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**BIOLOGICAL RESOURCE ASSESSMENT  
WITH BOTANICAL and BAT HABITAT SURVEYS,  
WOODLAND ASSESSMENT,  
and  
DELINEATION OF WATERS OF THE U.S.  
for the  
KOMES RANCH (CATHIARD) VINEYARD PROJECT  
Assessor Parcel Number 027-100-037  
1978 Zinfandel Lane, St. Helena, California**

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**September 27, 2018  
*Updated December 8, 2020***

**Prepared by  
Northwest Biosurvey**



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## 1.0 PROJECT DESCRIPTION

**1.1 Proposed Project:** This survey covers nine vineyard blocks totaling  $\pm 65$  acres within a 203-acre parcel. The local permitting agency is requesting completion of a botanical survey and assessment of biological resources on the property as part of the California Environmental Quality Act (CEQA) review required for development of vineyards on the property.

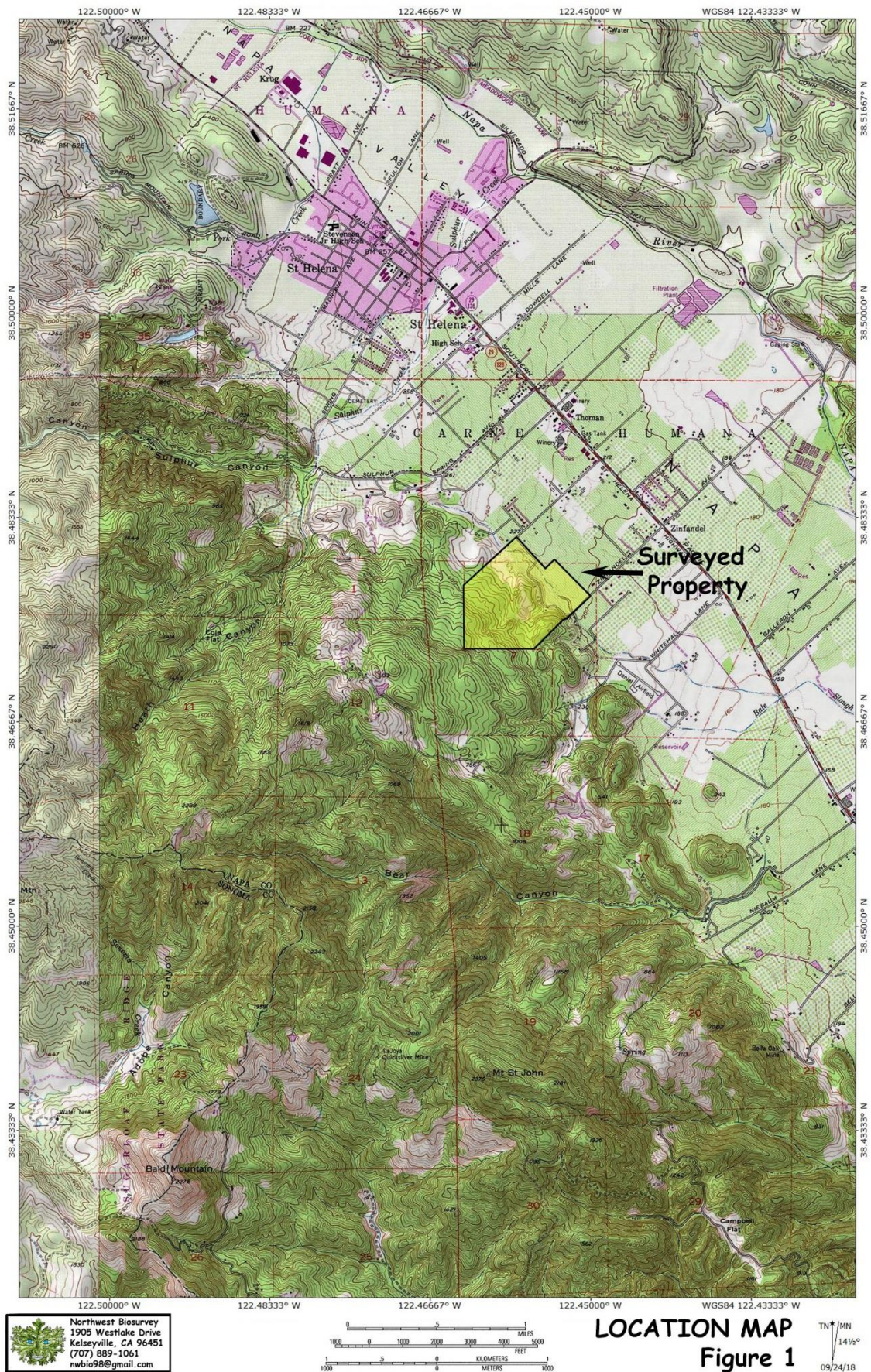
The initial phase of this assessment evaluates the potential for the parcel to contain sensitive plant and wildlife habitat. The second phase consists of a floristic-level botanical survey listing all plant taxa<sup>1</sup> on the property. The assessment will determine whether the property contains sensitive plants or potentially contains sensitive wildlife requiring mitigation under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA). As used here, the terms sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals and Natural Communities". A survey for sensitive bat habitat was also conducted for this project. The results of the surveys are provided in Section 5.0.

Due to the fact that wetland delineations are prepared with a standard format for U.S. Army Corps of Engineers review, the delineation is provided in its own section. The delineation and findings are provided in Section 6.0. Two sections are added to this assessment to meet Napa County environmental review policy. These are the "Napa County Woodland Assessment" (Section 7.0) and "Conformance with the Napa County Baseline Data Report" (Section 8.0).

**Updated Version:** Following completion of the original report in 2018, the client redesigned the proposed vineyard project, significantly reducing the area of proposed vineyard blocks and associated impacts to biological resources. This updated report assesses the new 2020 project design.

**1.2 Location:** The property is located at 1978 Zinfandel Lane, St. Helena, California (APN 027-100-037; Sec. 7 T07N R05W, Rutherford, Calif. 7½' Topographic Map). A location map is provided in **Figure 1**.

<sup>1</sup> Many sensitive plants and wildlife are subspecies or varieties which are taxonomic subcategories of species. The term "taxa" refers to species and their sub-specific categories.



## 2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of sensitive species potentially present. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDDB)
- Soils of the project area
- Elevation
- Presence or absence of special habitat features such as vernal pools and serpentine soils
- Plant communities existing within the project area

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database (CNDDDB)*; RareFind 5, 2018
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (2018 edition)
- California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System (CWHRS)*, Version 9.0
- Napa County *Baseline Data Report* (2005)

The **CNDDDB** and **RareFind 5** databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The **CNPS** database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in

conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species.

The **CWHR database** operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects, etc.).

The **Baseline Data Report** was produced for Napa County as part of the technical background documentation for the county's general plan update. It defines biotic communities considered sensitive in Napa County, identifies wildlife movement corridors, and reproduces data contained in the CNDDDB.

**2.1 Botanical Survey Methods:** An in-season floristic-level survey was conducted for the project in 2018. CNDDDB information and maps for the Rutherford quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer et al. 2009) as modified by the California Native Plant Society (CNPS), and mapped on a 1"=300' aerial photo. Vegetation community names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual of Higher Plants of California*. Where necessary, species names were updated based on the 6<sup>th</sup> edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the vegetation types is provided in **Figure 2**.

**2.2 Bat Habitat Survey Methods:** Mature trees and woodlands within the proposed vineyard blocks were assessed for their potential as habitat for sensitive bat species. These included searching for hollow trees, trees with open cavities, and trees with exfoliating bark.

Rather than map potential bat habitat trees, within the proposed vineyard blocks during the preapplication process, the mapping is recommended as part of the required preconstruction surveys as a condition of approval (i.e. similar to bird surveys). This avoids the mapping of trees with potential habitat characteristics regardless of whether they show signs of actual use. These trees must be surveyed regardless within 14 days prior to vegetation clearing to determine whether bats are actually present, making an additional prior survey moot.

**2.3 Delineation Methods:** The delineation was conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual*, January 1987, and the *Arid West 2008*

*Supplement*. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement*, 1973, and Mason's *Flora of the Marshes of California*, 1957, were used as supplemental texts.

**2.4 Woodland Assessment Methods:** The survey area contains four distinct woodland types which are discussed in Section 3.3, Vegetation Types: Douglas Fir Forest, Mixed Oak Woodland, Ghost Pine Forest, and Blue Oak Woodland. One study plot was selected within each of these woodland types based on natural community structure and identifiable geographic references (woodland boundaries, etc.). Trees within the study plots were mapped with a GPS waypoint and a record was made of their species, diameter at breast height (DBH), and any unique characteristics (dead, hollow, acorn storage tree, etc.). The methodology is discussed in detail in **Section 7.0** of this report.

**2.5 Survey Dates:** Site visits for botanical surveys, habitat assessments, the delineation, and mapping were made by Northwest Biosurvey staff on May 16, June 4, and August 14, 2018. Due to comparatively late onset of the spring bloom in 2018, all potentially present sensitive plant species in this area would have been identifiable on these dates.

**2.6 Biological Assessment Staff:** Field surveys, plant taxonomy, and the delineation were conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has over 35 years of experience as a biologist in the government and private sectors.

Mr. Zalusky was assisted in the field and with mapping and the woodland analysis by Leigh Zalusky. Leigh Zalusky has a Bachelor of Science Degree in Engineering from the University of California, Davis. He has also developed extensive skills in plant taxonomy and ecology while managing and assisting in the development of the Seigler Valley Wetland Mitigation Bank and while assisting Northwest Biosurvey staff in field surveys and vegetation mapping over the past three years.

Database review and report preparation were conducted with the assistance of Danielle Zalusky, Northwest Biosurvey principal planner. Ms. Zalusky has 15 years of experience as a planner in local government and the private sector and 16 years in field biology. She has a Bachelor of Arts Degree all course work toward an M.A. Degree in Rural and Town Planning from Chico State University. Prior to joining Northwest Biosurvey in 2002, Ms. Zalusky was a senior planner for the Lake County Community Development Department.

