (*Quercus agrifolia* Forest and Woodland Alliance) are defined by coast live oaks comprising more than 50% relative cover of the canopy layer. This vegetation community is present on the rolling hills in the western portion of the Study Area. Valley oak (*Quercus lobata*) and California bay (*Umbellularia californica*) are co-dominant species, along with a large eucalyptus tree at the western edge of the property. The understory of this land cover type consists of nonnative annual grasses, as described above. This alliance is not considered sensitive by CDFW. However, oak woodlands are protected under the California Oak Woodlands Conservation Act and Marin Countywide Plan policies and impacts to this community may be afforded consideration under CEQA.

3.3.2 California Bay Woodland

California bay woodland (*Umbellularia californica* Forest and Woodland Alliance) is located on the steep slopes, adjacent to the coast live oak woodland, on the northern border of the Study Area. Dominant species in the tree layer include California bay, valley oak, coast live oak, and California buckeye (*Aesculus californicus*), with California bay comprising greater than 30 percent of the relative cover in this stratum. Acacia (*Acacia* spp.) and Pacific madrone (*Arbutus menziesii*) individuals were observed in this land cover type within the Study Area, but they do not contribute enough to cover to be considered codominant tree species. The shrub stratum/vine stratum consists of Himalayan blackberry (*Rubus armeniacus*), French broom (*Genista monspessulana*), and toyon (*Heteromeles arbutifolia*). The herbaceous layer features a similar composition of species as the wild oats and annual brome grassland vegetation land cover type described above. The CDFW ranking for California bay woodlands is S3/G4, meaning it is vulnerable statewide and apparently secure worldwide. Therefore, this landcover type is considered sensitive by the CDFW and impacts may be afforded consideration under CEQA.

3.4 Soils

According to SoilWeb (CSRL 2023), the Study Area is underlain by two soil mapping units: Tocaloma-Saurin association, extremely steep; and Blucher-Cole complex, 2 to 5 percent slopes. Soils of the Tocaloma-Saurin association are typically well-drained and not considered hydric, while soils of the Blucher-Cole complex are typically poorly drained and are considered hydric (CSRL 2023). The parent materials of these soil mapping units include sandstone, shale, and granite (CSRL 2023).

Although none of these soil mapping units are classified as serpentine soils, islands of serpentine soils are common in the hills of Marin County north of Mount Tamalpais, including along Lucas Valley Road. Dark signatures visible in aerial photographs taken during the dry season, such as photographs taken in July of 2023, suggest the presence of serpentine soils within the Study Area (Google Earth 2023). During the site visit, WRA biologists determined that these aerial signatures correspond to areas of thin, loose soils with sparse cover by non-native annual grasses, which may indicate the presence of serpentine soils. Several rocks observed within the Study Area also appeared to be of serpentine origin; therefore, the Study Area may contain areas of serpentine soils, even though none of the soil mapping units documented within the Study Area are classified as serpentine.

3.5 Special-status Plant Species

Based on the CNDDDB and CNPS records, 88 special-status plant species have documented occurrences within the vicinity of the Study Area (CDFW 2023a). Of the 88 special-status species documented, 11 species have potential to occur within the Study Area due to the presence of suitable habitat and nearby occurrences. The remaining species are unlikely or have no potential to occur within the Study Area for one or more of the following reasons:

- The Study Area does not contain appropriate hydrologic conditions (e.g., vernal pools, marshes and swamps) necessary to support the special-status plant(s);
- The Study Area does not contain certain vegetation communities (e.g., chaparral, vernal pools, scrub, coniferous forest) associated with the special-status plant(s); or
- The Study Area is outside of the species' known elevation range.
- There are no documented occurrences of the species within 5 miles of the Study Area.

The species with potential to occur are listed in the table below.

Table 1. Special Status Plant Species with Potential to Occur

| SPECIES | STATUS | HABITAT | POTENTIAL FOR OCCURRENCE |
|--|-----------|---|---|
| Napa false indigo <i>Amorpha californica</i> <i>var. napensis</i> | Rank 1B.2 | Broadleafed upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 165 to 6560 feet (50 to 2000 meters). Blooms Apr-Jul. | Moderate Potential. The Study Area provides suitable cismontane woodland habitat with associated species that could potentially support this species. Multiple occurrences of this species have been documented within the vicinity of the Study Area. |
| Coast rockcress <i>Arabis blepharophylla</i> | Rank 4.3 | Broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub. Elevation ranges from 10 to 3610 feet (3 to 1100 meters). Blooms Feb-May. | Moderate Potential. The Study Area provides suitable broadleafed upland forest habitat with rocky soils that could potentially support this species. Multiple occurrences of this species have been documented within the vicinity of the Study Area. |
| bent-flowered fiddleneck <i>Amsinckia lunaris</i> | Rank 1B.2 | Cismontane woodland, coastal bluff scrub, valley and foothill grassland. Elevation ranges from 10 to 1640 feet (3 to 500 meters). Blooms Mar-Jun. | Moderate Potential. The Study Area provides grassland habitat with clay substrates that could potentially support this species, which has been observed within the vicinity of the Study Area. |
| Serpentine reed grass <i>Calamagrostis ophiditis</i> | Rank 4.3 | Chaparral (openings, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Elevation ranges from 295 to 3495 feet (90 to 1065 meters). Blooms Apr-Jul. | Moderate Potential. The Study Area provides grassland habitat with potential serpentine soils that could potentially support this species, which has been observed within the vicinity of the Study Area. |
| Oakland star-tulip <i>Calchortus umbellatus</i> | Rank 4.2 | Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 330 to 2295 feet (100 to 700 meters). Blooms Mar-May. | Moderate Potential. The Study Area provides grassland and cismontane woodland habitat with potential serpentine soils that could potentially support this species, which has been observed within the vicinity of the Study Area. |
| Tiburon buckwheat <i>Eriogonum luteolum</i> <i>var. caninum</i> | Rank 1B.2 | Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 0 to 2295 feet (0 to 700 meters). Blooms May-Sep. | Moderate Potential. This species has been documented less than 0.5 miles from the Study Area and suitable grassland habitat with potential serpentine soils. |