### 3.0 SITE CHARACTERISTICS

**3.1 Topography and Drainage:** The Komes Ranch Vineyard is located along the eastern toe of the Mayacamas Range and extends into the level terrain of the Napa Valley south of Saint Helena. The property drains east onto the valley floor into Bale Slough, which transects the property from north to south. At this location the slough consists of an excavated drainage ditch between vineyard blocks. Elevations range from 700 feet msl (mean sea level) at the southwestern corner of the property to 200 feet msl at its eastern corner. The topography is shown in **Figure 1**.

**3.2 Soils:** The property contains the following soil types:

- **Forward gravelly loam, 9-30% slopes;**
- **Forward gravelly loam, 30-75% slopes:**

These strongly sloping to very steep soils are on side slopes and uplands. The Forward series consists of well drained soils on uplands. The soils formed in material weathered from rhyolite. Included with this soil in mapping were small areas of Aiken, Boomer, Kidd, and Sobrante soils. The plant cover is mainly Douglas fir, madrone, scrub oak, pepper, and bay trees. Runoff is medium to very rapid on steep slopes. The hazard of erosion is slight to moderate to very high. Permeability is moderately rapid. Most of central part of the parcel contains these soils.

- **Henneke gravelly loam, 30-75% slopes:**

This steep and very steep soil is on uplands. Included with this soil in mapping were small areas of Lodo, Maymen, and Montara soils. The Henneke series consists of excessively drained soils on uplands. These soils formed in material weathered from serpentine. The vegetation is scattered oak, foothill pine, scrub oak, manzanita, muskbrush, toyon, MacNab cypress, and a few annual grasses. Runoff is rapid to very rapid. The hazard of erosion is moderate to high. Permeability is moderately slow. The southern border of the parcel contains this serpentine soil type.

- **Maxwell clay, 2-9% slopes:**

This gently sloping to moderately sloping soil is on old alluvial fans and basin rims. Included with this soil in mapping were small areas of Montara and Tehama soils and small areas of soils that are similar to this Maxwell soil but that are reddish brown to dark reddish brown. The Maxwell series consists of somewhat poorly drained soils on old alluvial fans and basin rims. These soils formed in material derived from serpentinitic alluvium. The vegetation is typically a sparse growth of lupine, tarweed, wild oats, and other annuals.

Runoff is slow. Permeability is very slow. The hazard of erosion is slight. A portion of proposed Vineyard Block 3 is within this serpentine soil unit.

- **Montara clay loam, 5-30% slopes:**

This gently sloping to moderately steep soil is on foot slopes, side slopes, and rounded ridgetops on uplands. Included with this soil in mapping were areas of Henneke and Maxwell soils. The Montara series consists of well drained soils on uplands. These soils formed in material weathered from serpentine. The vegetation consists mainly of annual grasses and a few ghost pines. Runoff is rapid. The hazard of erosion is moderate. Permeability is moderately slow. A large area on the west portion of the parcel contains this soil type.

**3.3 Vegetation Types:** The entire parcel was mapped for vegetation in order to provide context. The property contains nine plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation*. These vegetation types and four other cover types are listed in **Table 1**. They are described below and shown in the vegetation map provided in **Figure 2**.

- **Douglas Fir Forest:**

This community occupies north and east-facing slopes. Mature Douglas firs (*Pseudotsuga menziesii* var. *menziesii*) provide a 60% canopy cover. The subcanopy consists of mature California black oak (*Quercus kelloggii*), Pacific madrone (*Arbutus menziesii*), and California bay (*Umbellularia californica*). Community edges include coast live oak (*Quercus agrifolia*). Young incense cedar (*Calocedrus decurrens*) are present to a DBH (diameter at breast height) of 8 or more inches, but these may have been planted. The shrub layer is sparse but includes sugar bush (*Rhus ovata*), poison oak (*Toxicodendron diversilobum*), and saplings of the upper and lower canopy trees. Ground cover within the community is duff and woody debris.

- **Mixed Oak Woodland:**

This "community" is an ecotone of three woodland types: Oregon white oak (*Quercus garryana* var. *garryana*), coast live oak, and black oak-Douglas fir forest. It includes a heterogeneous mix of these tree species plus ghost pine (*Pinus sabiniana*), bay, and madrone. Dominance shifts from black oak-Douglas fir forest in more shaded areas to coast live oak and ghost pine in the more exposed areas.

The shrub layer tends to be dense and nearly impenetrable, consisting primarily of saplings of the tree canopy – mainly coast live oak and madrone. Toyon (*Heteromeles arbutifolia*), coyote brush (*Baccharis pilularis*), and poison oak are common in the more open portions of the shrub layer. The ground cover under the canopy is leaf

litter with a moderately dense cover of tripvine (*Symphoricarpos mollis*), hedgehog dogtail (*Cynosurus echinatus*), and perennial ryegrass (*Festuca perennis*). Grasses and forbs such as hayfield tarweed (*Hemizonia congesta*), Davy's gumweed (*Grindelia hirsutula* var. *davyi*), and slender wild oat (*Avena barbata*) occur in more open areas.

- **Ghost Pine Forest:**

Ghost pine occurs throughout the Mixed Oak Woodland described above. However, in a few locations, the canopy cover of ghost pine is sufficiently dense to qualify as small separate communities. Due to the small patch sizes, the shrub and ground cover layers are the same as the surrounding Mixed Oak Woodland.

- **Blue Oak Woodland:**

This community occurs on west-and south-facing slopes along the southeast edge of the property. The canopy often consists of a homogenous stand of mature blue oaks (*Quercus douglasii*) but may include scattered bay, ghost pine, and California buckeye (*Aesculus californica*). Blue oaks occur both as scattered individuals and as closed-canopy woodland. A shrub layer is generally lacking; however, white-leaf common manzanita (*Arctostaphylos manzanita* ssp. *glaucescens*), hoary coffeeberry (*Frangula californica* ssp. *tomentella*), and interior live oak shrubs (*Quercus wislizeni* var. *frutescens*) occur in widely spaced distribution. The ground cover is Wild Oat Grassland but includes cottontop (*Micropus californicus*), which becomes diffuse within the denser woodlands.

- **Fremont Cottonwood Forest:**

While scattered Fremont cottonwoods (*Populus fremontii* var. *fremontii*) occur in a number of mesic (moist soil) locations on the property, they form a distinct community along the shore of the northern reservoir. This narrow band of mature trees is bordered by a roadway on its upland edge and by Narrow-leaved Cattail Marsh along the wetted edge of the reservoir. The community is maintained and lacks developed shrub and ground cover layers.

- **Narrow-leaved Cattail Marsh:**

Narrow-leaved cattail (*Typha angustifolia*) occurs within the littoral zone (shallow, shore zone) of the three western reservoirs and in scattered segments of drainages on the property. Within creek channels, it is often interspersed with large leather root (*Hoita macrostachya*).

- **Two-tooth Sedge Seep:**

This extensive wetland occupies a series of depressions in the southeastern corner of the property. It extends up the adjacent slopes where it is fed by seep-springs which saturate the low surrounding hillsides and pool within the central wetlands. Two-tooth sedge (*Carex serratodens*) dominates this community but is joined by pointed rush (*Juncus oxymersis*) in flooded depressions and patches of Baltic rush (*Juncus balticus*), foothill sedge (*Carex tumulicola*), and Pacific bog rush (*Juncus effusus* var. *pacificus*) within the saturated soils. This community grades into a small Baltic Rush Marsh along its northeastern edge.

- **Baltic Rush Marsh:**

This small marsh is contiguous with the Two-tooth Sedge Marsh in the southeastern corner of the property and shares its seep-spring hydrology. Baltic rush is codominant with cobwebby hedge nettle (*Stachys albens*), and together they form a dense herbaceous cover over the saturated soils within this community. Along its southern edge the community merges with the Two-Tooth Sedge Marsh while to the north it gives way to Mixed Oak Woodland above the seep springs which feed it.

- **Wild Oat Grassland:**

Dryer, more exposed areas support Wild Oat Grassland, which is heavily dominated by slender wild oat and winter vetch (*Vicia villosa* ssp. *villosa*). Hedgehog dogtail and blue wild rye *Elymus glaucus* ssp. *glaucus* ( ) also occur beneath the scattered tree canopies within the grassland. The community includes small, sub-mappable swards of tall (to one meter tall) perennial ryegrass in areas where seeps and Himalayan blackberry (*Rubus armeniacus*) occur.

- **Vineyard:**

Developed vineyards occur throughout the property, mainly within the valley areas.

- **Ruderal:**

Ruderal consists of manmade structures such as buildings, driveways, parking lots, and landscaping.

- **Imported Soils:**

An area where soil and rocks have been imported and discarded occurs in the area of the Two-tooth Sedge Seep in the southern portion of the parcel.