| SPECIES | STATUS | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|----------------------|---|--|
| <p>congested-headed hayfield tarplant</p> <p><i>Hemizonia congesta</i> <i>ssp. congesta</i></p> | Rank 1B.2 | Valley and foothill grassland. Elevation ranges from 65 to 1835 feet (20 to 560 meters). Blooms Apr-Nov. | Moderate Potential. Suitable grassland habitat for this species is present in the Study Area, and there are multiple occurrences of this species documented within the vicinity of the Study Area. |
| <p>Woolly-headed lessingia</p> <p><i>Lessingia hololeuca</i></p> | Rank 3 | Broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 50 to 1000 feet (15 to 305 meters). Blooms Jun-Oct. | Moderate Potential. The Study Area provides grassland habitat with potential serpentine soils that could potentially support this species, which has been observed within the vicinity of the Study Area. |
| <p>Tamalpais lessingia</p> <p><i>Lessingia micradenia</i> <i>var. micradenia</i></p> | Rank 1B.2 | Chaparral, valley and foothill grassland. Elevation ranges from 330 to 1640 feet (100 to 500 meters). Blooms (Jun)Jul-Oct. | Moderate Potential. Potential serpentine soils within the Study Area may support this species, and there are multiple occurrences of this species documented within the vicinity of the Study Area. |
| <p>Tiburon jewelflower</p> <p><i>Streptanthus glandulosus</i> <i>ssp. niger</i></p> | FE, SE, Rank 1B.1 | Valley and foothill grassland (serpentine). Elevation ranges from 100 to 490 feet (30 to 150 meters). Blooms May-Jun. | Moderate Potential. Potential serpentine soils the Study Area may support this species, and there are multiple occurrences of this species documented within the vicinity of the Study Area. |
| <p>Mt. Tamalpais bristly jewelflower</p> <p><i>Streptanthus glandulosus</i> <i>ssp. pulchellus</i></p> | Rank 1B.2 | Chaparral, valley and foothill grassland. Elevation ranges from 490 to 2625 feet (150 to 800 meters). Blooms May-Jul(Aug). | Moderate Potential. Potential serpentine soils within the Study Area may support this species, and there are multiple occurrences of this species documented within the vicinity of the Study Area. |

3.6 Special-status Wildlife Species

No special-status wildlife species were observed within the Study Area or immediate vicinity during the site assessment on November 28, 2023. Twelve (12) special-status wildlife species have been documented to occur within 5-miles of the Study Area (CDFW 2023a). Most of these species were determined to have no potential or are unlikely to occur within the Study Area due to the absence of suitable habitat features. Features not found within the Study Area that are required to support special-status wildlife species include the following:

- Vernal pools
- Perennial aquatic habitat (e.g. streams, rivers or ponds)
- Tidal marsh vegetation
- Presence of specific host plants
- Loose-textured sandy soils
- Mammal burrows or man-made burrow surrogates

The absence of such habitat features eliminates components critical to the survival or movement of most special-status species found in the vicinity. Additionally, given the Study Area's relative proximity to sensitive habitats associated with the San Pablo Bay, many species documented nearby are obligates to tidal marsh habitats which are not present on or in the immediate vicinity of the Study Area.

Two (2) special-status species were determined to have potential to occur in portions of the Study Area: pallid bat (*Antrozous pallidus*) and white-tailed kite (*Elanus leucurus*). These species are discussed in greater detail below. An additional species, Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*), was determined to be unlikely to occur within the Study Area but is discussed further in this document due to the presence of potentially suitable roost habitat on other parts of the Property.

Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority.

Moderate Potential. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented within snags and basal hollows of conifers, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2023). Trees within the Study Area (primarily oaks) may contain cavities or snags suitable for roosting by this species. A targeted bat habitat assessment was not performed under this biological assessment.