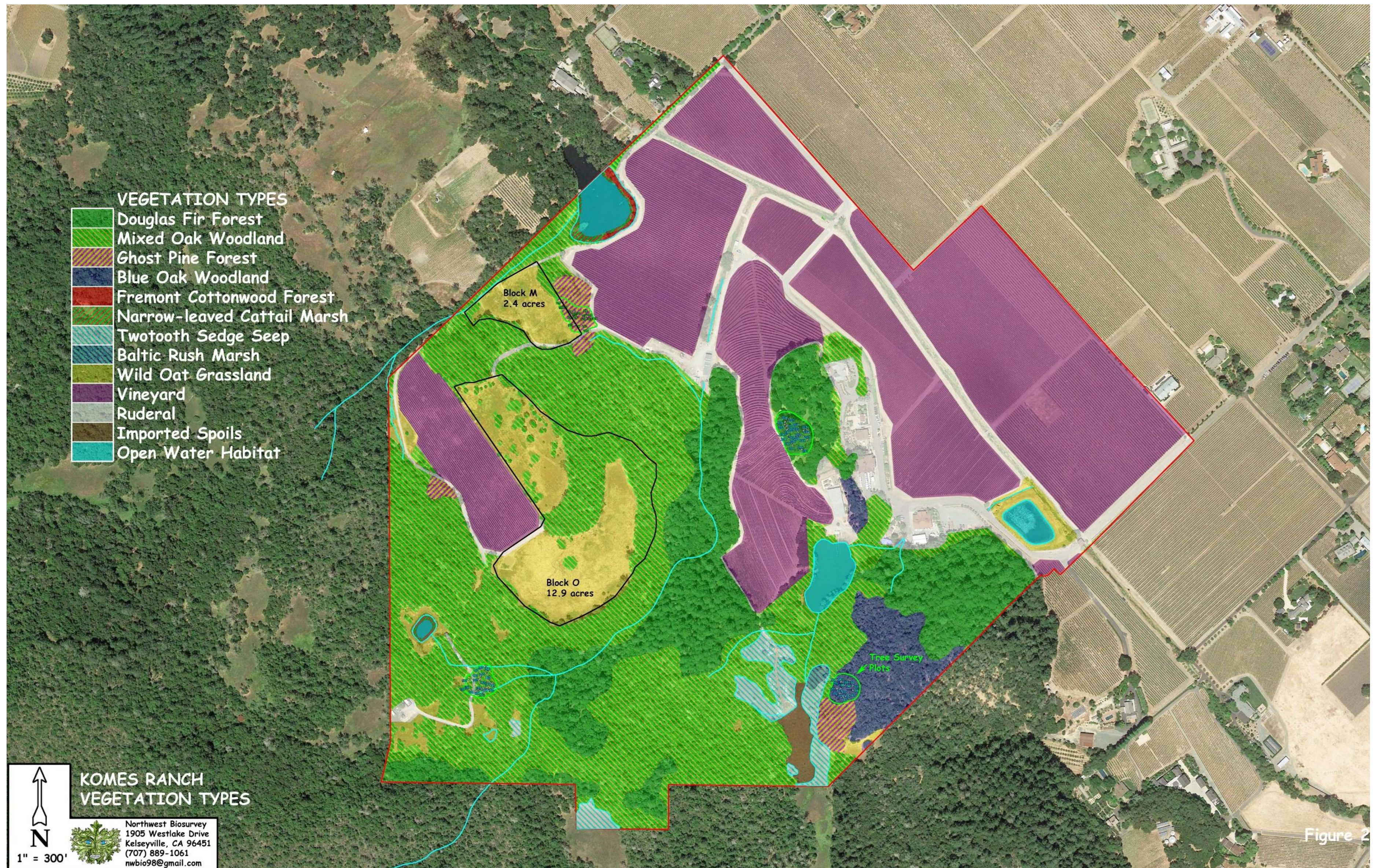
- **Open Water Habitat:**

Open water occurs throughout the reservoirs on the property within a narrow band of narrow-leaved cattail.

TABLE 1. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT

| COVER TYPE                       | Total Acres of Cover Type on Property | Percent of Property Supporting Cover Type | Acres of Cover Types Within Vineyard Blocks |             | Total Acres of Cover Types in Vineyard Blocks | Percent of Cover Types in Vineyard Blocks |
|----------------------------------|---------------------------------------|-------------------------------------------|---------------------------------------------|-------------|-----------------------------------------------|-------------------------------------------|
|                                  |                                       |                                           | O                                           | M           |                                               |                                           |
| Douglas Fir Forest               | 25.71                                 | 12.67                                     | -                                           | -           | 0.00                                          | 0.00                                      |
| Mixed Oak Woodland               | 58.73                                 | 28.93                                     | 4.40                                        | -           | 4.40                                          | 7.49                                      |
| Ghost Pine Forest                | 2.20                                  | 1.08                                      | -                                           | 0.00        | 0.00                                          | 0.00                                      |
| Blue Oak Woodland                | 5.46                                  | 2.69                                      | -                                           | -           | -                                             | 0.00                                      |
| Fremont Cottonwood Forest        | 0.23                                  | 0.11                                      | -                                           | -           | -                                             | 0.00                                      |
| Narrow-leaved Cattail Marsh      | 0.39                                  | 0.19                                      | -                                           | -           | -                                             | 0.00                                      |
| Two-tooth Sedge Seep             | 2.54                                  | 1.25                                      | -                                           | -           | -                                             | 0.00                                      |
| Baltic Rush Marsh                | 0.18                                  | 0.09                                      | -                                           | -           | -                                             | 0.00                                      |
| Wild Oat Grassland               | 15.12                                 | 7.45                                      | 8.40                                        | 2.02        | 10.42                                         | 68.92                                     |
| Vineyard                         | 68.91                                 | 33.95                                     | -                                           | -           | -                                             | 0.00                                      |
| Ruderal                          | 19.27                                 | 9.49                                      | 0.10                                        | 0.06        | 0.16                                          | 0.83                                      |
| Imported Soils                   | 1.03                                  | 0.51                                      | -                                           | -           | -                                             | 0.00                                      |
| Open Water Habitat               | 3.23                                  | 1.59                                      | -                                           | -           | -                                             | 0.00                                      |
| <b>Total Acres of Cover Type</b> | <b>203.00</b>                         | <b>100.00</b>                             | <b>12.90</b>                                | <b>2.08</b> | <b>14.98</b>                                  | <b>7.38*</b>                              |

\* Bottom Right Cell = total percent of property within proposed vineyard blocks.



## 4.0 PRE-SURVEY RESEARCH RESULTS

**4.1 CNPS Electronic Inventory Analysis:** A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Rare Plant Ranks 1B through 4. The query included all plants within this region of Napa County occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys.

**Note:** *The CNPS list is used to broaden the list of sensitive species considered during the subsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa (e.g. vernal pools). Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

**4.2 California Natural Diversity Database:** The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Rutherford 7½' quadrangle map were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within the quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

**TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS**

**Selected CNPS Plants by Scientific Name:**

*Komes Ranch Vineyard Project*

| Scientific Name                                          | Common Name                  | Family        | Lifeform                   | CRPR | CESA | FESA | Blooming Period | Habitat                                                                                                                   |
|----------------------------------------------------------|------------------------------|---------------|----------------------------|------|------|------|-----------------|---------------------------------------------------------------------------------------------------------------------------|
| <i>Amorpha californica</i> var. <i>napensis</i>          | Napa false indigo            | Fabaceae      | perennial deciduous shrub  | 1B.2 | None | None | Apr-Jul         | Broadleaved upland forest (openings), Chaparral, Cismontane woodland                                                      |
| <i>Amsinckia lunaris</i>                                 | bent-flowered fiddleneck     | Boraginaceae  | annual herb                | 1B.2 | None | None | Mar-Jun         | Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland                                                   |
| <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> | Rincon Ridge manzanita       | Ericaceae     | perennial evergreen shrub  | 1B.1 | None | None | Feb-Apr(May)    | Chaparral (rhyolitic), Cismontane woodland                                                                                |
| <i>Astragalus claranus</i>                               | Clara Hunt's milk-vetch      | Fabaceae      | annual herb                | 1B.1 | CT   | FE   | Mar-May         | Chaparral (openings), Cismontane woodland, Valley and foothill grassland                                                  |
| <i>Brodiaea leptandra</i>                                | narrow-anthered brodiaea     | Themidaceae   | perennial bulbiferous herb | 1B.2 | None | None | May-Jul         | Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland |
| <i>Ceanothus confusus</i>                                | Rincon Ridge ceanothus       | Rhamnaceae    | perennial evergreen shrub  | 1B.1 | None | None | Feb-Jun         | Closed-cone coniferous forest, Chaparral, Cismontane woodland                                                             |
| <i>Ceanothus divergens</i>                               | Calistoga ceanothus          | Rhamnaceae    | perennial evergreen shrub  | 1B.2 | None | None | Feb-Apr         | Chaparral (serpentinite or volcanic, rocky)                                                                               |
| <i>Ceanothus sonomensis</i>                              | Sonoma ceanothus             | Rhamnaceae    | perennial evergreen shrub  | 1B.2 | None | None | Feb-Apr         | Chaparral (sandy, serpentinite or volcanic)                                                                               |
| <i>Erigeron greenei</i>                                  | Greene's narrow-leaved daisy | Asteraceae    | perennial herb             | 1B.2 | None | None | May-Sep         | Chaparral (serpentinite or volcanic)                                                                                      |
| <i>Leptosiphon jepsonii</i>                              | Jepson's leptosiphon         | Polemoniaceae | annual herb                | 1B.2 | None | None | Mar-May         | Chaparral, Cismontane woodland, Valley and foothill grassland                                                             |

| Scientific Name                                   | Common Name              | Family         | Lifeform              | CRPR | CESA | FESA | Blooming Period | Habitat                                                                                         |
|---------------------------------------------------|--------------------------|----------------|-----------------------|------|------|------|-----------------|-------------------------------------------------------------------------------------------------|
| <i>Lupinus sericatus</i>                          | Cobb Mountain lupine     | Fabaceae       | perennial herb        | 1B.2 | None | None | Mar-Jun         | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest      |
| <i>Penstemon newberryi</i> var. <i>sonomensis</i> | Sonoma beardtongue       | Plantaginaceae | perennial herb        | 1B.3 | None | None | Apr-Aug         | Chaparral (rocky)                                                                               |
| <i>Ranunculus lobbii</i>                          | Lobb's aquatic buttercup | Ranunculaceae  | annual herb (aquatic) | 4.2  | None | None | Feb-May         | Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland, Vernal pools |
| <i>Streptanthus hesperidis</i>                    | green jewelflower        | Brassicaceae   | annual herb           | 1B.2 | None | None | May-Jul         | Chaparral (openings), Cismontane woodland                                                       |

#### KEY FOR TABLE 2:

##### CNPS Rare Plant-Threat Rank Definitions:

CRPR = California Rare Plant Rank

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California

1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California

1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California

2A = Presumed extinct in California, but extant elsewhere

2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.

2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.

2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.

3 = Plants about which we need more information (Review List)

3.1 = Plants about which we need more information (Review List); seriously threatened in California

3.2 = Plants about which we need more information (Review List); fairly threatened in California

3.3 = Plants about which we need more information (Review List); not very threatened in California

4.1 = Plants of limited distribution (watch list); seriously threatened in California

4.2 = Plants of limited distribution (watch list); fairly threatened in California

4.3 = Plants of limited distribution (watch list); not very threatened in California

##### State and Federal Status:

CESA = California Endangered Species Act

FESA = Federal Endangered Species Act

CR = State Rare

CT = State Threatened

SSC = CDFW Species of Special Concern

WL = CDFW Watch List

FT = Federal Threatened

CE = State Endangered.

CD = State Delisted

FP = CDFW Fully Protected

FE = Federal Endangered

FD = Federal Delisted

**TABLE 3. CNDDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE RUTHERFORD, CALIF. 7½' QUAD.**

| Plant Species                                            | Common Name                  | Habitat Requirements,<br>Fed/State/CNPS* Status                                                                | Blooming<br>Season         | Habitat<br>Present      |
|----------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------|
| <i>Amorpha californica</i> var. <i>napensis</i>          | Napa false indigo            | Broadleaved upland forest, chaparral, cismontane woodland/openings; --/--/1B.2                                 | April-July<br>decid. shrub | Habitat is<br>present   |
| <i>Amsinckia lunaris</i>                                 | bent-flowered fiddleneck     | Coastal bluff scrub, cismontane woodland, valley & foothill grassland; --/--/1B.2                              | March-June<br>ann. herb    | Habitat is<br>present   |
| <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> | Rincon Ridge manzanita       | Chaparral, cismontane woodland/highly restricted endemic to red rhyolites in Sonoma County; --/--/1B.1         | Feb.-April<br>everg. shrub | Poor habitat<br>present |
| <i>Astragalus claranus</i>                               | Clara Hunt's milk-vetch      | Chaparral, cismontane woodland, valley & foothill grassland; serpentinite or volcanic, rocky, clay; FE/ST/1B.1 | March-May<br>ann. herb     | Habitat is<br>present   |
| <i>Brodiaea leptandra</i>                                | narrow-anthered brodiaea     | Broadleaved upland forest, chaparral, lower montane conif. forest; --/--/1B.2                                  | May-July<br>per. herb      | Habitat is<br>present   |
| <i>Ceanothus confusus</i>                                | Rincon Ridge ceanothus       | Closed cone conif. forest, chaparral, cismontane woodland/volcanic; --/--/1B.1                                 | Feb.-April<br>everg. shrub | Habitat is<br>present   |
| <i>Ceanothus divergens</i>                               | Calistoga ceanothus          | Chaparral, cismontane woodland/serpentine, volcanic, rocky; --/--/1B.2                                         | Feb.-March<br>everg. shrub | Habitat is<br>present   |
| <i>Ceanothus sonomensis</i>                              | Sonoma ceanothus             | Chaparral/sandy, serpentine, or volcanic soils; --/--/1B.2                                                     | Feb.-April<br>everg. shrub | Habitat is<br>present   |
| <i>Erigeron greenei</i>                                  | Greene's narrow-leaved daisy | Chaparral/serpentine and volcanic, generally in shrubby vegetation; --/--/1B.2                                 | May-Sept.<br>per. herb     | Habitat is<br>present   |
| <i>Eryngium jepsonii</i>                                 | Jepson's coyote-thistle      | Valley & foothill grassland, vernal pools/clay; --/--/1B.2                                                     | April-August<br>per herb   | Habitat not<br>present  |
| <i>Leptosiphon jepsonii</i>                              | Jepson's leptisiphon         | Chaparral, cismontane woodland, grassy slopes/volcanic or serpentine edge; --/--/1B.2                          | May-July<br>ann. herb      | Habitat is<br>present   |
| <i>Lupinus sericatus</i>                                 | Cobb Mountain lupine         | Broadleaved upland forest, chaparral, cismontane woodland, lower montane conif. forest; --/--/1B.2             | March-June<br>per. herb    | Habitat is<br>present   |
| <i>Streptanthus hesperidis</i>                           | green jewelflower            | Chaparral or cismontane woodland (openings)/serpentine, rocky; --/--/1B.2                                      | May-July<br>ann. herb      | Habitat is<br>present   |

\*See CNPS list for key

| Wildlife Species           | Common Name       | Habitat Requirements/Status                                                                                                                                                                                                  | Season<br>Present | Habitat<br>Present                        |
|----------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------|
| <i>Bombus occidentalis</i> | western bumblebee | Once common in the western U.S., these bees are important pollinators of both wild plants and crops. Threats to be bee include insecticides, loss of habitat, climate change and diseases from commercial bee rearing. G4/S1 | year-round        | Possible<br>habitat<br>present on<br>site |

| Wildlife Species                | Common Name                 | Habitat Requirements/Status                                                                                                                                                            | Season Present        | Habitat Present              |
|---------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------|
| <i>Dicamptodon ensatus</i>      | California giant salamander | Cool, moist forest habitats associated with rocky streams. SSC/G3/SNR                                                                                                                  | year-round            | Habitat not present          |
| <i>Taricha rivularis</i>        | red-bellied newt            | Occurs near high to moderate gradient streams and rivers, riffles, pools. Burrows in soil or debris near water, emerges during fall rains to water to breed. G4/SNR                    | year-round            | Habitat not present          |
| <i>Rana boylei</i>              | foothill yellow-legged frog | Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats. SSC/G3/S2S3                                                                  | year-round            | Habitat is present           |
| <i>Emys marmorata</i>           | western pond turtle         | Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands. SSC/G3G4/S3 | year-round            | Habitat is present           |
| <i>Haliaeetus leucocephalus</i> | bald eagle                  | Large bodies of water with adjacent snags. Nests in large old-growth or dominant live tree (often ponderosa pine) with open branches. FD/SE/SFP/G5/S2                                  | wintering and nesting | Poor habitat present         |
| <i>Cypseloides niger</i>        | black swift                 | Steep, moist cliffs near surf or waterfalls; SSC/G4/S2                                                                                                                                 | nesting               | Habitat not present          |
| <i>Buteo swainsoni</i>          | Swainson's hawk             | Small groves of trees in riparian areas and oak savanna, cultivated areas. ST/G5/S3                                                                                                    | nesting               | Moderate habitat present     |
| <i>Antrozous pallidus</i>       | pallid bat                  | Open, dry habitats, forest habitats, in caves, tunnels, buildings, bridges; sensitive to human disturbance. SSC/G5/S3                                                                  | local migrant         | Habitat present in woodlands |
| <i>Erethizon dorsatum</i>       | North American porcupine    | Occurs in a wide variety of coniferous and mixed woodland habitats in Sierra Nevada, Cascade, and Coast Ranges/ uses fallen and standing dead trees as cover; G5/S3                    | year-round            | Moderate habitat present     |

**KEY FOR TABLE 3:**

SE/ST/SD=State Endangered/Threatened/Delisted

SC/SCT/SCD=State Candidate for Listing/Threatened/Delisting

SSC=CDFW Species of Special Concern

SFP=CDFW Fully Protected

WL=CDFW Watch List

FE/FT/FD=Federal Endangered/Threatened/Delisted

FPE/FPT/FPD/FP=Federal Proposed Endangered/Threatened/Delisting

FC=Federal Candidate

NatureServe Conservation Status:

G1/S1 = Global/State Critically Imperiled

G2/S2 = Global/State Imperiled

G3/S3 = Global/State Vulnerable

G4/S4 = Global/State Apparently Secure

G5/S5 = Global/State Secure

SNR = Not yet assessed

**4.3 Wildlife Habitat Analysis Results:** The California Wildlife Habitat Relationships analysis listed a large number of wildlife species as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

**4.4 Wildlife Assessment:** Based on the pre-survey research conducted for this study, a total of 14 sensitive wildlife species need to be accounted for within the project area. These include the species identified as present within the Rutherford quadrangle by the CNDDDB and listed in Table 3. Lewis' woodpecker, loggerhead shrike, and Lawrence's gold finch are added based on the presence of potential habitat and because they are listed in table 4-7 of the Napa County BDR. White-tailed kite was added based on the presence of potential habitat. Accepted protocol requires that all CNDDDB species in the surrounding U.S.G.S. quadrangle be discussed even though suitable habitat may not occur on the site.

- **Western bumble bee (*Bombus occidentalis*):**

Once common in the western and northwestern U.S., these bees are important pollinators of both wild plants and crops and has been commercially reared to pollinate crops such as greenhouse tomatoes and cranberries; it has also been an important pollinator of alfalfa, avocado, apples, cherries, blackberries, and blueberry. Since 1998 populations have declined due to insecticides, loss of habitat, climate change and diseases from commercial bee rearing. This bee is a generic forager and its habitat requirements are non-specific. Identification of bees is based on their sex and markings.

- **California giant salamander (*Dicamptodon ensatus*):**

This species is found in damp forests in cool, rocky streams, and occasionally in ponds and lakes. It prefers humid coastal forests, including Douglas fir, redwood, montane and valley-foothill riparian habitats. Cold flowing water is necessary for egg-laying and maturing. Larvae and adults in their aquatic state hide between rocks in streambeds; on land they may be found under litter or underground. Food is snails, slugs, small rodents and mammals, fish, and other amphibians. The salamanders are mostly nocturnal. The streams on the site are too warm to provide appropriate habitat for salamanders.

- **Red-bellied newt (*Taricha rivularis*):**

This species is often found under rocks, logs, soil or duff, or in rodent burrows in coastal woodlands and redwood forests. Newts occur near high to moderate gradient streams and rivers, in riffles, and pools. They usually breed in flowing water. Newts burrow in soil or debris near water, and emerge during fall rains to breed; and may migrate up to a mile or more between terrestrial habitat and stream breeding sites.

They may breed from late February through May. They have been identified in the Cobb Mountain area along Bottle Rock Road and throughout the Geysers. Appropriate habitat for newts does not occur within the streams on the project site.

- **Foothill yellow-legged frog (*Rana boylei*):**

These frogs require either perennial or long-duration stream flows as successful breeding sites due to the lengthy period required for metamorphosis of larvae. They are relatively common along the shaded banks of perennial headwater streams, and are seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral streams unsuitable as breeding sites. The ephemeral streams on the property are of too-short duration to provide suitable habitat for *Rana boylei*.

- **Western pond turtle (*Emys marmorata*):**

These turtles prefer slow or ponded water with sheltering vegetation but will range widely through less suitable habitat in search of these sites. Stream channels are often used as movement corridors between waterways or ponds. Eggs are laid on land in sheltered nests. Young overwinter in the nest and emerge the following spring in Northern California. Food includes aquatic insects, crustaceans, fish, and riparian vegetation. When present, pond turtles are readily observed basking along shorelines or on logs in shallow water. There are numerous ponds on and near the property and turtles may be present.