Townsend's western big-eared bat, (*Corynorhinus townsendii townsendii*), CDFW Species of Special Concern, WBWG High Priority. This species ranges throughout western North America from British Columbia to central Mexico. Its local distribution is strongly associated with the presence of caves, but roosting also occurs within man-made structures including mines and buildings. While many bat species wedge themselves into tight cracks and crevices, big-eared bats hang from walls and ceilings in the open. Males roost singly during the spring and summer months while females aggregate in the spring at maternity roosts to give birth. Females roost



with their young until late summer or early fall, until the young become independent, flying and foraging on their own. In central and southern California, hibernation roosts tend to be made up of small aggregations of individuals (Pierson and Rainey 1998). Foraging typically occurs along edge habitats near streams and wooded areas, where moths are the primary prey (WBWG 2023). The unoccupied residence on the Property, approximately 200 feet to the west of the Study Area, may provide suitable roost habitat for this species.

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Moderate Potential. The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas, and wetlands. Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). White-tailed kite may nest in large trees within or immediately adjacent to the Study Area.

3.7 Wildlife Corridors

Wildlife movement between suitable habitat areas can occur via open space areas lacking substantial barriers. The terms “landscape linkage” and “wildlife corridor” are often used when referring to these areas. The key to a functioning corridor or linkage is that it connects two larger habitat blocks, also referred to as core habitat areas (Beier 1992, Soule and Terborgh 1999). The term “wildlife corridor” is useful in the context of smaller, local area planning, where wildlife movement may be facilitated by specific local biological habitats or passages and/or may be restricted by barriers to movement. Above all, wildlife corridors must link two areas of core habitat and should not direct wildlife to developed areas or areas that are otherwise void of core habitat (Hilty et al. 2019).

The Study Area is not within a designated wildlife corridor depicted in the Essential Connectivity Areas dataset published by CDFW, which provides baseline data on landscape-scale corridor areas (CalTrans 2012; CDFW 2023b). The Study Area occurs at the margins of larger open space areas; however, it does not provide connectivity between two habitat blocks. The Study Area is directly adjacent to existing development and borders Lucas Valley Road and dense residential housing immediately to the north; therefore, the proposed Project would not significantly alter the current characteristics of the surrounding landscape nor disrupt wildlife movement between suitable habitat area associated with the Terra Linda Sleepy Hollow Open Space Preserve in the surrounding area. While common wildlife species presumably utilize the site to some degree for movement at a local scale, the Study Area does not function as a true wildlife movement corridor on a local or regional scale.



4.0 RECOMMENDATIONS

4.1 Analysis of Potential Effects to Sensitive Vegetation Communities and Trees

4.1.1 Protected Trees

The Marin County Ordinance (No. 3342, Chapter 22.75 Native Tree Preservation and Protection) requires tree removal permits for “protected” and “heritage” trees¹. Protected trees include native tree species including, but not limited to native oaks (*Quercus* spp.) with a minimum diameter at breast height (DBH; measured 4.5 feet above grade) of six inches, and California bay with a minimum DBH of 10 inches. Heritage trees are defined as native oaks with a minimum DBH of 18 inches, and most other native tree species with a minimum DBH of 30 inches.

A tree survey, performed on November 8, 2023, identified 66 protected trees within the Study Area (HortScience/Bartlett Consulting 2023). Based on an evaluation of the trees within the Study Area and the proposed site plan, the tree survey report recommends the preservation of 55 trees and the removal of 113 trees, including 45 protected trees. Prior to the removal of protected trees as defined above, the Project will need to obtain a tree removal permit from Marin County. Tree replacement and protection measures will be required as determined by the County. Mitigation for tree removal may require one or more of the following, as specified by the tree removal permit:

- Establishment and maintenance of replacement trees in conformance with the Countywide Plan Policies, Landscaping Objectives (Chapter 22.26.040), and the Marin County Fire Department
- A management plan that designates areas of the property for preservation of stands of trees, or saplings and replacement plantings, as required
- Removal of invasive species
- Posting of a bond to cover the cost of an inspection to ensure the success of mitigation measures

4.1.2 Sensitive Natural Communities

Potential impacts to sensitive natural communities, including coast live oak woodland and California bay woodland, would need to be avoided or minimized to the greatest extent feasible. Mitigation for unavoidable impacts may be achieved to the County’s satisfaction through compliance with the County tree ordinance by replacement of protected trees as described above (Section 4.1.1). In addition, revegetation with native species may be required to restore temporarily impacted areas within these communities. Any permanently impacted sensitive natural communities may require compensatory mitigation in accordance with County requirements, which could include in-kind habitat replacement on- or off-site, at a minimum 1:1 ratio, or as otherwise specified. Restored sensitive natural areas may need to be monitored for a five-year period, or longer, to ensure revegetation success in accordance with a Habitat Restoration and Monitoring Plan (HMMP). An HMMP typically requires replacement plantings,

¹ Trees in poor condition are exempted from the Prohibition on Removal of a Protected Tree [22.75.050 (B)].

invasive species management (if applicable), and monitoring of the performance of replacement plantings for 5 to 10 years, or until performance standards are met.

4.2 Analysis of Potential Effects to Special-Status Species

4.2.1 Special-Status Plant Species

The Study Area provides suitable habitat for 11 special-status plant species due to the relatively undisturbed grassland habitat, presence of potential serpentine soils, and nearby documented occurrences. Targeted surveys for these species will be required to support the County's CEQA review. WRA recommends three appropriately timed protocol-level surveys, one during mid spring (March-May), one during late/early summer (May-June), and one during mid-late summer (July-August), with reference site visits for these species to fine tune the timing as needed. If no special-status plant species are found, then the Project will not have any impacts to special-status plant species and no additional mitigation measures would be necessary.

If any of special-status plant species are found and cannot be avoided by construction activities within the Study Area, the following measures may be required:

- If the surveys determine that one or more special-status plant species are present within the Study Area, direct and indirect impacts on the species should be avoided where feasible through the establishment of activity exclusion zones, where no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for special-status plant species should be established prior to activities around each occupied habitat site, the boundaries of which should be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The size of activity exclusion zones may be determined through consultation with a qualified biologist.
- If exclusion zones and avoidance of impacts to special-status plant species within the Study Area are not feasible, then the loss of individuals or occupied habitat of special-status plants should be compensated for through the acquisition, protection, and subsequent management of existing occurrences. Before the implementation of compensation measures, the Project's applicant should provide detailed information to the lead agency on the quality of preserved habitat, location of the preserved occurrences, provisions for protecting and managing the areas, the responsible parties involved, and other pertinent information that demonstrates the feasibility of the compensation. A mitigation plan identifying appropriate mitigation ratios at a minimum ratio of 1:1 should be developed in consultation with, and approved by, the lead agency prior to the commencement of any activities that would impact special-status plant species that occur within the Study Area.
- A mitigation plan may include but is not limited to the following:
 - Transplantation of perennial species and/or reseeding of annual species in other suitable portions of the Study Area. Transplantation and/or reseeding of special-status species will require a monitoring plan to ensure successful establishment, OR
 - The acquisition of off-site mitigation areas presently supporting the special-status species within the Study Area, OR



- Purchase of credits in a mitigation bank that is approved to sell credits for special-status plants, or payment of in-lieu fees to a public agency or conservation organization (e.g. a local land trust) for the preservation and management of existing populations of special-status plants.
- In addition to these measures, if pre-construction surveys find that Tiburon jewelflower (*Streptanthus glandulosus* ssp. *niger*), a federally and state listed species, is present within the Study Area or access routes and cannot be avoided, consultation may be required with U.S. Fish and Wildlife Service (USFWS) to assess impacts to this species. However, since there are no waters of the United States onsite, the U.S. Army Corps of Engineers could not serve as the federal nexus agency for Section 7 consultation with the USFWS, and Section 10 consultation would be required, which is a tedious and time-consuming process. Consultation may result in additional conservation measures to further reduce any effects resulting from building activities at the time of construction. Impacts to Tiburon jewelflower will also require consultation with CDFW to obtain an Incidental Take Permit. If this species is found to be absent, formal consultation would not be required.

4.2.2 Special-Status Wildlife Species

WHITE-TAILED KITE AND NON-SPECIAL-STATUS NESTING BIRDS

One special-status bird species, white-tailed kite, has the potential to nest in trees and ground vegetation within the Study Area or in the immediate vicinity. In addition, non-special-status native birds (e.g., passerines, raptors) may nest on the ground, in trees, and in vegetation within and immediately surrounding the Study Area. The active nests of such birds are protected under the federal Migratory Bird Treaty Act (MBTA) as well as by California Fish and Game Codes (CFGC). If construction begins during the avian nesting season, generally February 1 to August 31, nesting birds may be impacted through the removal of nest structures or through localized disturbance sufficient to cause nest abandonment. To avoid and minimize these potential impacts and maintain compliance with the MBTA and CFGC, the following is recommended:

- If construction activities are initiated during the nesting season (February 1 – August 31), a nesting bird survey should be conducted by a qualified biologist within 7 days prior to the start of ground disturbance within the Study Area. If active nests are found, exclusion buffers appropriate to the species should be established by the qualified biologist to prevent impacts to nesting birds. Buffers should be maintained until the biologist determines that young have fledged or the nest becomes inactive.
- If construction activities are initiated outside of the nesting season (September 1 – January 31), no pre-construction nesting bird surveys are necessary.

ROOSTING BATS

Trees within the Study Area may support special-status and non-status bat roosts that are protected under the CFGC. Removal and trimming trees during the bat maternity season (generally April through September) could adversely affect bat breeding, and potentially result in the loss of dependent young and impacts to roosting bats must be assessed pursuant to CEQA.

It is recommended that any removal or trimming of trees with a diameter at breast height greater than 16 inches occur outside of the bat maternity season (October through March).



Regardless, WRA recommends that a bat roost assessment be performed by a qualified biologist no more than 30 days prior to tree removal to determine if roosting bats are present. If special-status bat species or maternity roosts of any species are detected during these surveys, the roost trees and a no-disturbance buffer of no less than 100-feet should be avoided until maternity activities have ceased. Irrespective of time of year, all felled trees should remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape.