- **Bald eagle (*Haliaeetus leucocephalus*):**

This is a California Endangered and California Fully Protected species. It requires large bodies of water with abundant fish, and adjacent snags or perches. Nests are near water and consist of a stick platform on a large live tree, often the largest tree in a stand, usually with fairly open canopy. Bald eagles hunt over lakes and rivers and nest in adjacent riparian habitat. There is no suitable nesting or roosting habitat for this large bird.

- **Black swift (*Cypseloides niger*):**

This California Species of Special Concern occupies a very unique and specific habitat consisting of wet, shaded, cliff-sides in the spray zone of creeks and on cliffs along the ocean. These conditions are not met in or near the project site.

- **Swainson's hawk (*Buteo swainsoni*):**

This hawk is known locally mostly in the central valley. Habitat is scattered large trees in open areas. Preferred nesting habitat is open riparian habitat or small groves of trees near sparsely vegetated flatlands. They usually roost in stick nests in large trees,

although the hawk will also roost on the ground if no trees are available. Swainson's hawks forage in adjacent grasslands, grazing pastures, or agricultural fields, and their diet ranges from insects to small birds and mammals. They will soar at high and low elevations in search of prey, which is caught in flight, but they may also walk on the ground in search of invertebrates. No hawks were seen during the site visits, but they may be present in the vicinity.

- **White-tailed kite (*Elanus leucurus*):**

Usually found near agricultural areas, the kite prefers open terrain near woodlands and water. These raptors hunt over open country and prefer large, deciduous trees surrounded by expanses of grassland, meadows, farmland and/or wetlands for nesting and roosting sites. The grasslands throughout the property with adjacent oak woodlands provide potential hunting and nesting habitat for white-tailed kite.

- **Lawrence's gold finch (*Carduelis lawrencei*):**

These passerine (perching birds) prefer to nest in the dense foliage of oaks in dry open woodland near brushy and grassy areas or chaparral. Proximity to water is important. Their diet consists primarily of seeds but includes some insects. They frequently nest near other pairs during a breeding season that extends from late March through July, with birds migrating south in August. There is nesting and foraging habitat for this bird in the oak woodlands and grasslands within the survey area.

- **Lewis' woodpecker (*Melanerpes lewis*):**

These woodpeckers excavate nest cavities in dead trees and dead limbs of live trees in open woodlands. They hunt insects and eat fruits and berries throughout the spring and summer and shift their diet to cached acorns and emerging insects in the fall and winter. Breeding occurs between early May and July. The diverse woodland habitats on the property provide potentially good habitat for the woodpecker.

- **Loggerhead shrike (*Lanius ludovicianus*):**

This bird is considered a sensitive species by the County of Napa. These passerines prefer open-canopied woodlands with grass groundcover, and grazed open pastures. Preferred habitats include valley-foothill woodlands and riparian. They build well-concealed nests in the dense foliage of oaks and shrubs. They eat large insects but are fairly unique for passerines in that they also eat small amphibians, reptiles, birds, and mammals which they may impale on thorns or barbed wire fences. Shrikes use fence posts or shrubs as observation posts. Nesting occurs between March and early July when the young are fully fledged. Potential habitat for this species may be found in the mix of grassland and woodlands.

- **Pallid bat (*Antrozous pallidus*):**

Optimal habitat for these bats consists of open, dry habitats with rocky areas, but the bats are also found in oak savanna grasslands, and in open forest and woodlands with access to riparian and open water for feeding and drinking in northern California. Foraging occurs over open country. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces; they will also roost in buildings, bridges, and hollow trees. Preferred roosts are high above the ground and inaccessible to terrestrial predators, although they are occasionally found roosting on the ground underneath sacks and other items left by humans. No evidence of bats was found during the field surveys; however, the diverse woodlands and ponds provide good potential habitat for this species and bats may be present in the future.

- **North American porcupine (*Erethizon dorsatum*):**

This large, primarily nocturnal rodent prefers conifer and hardwood forests and woodlands, but is also found in forested wetlands and chaparral. They can withstand extreme cold temperatures. Porcupines use downed logs and debris, as well as snags and tree hollows, as cover and dens. Food is vegetation including twigs, berries, roots, seeds, needles, and bark; porcupines commonly climb trees for food. The porcupine breeds from September to November or December, giving birth in the spring. Lifespan is relatively long for a rodent.

Porcupines may occur in the area and on the property. This species is listed in the CNDDDB as "G5" (Global Secure) and "SNR" (Species not Rated-California). It is therefore not a species with sensitive regulatory status although its local accounts are included in the database.

## 5.0 FIELD SURVEY RESULTS

**5.1 Bat Habitat Survey Results:** A survey for bat habitat was conducted for this project. Mature trees within the proposed vineyard blocks were assessed for potential as roosting sites for sensitive bat species. These potential bat habitat sites include hollow trees, trees with open cavities, and trees with exfoliating bark.

Results of bat habitat survey: A number of trees within the blocks may contain suitable habitat for bats because of open cavities and hollows. Pre-construction surveys (within two weeks of disturbance) are recommended for mature trees within vineyard blocks.

**5.2 Botanical Field Survey Results:** Table 4 presents the results of the floristic-level botanical survey of the property. Each of the sensitive plant taxa potentially occurring at the property and listed in Tables 2 and 3 was specifically searched for during the surveys. A total of 94 native and introduced plant taxa were identified. No taxa with sensitive status were found.

**Note:** *Even when a site meets the generalized habitat description for a sensitive plant taxon, this is not a guarantee that it is present. The precise habitat requirements for any species cannot be known in most cases. Plants with sensitive regulatory status are rare because they have a narrow band of habitat criteria that must be met. These may include a wide range factors including microclimate, seasonal soil moisture, soil chemistry and texture, and presence or absence of specific pests or competitors.*

*At present the specifics of these factors are not known for the vast majority of plant taxa. This issue is understood by regulatory biologists and is dealt with through the requirement that a floristic-level botanical survey be conducted which lists all plants occurring at a site throughout the full range of blooming seasons. Ultimately, the botanical survey determines whether a taxon is present or not present.*

TABLE 4. FLORA OF THE KOMES RANCH PROPERTY

| Habit | Species                                              | Common Name                        | Family         | Origin |
|-------|------------------------------------------------------|------------------------------------|----------------|--------|
| forb  | <i>Daucus carota</i>                                 | Queen Anne's lace                  | Apiaceae       | A      |
| forb  | <i>Perideridia kelloggii</i>                         | Kellogg's yampah                   | Apiaceae       | N      |
| forb  | <i>Torilis arvensis</i>                              | field hedge parsley                | Apiaceae       | A      |
| forb  | <i>Achillea millefolium</i>                          | common yarrow                      | Asteraceae     | N      |
| forb  | <i>Anaphalis margaritaceae</i>                       | pearly everlasting                 | Asteraceae     | N      |
| forb  | <i>Cirsium brevistylum</i>                           | clustered thistle, Indian thistle  | Asteraceae     | N      |
| forb  | <i>Cynara cardunculus</i>                            | artichoke thistle                  | Asteraceae     | A      |
| forb  | <i>Eriophyllum lanatum</i> var. <i>achillaeoides</i> | yarrow leaved woolly sunflower     | Asteraceae     | N      |
| forb  | <i>Grindelia hirsutula</i> var. <i>davyi</i>         | Davy's gumweed                     | Asteraceae     | N      |
| forb  | <i>Helminthotheca echoides</i>                       | bristly ox-tongue                  | Asteraceae     | A      |
| forb  | <i>Hemizonia congesta</i>                            | hayfield tarweed                   | Asteraceae     | N      |
| forb  | <i>Micropus californicus</i>                         | cottontop                          | Asteraceae     | N      |
| forb  | <i>Tragopogon porrifolius</i>                        | salsify                            | Asteraceae     | A      |
| forb  | <i>Wyethia glabra</i>                                | green mule ears, shining mule ears | Asteraceae     | N      |
| forb  | <i>Convolvulus arvensis</i>                          | orchard morning-glory              | Convolvulaceae | A      |
| forb  | <i>Carex nudata</i>                                  | naked sedge, torrent sedge         | Cyperaceae     | N      |
| forb  | <i>Carex serratodens</i>                             | two-tooth sedge                    | Cyperaceae     | N      |
| forb  | <i>Carex tumulicola</i>                              | foothill sedge                     | Cyperaceae     | N      |
| forb  | <i>Cyperus eragrostis</i>                            | tall flat sedge                    | Cyperaceae     | N      |
| forb  | <i>Acmispon brachycarpus</i>                         | shortpodded lotus, hill lotus      | Fabaceae       | N      |
| forb  | <i>Medicago polymorpha</i>                           | California burclover               | Fabaceae       | A      |
| forb  | <i>Trifolium hirtum</i>                              | rose clover                        | Fabaceae       | A      |
| forb  | <i>Trifolium subterraneum</i>                        | subterranean clover                | Fabaceae       | A      |
| forb  | <i>Vicia americana</i> var. <i>americana</i>         | American vetch                     | Fabaceae       | N      |
| forb  | <i>Vicia villosa</i> ssp. <i>villosa</i>             | winter vetch, hairy vetch          | Fabaceae       | A      |
| forb  | <i>Geranium dissectum</i>                            | cut-leaved geranium                | Geraniaceae    | A      |
| forb  | <i>Hypericum concinnum</i>                           | gold-wire                          | Hypericaceae   | N      |

| Habit | Species                                           | Common Name                                    | Family           | Origin |
|-------|---------------------------------------------------|------------------------------------------------|------------------|--------|
| forb  | <i>Sisyrinchium bellum</i>                        | blue-eyed grass, western blue-eyed grass       | Iridaceae        | N      |
| forb  | <i>Juncus balticus</i>                            | Baltic rush                                    | Juncaceae        | N      |
| forb  | <i>Juncus effusus</i> var. <i>pacificus</i>       | Pacific bog rush                               | Juncaceae        | N      |
| forb  | <i>Juncus oxymers</i>                             | pointed rush                                   | Juncaceae        | N      |
| forb  | <i>Stachys albens</i>                             | cobwebby hedge nettle, white-stem hedge nettle | Lamiaceae        | N      |
| forb  | <i>Calochortus luteus</i>                         | yellow Mariposa lily                           | Liliaceae        | N      |
| forb  | <i>Chlorogalum pomeridianum</i>                   | wavyleaf soap plant                            | Liliaceae        | N      |
| forb  | <i>Triteleia laxa</i>                             | Ithuriel's spear                               | Liliaceae        | N      |
| forb  | <i>Malva parviflora</i>                           | cheeseweed                                     | Malvaceae        | A      |
| forb  | <i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i> | purple clarkia, winecup clarkia, four-spot     | Onagraceae       | N      |
| forb  | <i>Mimulus guttatus</i>                           | seep monkeyflower                              | Phrymaceae       | N      |
| forb  | <i>Plantago lanceolata</i>                        | English plantain                               | Plantaginaceae   | A      |
| forb  | <i>Leptosiphon bicolor</i>                        | true baby stars                                | Polemoniaceae    | N      |
| forb  | <i>Rumex crispus</i>                              | curly dock                                     | Polygonaceae     | A      |
| forb  | <i>Anagalis arvensis</i>                          | scarlet pimpernel                              | Primulaceae      | A      |
| forb  | <i>Galium porrigens</i> var. <i>porrigens</i>     | climbing bedstraw, graceful bedstraw           | Rubiaceae        | N      |
| forb  | <i>Verbascum thapsus</i>                          | woolly mullein                                 | Scrophulariaceae | A      |
| forb  | <i>Typha angustifolia</i>                         | narrow-leaf cattail                            | Typhaceae        | N      |
| grass | <i>Aira caryophyllea</i>                          | silver European hairgrass                      | Poaceae          | A      |
| grass | <i>Avena barbata</i>                              | slender wild oat                               | Poaceae          | A      |
| grass | <i>Briza maxima</i>                               | big quaking grass                              | Poaceae          | A      |
| grass | <i>Briza minor</i>                                | small quaking grass                            | Poaceae          | A      |
| grass | <i>Bromus arvensis</i>                            | field brome                                    | Poaceae          | A      |
| grass | <i>Bromus commutatus</i>                          | meadow brome, hairy chess                      | Poaceae          | A      |
| grass | <i>Bromus diandrus</i>                            | ripgut grass, ripgut brome                     | Poaceae          | A      |
| grass | <i>Bromus hordeaceus</i>                          | soft chess                                     | Poaceae          | A      |
| grass | <i>Cynosurus echinatus</i>                        | hedgehog dogtail, annual dogtail               | Poaceae          | A      |
| grass | <i>Elymus glaucus</i> ssp. <i>glaucus</i>         | blue wildrye                                   | Poaceae          | N      |

| Habit | Species                                          | Common Name                           | Family        | Origin |
|-------|--------------------------------------------------|---------------------------------------|---------------|--------|
| grass | <i>Festuca arundinacea</i>                       | reed fescue, tall fescue              | Poaceae       | A      |
| grass | <i>Festuca perennis</i>                          | perennial ryegrass, Italian rye grass | Poaceae       | A      |
| grass | <i>Gastridium phleoides</i>                      | nitgrass                              | Poaceae       | A      |
| grass | <i>Hordeum marinum ssp. gussoneanum</i>          | Mediterranean barley                  | Poaceae       | A      |
| grass | <i>Poa annua</i>                                 | annual bluegrass                      | Poaceae       | A      |
| grass | <i>Polypogon monspeliensis</i>                   | rabbits-foot grass, annual beardgrass | Poaceae       | A      |
| grass | <i>Triticum aestivum</i>                         | common wheat, winter wheat            | Poaceae       | A      |
| shrub | <i>Rhus ovata</i>                                | sugar bush, sugar sumac               | Anacardiaceae | N      |
| shrub | <i>Toxicodendron diversilobum</i>                | poison oak                            | Anacardiaceae | N      |
| shrub | <i>Baccharis pilularis</i>                       | coyote brush, chaparral broom         | Asteraceae    | N      |
| shrub | <i>Arctostaphylos manzanita ssp. glaucescens</i> | white-leaf common manzanita           | Ericaceae     | N      |
| shrub | <i>Arctostaphylos manzanita ssp. manzanita</i>   | common manzanita                      | Ericaceae     | N      |
| shrub | <i>Hoita macrostachya</i>                        | large leather root                    | Fabaceae      | N      |
| shrub | <i>Rupertia physodes</i>                         | California tea                        | Fabaceae      | N      |
| shrub | <i>Quercus durata var. durata</i>                | leather oak                           | Fagaceae      | N      |
| shrub | <i>Quercus wislizeni var. frutescens</i>         | interior live oak                     | Fagaceae      | N      |
| shrub | <i>Ceanothus jepsonii var. albiflorus</i>        | white-flowered musk brush             | Rhamnaceae    | N      |
| shrub | <i>Frangula californica ssp. californica</i>     | California coffeeberry                | Rhamnaceae    | N      |
| shrub | <i>Frangula californica ssp. tomentella</i>      | hoary coffeeberry                     | Rhamnaceae    | N      |
| shrub | <i>Adenostoma fasciculatum</i>                   | chamise                               | Rosaceae      | N      |
| shrub | <i>Heteromeles arbutifolia</i>                   | toyon                                 | Rosaceae      | N      |
| shrub | <i>Rubus armeniacus</i>                          | Himalayan blackberry                  | Rosaceae      | A      |
| tree  | <i>Calocedrus decurrens</i>                      | incense cedar                         | Cupressaceae  | N      |
| tree  | <i>Arbutus menziesii</i>                         | Pacific madrone                       | Ericaceae     | N      |
| tree  | <i>Quercus agrifolia</i>                         | coast live oak                        | Fagaceae      | N      |
| tree  | <i>Quercus douglasii</i>                         | blue oak                              | Fagaceae      | N      |
| tree  | <i>Quercus garryanna var. garryanna</i>          | Oregon white oak                      | Fagaceae      | N      |
| tree  | <i>Quercus kelloggii</i>                         | California black oak                  | Fagaceae      | N      |
| tree  | <i>Quercus wislizeni var. wislizeni</i>          | interior live oak                     | Fagaceae      | N      |

| Habit | Species                                            | Common Name                  | Family           | Origin |
|-------|----------------------------------------------------|------------------------------|------------------|--------|
| tree  | <i>Aesculus californica</i>                        | California buckeye           | Hippocastanaceae | N      |
| tree  | <i>Umbellularia californica</i>                    | California bay               | Lauraceae        | N      |
| tree  | <i>Eucalyptus globulus</i>                         | bluegum eucalyptus           | Myrtaceae        | A      |
| tree  | <i>Pinus ponderosa</i>                             | ponderosa pine               | Pinaceae         | N      |
| tree  | <i>Pinus sabiniana</i>                             | ghost pine, foothill pine    | Pinaceae         | N      |
| tree  | <i>Pseudotsuga menziesii</i> var. <i>menziesii</i> | Douglas fir                  | Pinaceae         | N      |
| tree  | <i>Populus fremontii</i> var. <i>fremontii</i>     | Fremont cottonwood           | Salicaceae       | N      |
| vine  | <i>Symphoricarpos mollis</i>                       | tripvine, creeping snowberry | Caprifoliaceae   | N      |
| vine  | <i>Vitis californica</i>                           | California wild grape        | Vitaceae         | N      |
| vine  | <i>Vitis vinifera</i>                              | wine grape                   | Vitaceae         | A      |

**Origin:** N = Native, A = Alien

## **6.0 DELINEATION OF WATERS OF THE U.S.**

### **6.1 Methodology**

**6.1.1 Purpose of Delineation:** This delineation has been conducted at the request of the local permitting agency in order to determine the extent of possible waters of the U.S. on the project.

**6.1.2 Delineation Procedure:** This delineation has been conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual*, January 1987, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, 2008. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement* 1973, and Mason's *Flora of the Marshes of California*, 1957, were used as supplemental texts; however, all nomenclature and wetland indicator status have been checked with the U.S. Army Corps of Engineers. 2016. *National Wetland Plant Lists: Arid West and California*.

The survey included use of Google satellite images, 7.5' USGS quadrangle maps, and LIDAR mapped overlays along with an extensive foot survey.

**6.1.3 Delineation Date:** Delineation fieldwork was completed on May 16, 2018.

**6.1.4 Delineation Staff:** The delineation was conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has more than 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc. He was assisted in the field and with mapping by Leigh Zalusky, Northwest Biosurvey engineer.

### **6.2 Existing Conditions**

**6.2.1 Location, Drainage, and Soil Type:** These subjects are discussed in detail in Section 1.2 (Location), Section 3.1 (Topography and Drainage), and Section 3.2 (Soils) in the biological resource assessment report in which this delineation is included. All waters of the U.S. occurring within the survey area consist of wetlands and "other waters" pursuant to Corps of Engineers definitions.

### 6.3 Aquatic Resources Results

**6.3.1 Wetland Vegetation:** Dominant plants identified within the wetland and upland sample points are listed below in **Table 5** with their stratum and indicator status. Since 2008, a number of changes in wetland indicator status of several plant species have been made pursuant to the Army Corps of Engineer's *The National Wetland Plant List* and the *Arid West 2016 Regional Wetland Plant List*. Additionally, a number of species and common names were revised in the 2012 Jepson Manual. The wetland sample points were taken in the Two-tooth Sedge Seep and Baltic Rush Marsh communities.