During the site visit, the dilapidated barn structure within the Study Area was investigated for any evidence of bat occupancy and the presence of suitable roost features. Given that the structure contains large openings and is fairly exposed to air flow, it was determined unlikely to contain the thermodynamic properties necessary to support roosting bats. However, the unoccupied residence on the Property was not evaluated as part of this assessment and may have potential to support roosting bat species that are known to occur in the area. Although the unoccupied residence building is not within the current Study Area, an additional bat roost assessment will be necessary, as described above, if this structure is proposed for demolition in the future.

4.3 Likely Approaches to Environmental Review and Permitting

Based on WRA's understanding of the site conditions, the Project will not require regulatory permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, or CDFW due to the absence of potentially jurisdictional aquatic features within the Study Area. However, WRA mapped two sensitive land cover types that are provided special protection under CEQA and other applicable federal, state, and local laws, regulations, and ordinances. Potential impacts to sensitive communities should be minimized to the greatest extent feasible. If impacts are unavoidable, mitigation will likely be required as determined by the County and may include on- or off-site compensatory mitigation, and monitoring in accordance with an HMMP. In addition, the removal of protected trees as defined in Section 4.1.1 will require a tree removal permit from the County.

The CEQA lead agency (Marin County) will ultimately determine the appropriate level of environmental review to comply with CEQA. However, the Project may be able to qualify for a CEQA exemption if impacts to sensitive communities and special-status species can be avoided.

5.0 CONCLUSIONS AND RECCOMENDATIONS

Based on WRA's analysis, likely biological constraints for the development plan relate mostly to the sensitive biological communities present onsite, as well the potential impacts to special-status plants, roosting bats, and nesting birds that may be present within the Study Area. Tree removal necessary for the development will require a tree removal permit from the County and may require compensatory mitigation if sensitive communities cannot be avoided.

Given the location and visibility of the Project site, it may be in the Project's best interest to attempt to qualify for a CEQA exemption. To accomplish this, WRA recommends conducting rare plant surveys as described in Section 4.2.1 to rule out the presence of special-status plant species onsite, and adjusting the grading envelope to minimize or eliminate any impacts to sensitive communities, including coast live oak woodland and California bay woodland, to the greatest extent feasible.



Additional project-specific avoidance and minimization measures have been recommended for incorporation into the Project design and Project Description to reduce impacts to a level considered less than significant pursuant to CEQA in the future. **If the proposed Project would result in impacts to sensitive communities, and/or special status species, the Project will not qualify for a CEQA exemption and mitigation will be required, as determined by the County.**



Attachments

Attachment A. Figures

Figure 1. Study Area Location

Figure 2. Land Cover Types within the Study Area

Attachment B. Species Observed within the Study Area

Attachment C. Representative Site Photographs

6.0 REFERENCES

- Beier, P., and S. Loe. 1992. A checklist for evaluating impacts to wildlife movement corridors. *Wildlife Society Bulletin* 20(4):434–440.
- Buck-Diaz, J., K. Sikes, and J. M. Evens. 2021. Vegetation classification of alliances and associations of Marin County, California. Report to Tamalpais Lands Collaborative (One Tam) California Native Plant Society, Sacramento, CA.
- Bulger, J.B., S.J. Norman, and R.B. Seymour. 2003. Terrestrial Activity and Conservation of Adult California Red-legged Frogs (*Rana aurora draytonii*) in Coastal Forests and Grasslands. *Biological Conservation* 110 (2003) 85–95.
- California Department of Fish and Wildlife (CDFW). 2023a. California Natural Diversity Database (CNDDB). Biogeographic Data Branch, Vegetation Classification and Mapping Program, Sacramento, California. Available online at: <https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data>; most recently accessed: November 2023
- California Department of Fish and Wildlife (CDFW). 2023b. Biogeographic Information and Observation System. Biogeographic Data Branch. Sacramento, California. Online at: <https://wildlife.ca.gov/Data/BIOS>; most recently accessed: November 2023.
- California Native Plant Society (CNPS). 2023b. Rare Plant Inventory (online edition, v9.5). Sacramento, California. Online at: <http://rareplants.cnps.org/>; most recently accessed: November 2023.
- California Native Plant Society (CNPS). 2023b. A Manual of California Vegetation, Online Edition. Available online at: <http://vegetation.cnps.org>. Most recently accessed: November 2023.
- California Department of Transportation (CalTrans). 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration. Available online at: <https://www.wildlife.ca.gov/Conservation/Planning/Connectivity/CEHC>
- California Soil Resource Lab (CSRL). 2023. SoilWeb. Online at: <http://casoilresource.lawr.ucdavis.edu/>; most recently accessed: November 2023.
- Consortium of California Herbaria 2 (CCH2). 2023. CCH2 Portal. Online at: <http://cch2.org/portal/index.php>; most recently accessed: November 2023.
- Department of Fish and Game (CDFW). March 2012. Staff Report on Burrowing Owl Mitigation.