**TABLE 5. PLANTS OCCURRING WITHIN WETLANDS  
KOMES RANCH PROJECT**

| Stratum | Species                            | Common Name           | Wetland Indicator Status* |
|---------|------------------------------------|-----------------------|---------------------------|
| herb    | <i>Achillea millefolium</i>        | common yarrow         | FACU                      |
| herb    | <i>Bromus hordeaceus</i>           | soft chess            | FACU                      |
| herb    | <i>Carex serratodens</i>           | two-tooth sedge       | <b>FACW</b>               |
| herb    | <i>Elymus glaucus ssp. glaucus</i> | blue wildrye          | FACU                      |
| herb    | <i>Festuca perennis</i>            | perennial ryegrass    | <b>FAC</b>                |
| herb    | <i>Hemizonia congesta</i>          | hayfield tarweed      | NI                        |
| herb    | <i>Juncus balticus</i>             | Baltic rush           | <b>FACW</b>               |
| herb    | <i>Stachys albens</i>              | cobwebby hedge nettle | <b>OBL</b>                |

\*Wetland Indicator Status:

- OBL = Occurs in aquatic resources >99% of time
- FACW = Occurs in aquatic resources 67-99% of time
- FAC = Occurs in aquatic resources 34-66% of time
- FACU = Occurs in aquatic resources 1-33% of time
- UPL = Occurs in uplands >99% of time
- NI = Indicator status not known in this region

**6.3.2 Wetland Soils:** The three wetland sample points (WSPs 1, 3, 5) are Montara clay loam (5-30% slopes); this is not a hydric soil type based on the Natural Resources Conservation District's National Wetland Indicator criteria. The soil for all of the wetland sample points have a soil indicator of F1 (Loamy mucky mineral), with a matrix hue of 5Y and redox depressions of 5YR.

**6.3.3 Wetland Hydrology:** The WSPs qualifying as wetlands have two hydrological indicators -- saturation (A3) and surface soil cracks (B6). These are both primary indicators.

**6.3.4 Waters of the U.S:** Waters of the U.S. within the survey area consist of stream channels throughout the property, ponds, and wetlands in the south part of the property. The results of the delineation are shown on the aerial photo base map provided in **Figure 3**. Wetland Sample Points, ponds, and stream segments are mapped in Figure 3 in light blue. Delineation forms corresponding to each numbered WSP are provided in **Appendix D**.

The wetlands total 2.68 acres in size. The total area of all delineated Waters of the U.S. is **7.32 acres**. The delineation results are shown in **Table 6** on the next page.

| Project Name: Komes Ranch                                                                                                         |               |          |             |            |              |             |            |              |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------|----------|-------------|------------|--------------|-------------|------------|--------------|
| Contact: Sean Garvey<br>Sean@kgranches.com                                                                                        |               |          |             |            |              |             |            |              |
| Delineator: Leigh Zalusky, Steve Zalusky<br>Northwest Biosurvey<br>1905 Westlake Drive<br>Kelseyville, CA 95451<br>(707) 889-1061 |               |          |             |            |              |             |            |              |
| Date of Map: December 4, 2020                                                                                                     |               |          |             |            |              |             |            |              |
| POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA                                                                                 |               |          |             |            |              |             |            |              |
| Name                                                                                                                              | Cowardin Code | HGM Code | Waters Type | Latitude   | Longitude    | Length (ft) | Width (ft) | Area (acres) |
| Stream Segments                                                                                                                   |               |          |             |            |              |             |            |              |
| IS1                                                                                                                               | R4            | -        | RPW         | 38.478417° | -122.454742° | 2886        | 5.75       | 0.3808       |
| ED1                                                                                                                               | R6            | -        | NRPW        | 38.479486° | -122.460418° | 1019        | 3.00       | 0.0702       |
| ED2                                                                                                                               | R6            | -        | NRPW        | 38.477324° | -122.463060° | 268         | 2.50       | 0.0154       |
| ED3                                                                                                                               | R6            | -        | NRPW        | 38.477077° | -122.463018° | 132         | 2.00       | 0.0061       |
| ED4                                                                                                                               | R6            | -        | NRPW        | 38.479532° | -122.457486° | 858         | 6.50       | 0.1280       |
| ED5                                                                                                                               | R6            | -        | NRPW        | 38.477929° | -122.458937° | 643         | 2.50       | 0.0369       |
| ED6                                                                                                                               | R6            | -        | NRPW        | 38.475607° | -122.457862° | 1685        | 3.00       | 0.1160       |
| ED7                                                                                                                               | R6            | -        | NRPW        | 38.474044° | -122.461443° | 645         | 2.00       | 0.0296       |
| ED8                                                                                                                               | R6            | -        | NRPW        | 38.473814° | -122.461256° | 384         | 2.25       | 0.0198       |
| ED9                                                                                                                               | R6            | -        | NRPW        | 38.473235° | -122.460842° | 636         | 2.50       | 0.0365       |
| ED10                                                                                                                              | R6            | -        | NRPW        | 38.476200° | -122.453106° | 268         | 7.00       | 0.0431       |
| ED11                                                                                                                              | R6            | -        | NRPW        | 38.475559° | -122.455154° | 387         | 8.00       | 0.0711       |
| ED12                                                                                                                              | R6            | -        | NRPW        | 38.475242° | -122.454850° | 501         | 3.00       | 0.0345       |
| ED13                                                                                                                              | R6            | -        | NRPW        | 38.474502° | -122.456959° | 239         | 4.00       | 0.0219       |
| ED14                                                                                                                              | R6            | -        | NRPW        | 38.474024° | -122.456397° | 286         | 1.50       | 0.0098       |
| Total Stream Segments:                                                                                                            |               |          |             |            |              |             |            | 1.0197       |
| Ponds                                                                                                                             |               |          |             |            |              |             |            |              |
| P1                                                                                                                                | PAB           | -        | IMPD        | 38.479774° | -122.459659° | NA          | NA         | 1.5882       |
| P2                                                                                                                                | PAB           | -        | IMPD        | 38.474511° | -122.462515° | NA          | NA         | 0.2099       |
| P3                                                                                                                                | PAB           | -        | IMPD        | 38.475112° | -122.456096° | NA          | NA         | 1.1826       |
| P4                                                                                                                                | PAB           | -        | IMPD        | 38.475788° | -122.452696° | NA          | NA         | 0.6679       |
| Total Ponds:                                                                                                                      |               |          |             |            |              |             |            | 3.6205       |
| Wetlands                                                                                                                          |               |          |             |            |              |             |            |              |
| WL1                                                                                                                               | PEM           | DEPRESS  | RPW/WN      | 38.473286° | -122.461061° | -           | -          | 0.0402       |
| WL2                                                                                                                               | PEM           | DEPRESS  | RPW/WN      | 38.472149° | -122.459847° | -           | -          | 0.3762       |
| WL3                                                                                                                               | PEM           | DEPRESS  | RPW/WN      | 38.473687° | -122.456703° | -           | -          | 1.3868       |
| WL4                                                                                                                               | PEM           | DEPRESS  | RPW/WN      | 38.472750° | -122.456606° | -           | -          | 0.0372       |
| WL5                                                                                                                               | PEM           | DEPRESS  | RPW/WN      | 38.472950° | -122.456223° | -           | -          | 0.8380       |
| Total Wetlands:                                                                                                                   |               |          |             |            |              |             |            | 2.6784       |
| Total Possible Waters of U.S. Within Survey Area                                                                                  |               |          |             |            |              |             |            | 7.3186       |

Project Name: Komes Ranch

Contact: Sean Garvey  
Sean@kgranches.com

Delineator: Leigh Zalusky, Steve Zalusky  
Northwest Biosurvey  
1905 Westlake Drive  
Kelseyville, CA 95451  
(707) 889-1061

Date of Map: December 4, 2020

POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA

| Name                                             | Cowardin Code | HGM Code | Waters Type | Latitude   | Longitude    | Length (ft) | Width (ft) | Area (acres) |
|--------------------------------------------------|---------------|----------|-------------|------------|--------------|-------------|------------|--------------|
| Stream Segments                                  |               |          |             |            |              |             |            |              |
| IS1                                              | R4            | -        | RPW         | 38.478417° | -122.454742° | 2886        | 5.75       | 0.3808       |
| ED1                                              | R6            | -        | NRPW        | 38.479486° | -122.460418° | 1019        | 3.00       | 0.0702       |
| ED2                                              | R6            | -        | NRPW        | 38.477324° | -122.463060° | 268         | 2.50       | 0.0154       |
| ED3                                              | R6            | -        | NRPW        | 38.477077° | -122.463018° | 132         | 2.00       | 0.0061       |
| ED4                                              | R6            | -        | NRPW        | 38.479532° | -122.457486° | 858         | 6.50       | 0.1280       |
| ED5                                              | R6            | -        | NRPW        | 38.477929° | -122.458937° | 643         | 2.50       | 0.0369       |
| ED6                                              | R6            | -        | NRPW        | 38.475607° | -122.457862° | 1685        | 3.00       | 0.1160       |
| ED7                                              | R6            | -        | NRPW        | 38.474044° | -122.461443° | 645         | 2.00       | 0.0296       |
| ED8                                              | R6            | -        | NRPW        | 38.473814° | -122.461256° | 384         | 2.25       | 0.0198       |
| ED9                                              | R6            | -        | NRPW        | 38.473235° | -122.460842° | 636         | 2.50       | 0.0365       |
| ED10                                             | R6            | -        | NRPW        | 38.476200° | -122.453106° | 268         | 7.00       | 0.0431       |
| ED11                                             | R6            | -        | NRPW        | 38.475559° | -122.455154° | 387         | 8.00       | 0.0711       |
| ED12                                             | R6            | -        | NRPW        | 38.475242° | -122.454850° | 501         | 3.00       | 0.0345       |
| ED13                                             | R6            | -        | NRPW        | 38.474502° | -122.456959° | 239         | 4.00       | 0.0219       |
| ED14                                             | R6            | -        | NRPW        | 38.474024° | -122.456397° | 286         | 1.50       | 0.0098       |
| Total Stream Segments:                           |               |          |             |            |              |             |            | 1.0197       |
| Ponds                                            |               |          |             |            |              |             |            |              |
| P1                                               | PAB           | -        | IMPD        | 38.479774° | -122.459659° | NA          | NA         | 1.5882       |
| P2                                               | PAB           | -        | IMPD        | 38.474511° | -122.462515° | NA          | NA         | 0.2099       |
| P3                                               | PAB           | -        | IMPD        | 38.475112° | -122.456096° | NA          | NA         | 1.1826       |
| P4                                               | PAB           | -        | IMPD        | 38.475788° | -122.452696° | NA          | NA         | 0.6679       |
| Total Ponds:                                     |               |          |             |            |              |             |            | 3.6205       |
| Wetlands                                         |               |          |             |            |              |             |            |              |
| WL1                                              | PEM           | DEPRESS  | RPWWN       | 38.473286° | -122.461061° | -           | -          | 0.0402       |
| WL2                                              | PEM           | DEPRESS  | RPWWN       | 38.472149° | -122.459847° | -           | -          | 0.3762       |
| WL3                                              | PEM           | DEPRESS  | RPWWN       | 38.473687° | -122.456703° | -           | -          | 1.3868       |
| WL4                                              | PEM           | DEPRESS  | RPWWN       | 38.472750° | -122.456606° | -           | -          | 0.0372       |
| WL5                                              | PEM           | DEPRESS  | RPWWN       | 38.472950° | -122.456223° | -           | -          | 0.8380       |
| Total Wetlands:                                  |               |          |             |            |              |             |            | 2.6784       |
| Total Possible Waters of U.S. Within Survey Area |               |          |             |            |              |             |            | 7.3186       |

N

1" = 300'

KOMES RANCH  
POSSIBLE WATERS OF THE U.S.