- Dunk, JR. 1995. White-tailed Kite (*Elanus leucurus*), The Birds of the World Online (A Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of the World Online: <https://birdsoftheworld.org/bow/species/whtkit/cur/introduction>
- Google Earth. 2023. Aerial Imagery 1985-2023. Most recently accessed: November 2023.
- Hilty, J. A., W. Z. Lidicker Jr, and A. M. Merenlender. 2019. Corridor Ecology: Linking Landscapes for Biodiversity Conservation. Second Edition. Island Press.
- HortScience/Bartlett Consulting. 2023. Preliminary Arborist Report: 1501 Lucas Valle Road, San Rafael. CA. November.
- Nationwide Environmental Title Research (NETR). 2023. Historic Aerials. Available online at: <https://historicaerials.com/viewer>. Most recently accessed: November 2023.
- Pierson, ED and WE Rainey. 1998. Distribution, Status and Management of Townsend's Big-eared Bat (*Corynorhinus townsendii*) in California. Department of Fish and Game. BMCP Technical Report Number 96-7.
- Poulin, Ray, L. D. Todd, E. A. Haug, B. A. Millsap and M. S. Martell. 2011. Burrowing Owl (*Athene cunicularia*), The Birds of the World Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of the World Online: <https://birdsoftheworld.org/bow/species/buowl/cur/introduction>
- Shuford, W. D. and Gardali, T., eds. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
- Soulé, M. E., and J. Terbough. 1999. Conserving nature at regional and continental scales - a scientific program for North America. *BioScience* 49(10):809-817.
- Thomson, R. C., A. N. Wright, and H. B. Shaffer. 2016. California amphibian and reptile species of special concern. Co-published by the California Department of Fish and Wildlife and University of California Press, Oakland, California.
- U.S. Army Corps of Engineers. (Corps). 2012. 2012 Nationwide Permits, Conditions, District Engineer's Decision, Further Information, and Definitions (with corrections). http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP2012_corrections_21sep-2012.pdf.
- U.S. Department of Agriculture (USDA). 2023a. Web Soil Survey. Soil Survey Staff, Natural Resources Conservation Service. Most recently accessed: October 2023.
- U.S. Department of Agriculture (USDA). 2023b. National List of Hydric Soils. Natural Resources Conservation Service. Available online at: <https://www.nrcs.usda.gov/publications/query-by-state.html>; most recently accessed: November 2023.

U.S. Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the California Red-Legged Frog; Final Rule. Federal Register 75(51): 12816-12959. March 17.

U.S. Fish and Wildlife Service (USFWS). 2023a. Information for Planning and Consultation. Available online at: <https://ecos.fws.gov/ipac/>. Most recently accessed: November 2023.

U.S. Fish and Wildlife Service. 2023b. National Wetlands Inventory (NWI). Online at: <http://www.fws.gov/nwi>; most recently accessed: November 2023

Western Bat Working Group (WBWG). 2023. Species Accounts. Available online at: <http://wbwg.org/western-bat-species/>

Xerces society for Invertebrate Conservation (Xerces society). 2023. At-Risk Bumble Bees and IUCN Red List. <https://www.iucnredlist.org/>. Most recently access: November 2023.



Attachment A.

Figures



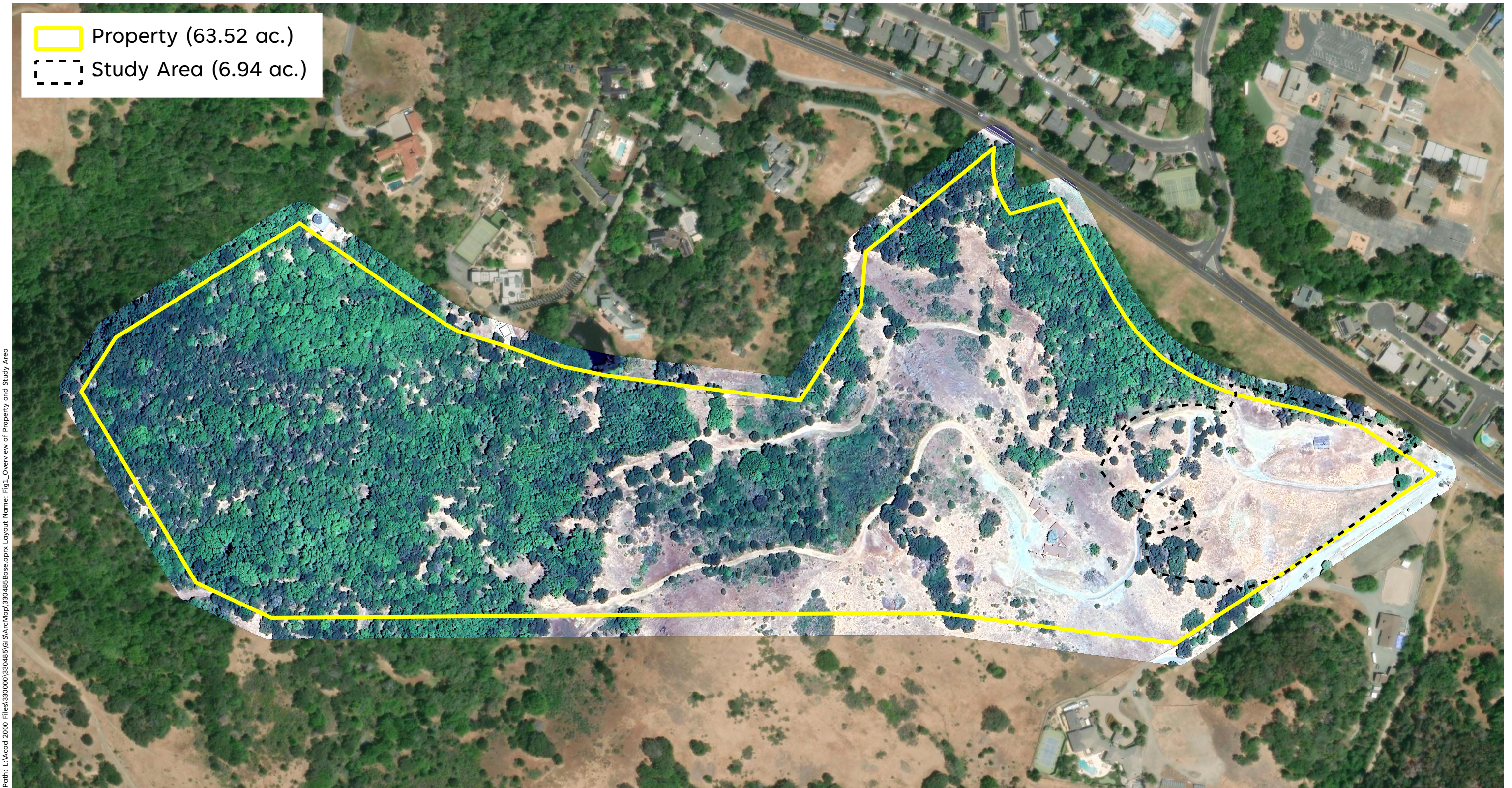


Figure 1. Overview of Property and Study Area

Lucas Valley Road, LLC
 Biological Constraints
 Marin County, California

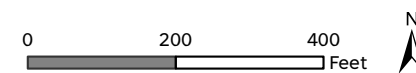




Figure 2. Land Cover Types within the Study Area

Lucas Valley Road, LLC
 Biological Constraints
 Marin County, California



Attachment B.

Species Observed within the Study Area



Attachment B. Species observed within the Study Area on November 28, 2023.

| PLANTS | | | | | | |
|--|--------------------|-----------------------|-------------------------|----------------------------|-----------------------------|-----------------------------|
| SCIENTIFIC NAME | COMMON NAME | ORIGIN | FORM | RARITY STATUS ¹ | CAL-IPC STATUS ² | WETLAND STATUS ³ |
| <i>Acacia</i> sp. | - | - | - | - | - | - |
| <i>Aesculus californica</i> | Buckeye | native | tree | - | - | - |
| <i>Arbutus menziesii</i> | Madrone | native | tree | - | - | - |
| <i>Avena</i> sp. | - | - | - | - | - | - |
| <i>Baccharis pilularis</i> | Coyote brush | native | shrub | - | - | - |
| <i>Briza maxima</i> | Rattlesnake grass | non-native (invasive) | annual grass | - | Limited | - |
| <i>Bromus diandrus</i> | Ripgut brome | non-native (invasive) | annual grass | - | Moderate | - |
| <i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i> | Italian thistle | non-native (invasive) | annual herb | - | Moderate | - |
| <i>Centaurea solstitialis</i> | Yellow starthistle | non-native (invasive) | annual herb | - | High | - |
| <i>Croton setiger</i> | Turkey-mullein | native | perennial herb | - | - | - |
| <i>Cynosurus echinatus</i> | Dogtail grass | non-native (invasive) | annual grass | - | Moderate | - |
| <i>Dittrichia graveolens</i> | Stinkwort | non-native (invasive) | annual herb | - | Moderate | - |
| <i>Elymus caput-medusae</i> | Medusa head | non-native (invasive) | annual grass | - | High | - |
| <i>Elymus glaucus</i> | Blue wildrye | native | perennial grass | - | - | FACU |
| <i>Eschscholzia californica</i> | California poppy | native | annual, perennial herb | - | - | - |
| <i>Festuca perennis</i> | Italian rye grass | non-native (invasive) | annual, perennial grass | - | Moderate | FAC |
| <i>Foeniculum vulgare</i> | Fennel | non-native (invasive) | perennial herb | - | High | - |
| <i>Genista monosperma</i> | Bridal broom | non-native | shrub | - | - | - |
| <i>Hemizonia congesta</i> | Hayfield tarweed | native | annual herb | - | - | - |
| <i>Heteromeles arbutifolia</i> | Toyon | native | shrub | - | - | - |
| <i>Hordeum murinum</i> | Foxtail barley | non-native (invasive) | annual grass | - | Moderate | FACU |
| <i>Phalaris aquatica</i> | Harding grass | non-native (invasive) | perennial grass | - | Moderate | FACU |

| PLANTS | | | | | | |
|---------------------------------|----------------------|-----------------------|-------|----------------------------|-----------------------------|-----------------------------|
| SCIENTIFIC NAME | COMMON NAME | ORIGIN | FORM | RARITY STATUS ¹ | CAL-IPC STATUS ² | WETLAND STATUS ³ |
| <i>Quercus agrifolia</i> | Coast live oak | native | tree | - | - | - |
| <i>Quercus lobata</i> | Valley oak | native | tree | - | - | FACU |
| <i>Rubus armeniacus</i> | Himalayan blackberry | non-native (invasive) | shrub | - | High | FAC |
| <i>Trifolium sp.</i> | - | - | - | - | - | - |
| <i>Umbellularia californica</i> | California bay | native | tree | - | - | FAC |

All species identified using the *Jepson Flora Project* (Jepson eFlora 2023); nomenclature follows Jepson eFlora. Sp.: “species,” intended to indicate that the observer was confident in the identity of the genus but uncertain which species.

¹**Rarity Status:**

The CNPS Inventory of Rare and Endangered Plants (CNPS 2023b)

FE: Federal Endangered
FT: Federal Threatened
SE: State Endangered
ST: State Threatened
SR: State Rare
Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B: Plants rare, threatened, or endangered in California and elsewhere
Rank 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3: Plants about which we need more information – a review list
Rank 4: Plants of limited distribution – a watch list

² **Cal-IPC Status: California Invasive Plant Inventory Status (Cal-IPC 2023)**

High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed: Assessed by Cal-IPC and determined to not be an existing current threat

³**Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Corps 2020)**

OBL: Almost always a hydrophyte, rarely in uplands
FACW: Usually a hydrophyte, but occasionally found in uplands
FAC: Commonly either a hydrophyte or non-hydrophyte
FACU: Occasionally a hydrophyte, but usually found in uplands
UPL: Rarely a hydrophyte, almost always in uplands
NL: Rarely a hydrophyte, almost always in uplands
NI: No information; not factored during wetland delineation

| WILDLIFE | | |
|--------------------------------|-------------------------|-----------|
| SCIENTIFIC NAME | COMMON NAME | STATUS |
| BIRDS | | |
| <i>Haemorhous mexicanus</i> | house finch | No status |
| <i>Junco hyemalis</i> | dark-eyed junco | No status |
| <i>Calypte anna</i> | Anna's hummingbird | No status |
| <i>Turdus migratorius</i> | American robin | No status |
| <i>Dryobates pubescens</i> | downy woodpecker | No status |
| <i>Corvus brachyrhynchos</i> | American crow | No status |
| <i>Columba livia</i> | rock pigeon | No status |
| <i>Zenaidura macroura</i> | mourning dove | No status |
| <i>Buteo jamaicensis</i> | red-tailed hawk | No status |
| <i>Melanerpes formicivorus</i> | acorn woodpecker | No status |
| <i>Spinus psaltria</i> | lesser goldfinch | No status |
| <i>Colaptes auratus</i> | northern flicker | No status |
| <i>Regulus calendula</i> | ruby-crowned kinglet | No status |
| <i>Psaltriparus minimus</i> | bushtit | No status |
| <i>Buteo lineatus</i> | red-shouldered hawk | No status |
| <i>Setophaga townsendi</i> | Townsend's warbler | No status |
| <i>Sitta carolinensis</i> | white-breasted nuthatch | No status |
| <i>Aphelocoma californica</i> | California scrub-jay | No status |
| <i>Baeolophus inornatus</i> | oak titmouse | No status |
| <i>Zonotrichia leucophrys</i> | white-crowned sparrow | No status |
| <i>Catharus guttatus</i> | hermit thrush | No status |
| <i>Cathartes aura</i> | turkey vulture | No status |
| MAMMALS | | |
| <i>Canis latrans</i> | coyote | No status |
| REPTILES AND AMPHIBIANS | | |
| <i>Sceloporus occidentalis</i> | western fence lizard | No status |



Attachment C.

Representative Site Photographs



Attachment C. Representative Site Photographs



Photo 1. Overview of the eastern portion of the Study Area, showing grassland habitat and adjacent private residence to the south. Photo taken on November 28, 2023.



Photo 2. Overview of the Study Area showing the existing barn with California bay woodland community to the North. Facing northeast. Photo taken on November 28, 2023.



Attachment C. Representative Site Photographs



Photo 3. Coast live oak woodland present in the western portion of the Study Area, existing fire road, and surrounding grassland habitat. Facing west; photo taken on November 28, 2023.



Photo 4. California bay woodland community located along the northern border of the Study Area. Dominant species in the tree layer include California bay, valley oak, coast live oak, and California buckeye. Photo taken on November 28, 2023.



Attachment C. Representative Site Photographs



Photo 5. Exterior view of the dilapidated barn in the Study Area, south of the California bay woodland community. Facing northeast; photo taken on November 28, 2023.



Photo 6. Interior view of the dilapidated barn in the Study Area. Large openings and gaps present on the roof and sides of the structure. Photo taken on November 28, 2023.



Attachment C. Representative Site Photographs



Photo 7. View of the existing fire road surrounded by grassland and oak woodland habitats. Serpentine rocks present on the left-hand side of the road, as pictured. Facing northwest; photo taken on November 28, 2023.



Photo 8. A rock observed within the Study Area that exhibited serpentine characteristics; photo taken on November 28, 2023.