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Figure 3

Komes Ranch Vineyard Biological Resource Assessment; APN 027-100-037

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## 7.0 NAPA COUNTY WOODLAND ASSESSMENT

This woodland analysis follows a protocol reviewed and approved by Napa County planning staff in January 2008.

**7.1 Procedure:** The Komes Ranch property contains four native woodland communities that occur within the proposed vineyard blocks: Mixed Oak Woodland, Blue Oak Woodland, Douglas Fir Forest, and Ghost Pine Forest. These communities are described in detail in Section 3.3 along with the other vegetation types on the property.

One study plot was selected for each of these woodland types. The location of the study area was based on how well it represented the community it was intended to sample. The size was based on the need to include enough trees to provide a meaningful statistical sample. The sample plot is mapped in **Figure 2**.

Within each study plot, each tree was mapped with a GPS waypoint and a record was made of its species, diameter at breast height (DBH), and any unique characteristics (dead, hollow, acorn storage tree, etc.). The field data for this plot is provided in **Appendix C**.

The data collected for the study plot was then statistically analyzed to provide the following information:

- Woodland species composition
- Average diameter at base height (DBH) for each species
- Average canopy size within the woodland
- Average distance between trunks
- Percent of canopy closure

This data is provided in **Tables 7-10** and is mapped in **Figure 2**.

**TABLE 7. TREE SURVEY DATA SUMMARY – MIXED OAK WOODLAND**

| <b>SPECIES</b>                               | <b>NUMBER IN SURVEY AREA</b> | <b>AVERAGE DBH (INCHES)</b> | <b>AVERAGE # OF TRUNKS PER ACRE<sup>4</sup></b> |
|----------------------------------------------|------------------------------|-----------------------------|-------------------------------------------------|
| OWO                                          | 5                            | 14.60                       | 13.28                                           |
| CLO                                          | 17                           | 12.35                       | 45.14                                           |
| DF                                           | 4                            | 6.75                        | 10.62                                           |
| BAY                                          | 3                            | 11.67                       | 7.97                                            |
| MAD                                          | 4                            | 10.75                       | 10.62                                           |
| <b>TOTAL</b>                                 | <b>33</b>                    | <b>11.76</b>                | <b>87.63</b>                                    |
| Total area of sample plot                    |                              | 16,404ft <sup>2</sup>       |                                                 |
| Average canopy size <sup>1</sup>             |                              | 467ft <sup>2</sup>          |                                                 |
| Average distance between trunks <sup>2</sup> |                              | 22ft                        |                                                 |
| Canopy closure <sup>3</sup>                  |                              | 94%                         |                                                 |

**TABLE 8. TREE SURVEY DATA SUMMARY – BLUE OAK WOODLAND**

| <b>SPECIES</b>                               | <b>NUMBER IN SURVEY AREA</b> | <b>AVERAGE DBH (INCHES)</b> | <b>AVERAGE # OF TRUNKS PER ACRE<sup>4</sup></b> |
|----------------------------------------------|------------------------------|-----------------------------|-------------------------------------------------|
| BLU                                          | 32                           | 11.63                       | 108.12                                          |
| GP                                           | 2                            | 10.50                       | 6.76                                            |
| BAY                                          | 1                            | 7.00                        | 3.38                                            |
| MAD                                          | 2                            | 5.50                        | 6.76                                            |
| BLK                                          | 1                            | 15.00                       | 3.38                                            |
| BUC                                          | 2                            | 9.50                        | 6.76                                            |
| <b>TOTAL</b>                                 | <b>40</b>                    | <b>11.13</b>                | <b>135.15</b>                                   |
| Total area of sample plot                    |                              | 12892ft <sup>2</sup>        |                                                 |
| Average canopy size <sup>1</sup>             |                              | 297ft <sup>2</sup>          |                                                 |
| Average distance between trunks <sup>2</sup> |                              | 18ft                        |                                                 |
| Canopy closure <sup>3</sup>                  |                              | 92%                         |                                                 |

**TABLE 9. TREE SURVEY DATA SUMMARY – DOUGLAS FIR FOREST**

| SPECIES                                      | NUMBER IN SURVEY AREA | AVERAGE DBH (INCHES) | AVERAGE # OF TRUNKS PER ACRE <sup>4</sup> |
|----------------------------------------------|-----------------------|----------------------|-------------------------------------------|
| MAD                                          | 1                     | 19.00                | 2.03                                      |
| DF                                           | 25                    | 27.88                | 50.81                                     |
| CLO                                          | 3                     | 20.33                | 6.10                                      |
| BAY                                          | 1                     | 10.00                | 2.03                                      |
| BLK                                          | 1                     | 17.00                | 2.03                                      |
| <b>TOTAL</b>                                 | <b>31</b>             | <b>25.94</b>         | <b>63.00</b>                              |
| Total area of sample plot                    |                       | 21433ft <sup>2</sup> |                                           |
| Average canopy size <sup>1</sup>             |                       | 650ft <sup>2</sup>   |                                           |
| Average distance between trunks <sup>2</sup> |                       | 26ft                 |                                           |
| Canopy closure <sup>3</sup>                  |                       | 94%                  |                                           |

**TABLE 10. TREE SURVEY DATA SUMMARY – GHOST PINE FOREST**

| SPECIES                                      | NUMBER IN SURVEY AREA | AVERAGE DBH (INCHES)  | AVERAGE # OF TRUNKS PER ACRE <sup>4</sup> |
|----------------------------------------------|-----------------------|-----------------------|-------------------------------------------|
| GP                                           | 16                    | 15.56                 | 49.65                                     |
| CLO                                          | 3                     | 13.33                 | 42.54                                     |
| BAY                                          | 1                     | 5.00                  | 15.95                                     |
| VO                                           | 1                     | 9.00                  | 28.72                                     |
| <b>TOTAL</b>                                 | <b>21</b>             | <b>14.43</b>          | <b>136.85</b>                             |
| Total area of sample plot                    |                       | 13,651ft <sup>2</sup> |                                           |
| Average canopy size <sup>1</sup>             |                       | 618ft <sup>2</sup>    |                                           |
| Average distance between trunks <sup>2</sup> |                       | 25ft                  |                                           |
| Canopy closure <sup>3</sup>                  |                       | 95%                   |                                           |

**Key:**

*CLO = Coast Live Oak*

*BLK = Black Oak*

*MAD = Pacific Madrone*

*BLU = Blue Oak*

*DF = Douglas Fir*

*GP = Ghost Pine*

*BAY = California Bay*

*VO = Valley Oak*

*OWO = Oregon White Oak*

*BUC = Buckeye*

GPS waypoint for each tree is indicated on the vegetation map provided in Figure 2.

1. Average canopy size per tree/trunk = (area of test plot X percent canopy closure)/combined # of trees in test plots
2. Average distance between trunks = square root of (sample area/total number of trunks)
3. Total area of canopy in community/total area of community
4. Total number of trunks per acre = ((ft<sup>2</sup>/acre)/area of test plot)) X number of trunks in test plot

**Table 11** provides an estimate of the species and number of trees that will be impacted by vineyard development in each of the proposed vineyard blocks based on the analysis provided above.

Average Diameter at Breast Height (DBH) for each species is provided in Tables 7 through 10.

**TABLE 11. ESTIMATED NUMBERS & SPECIES OF TREES IMPACTED WITHIN PROPOSED VINEYARD AREAS**

| Block #                     | Number and Species of Trees |     |     |    |     |     |     |    |     |     | Total # of Trees per Block                       |
|-----------------------------|-----------------------------|-----|-----|----|-----|-----|-----|----|-----|-----|--------------------------------------------------|
|                             | GP                          | BAY | CLO | VO | OWO | BLU | BLK | DF | MAD | BUC |                                                  |
| O                           | -                           | 35  | 199 | -  | 58  | -   | -   | 47 | 47  | -   | 386                                              |
| M                           | -                           | -   | -   | -  | -   | -   | -   | -  | -   | -   | 0                                                |
| <b>Total # Each Species</b> | -                           | 35  | 199 | -  | 58  | -   | -   | 47 | 47  | -   | <b>Total estimated trees in all blocks = 386</b> |

**7.2 Regional Setting and Continuity with Surrounding Woodlands and Other Habitat:** The Komes Ranch Vineyard property occupies the eastern toe of the Mayacamas Mountains between Sulphur Canyon and Bear Canyon, south of the City of Saint Helena. This shaded eastern slope supports dense stands of conifer forest and oak woodland. It is rugged terrain, deeply cut by canyons and their secondary drainages.

The western two-thirds of the Komes property drops approximately 500 feet in elevation from its western edge to the floor of the Napa Valley at an elevation of approximately 200 feet msl. The regional setting is shown in the map provided in **Figure 4** while the topography is shown in **Figure 1**.

### **7.3 Wildlife Value of Woodlands in the Survey Area:**

- **Core Habitat Value:** Core habitat is habitat provided by a plant community in its pure form without the direct influence of surrounding plant communities and intermediate, overlapping edge habitat (edge effect). While many wildlife species can use a wide range of habitats and may even need a mix of habitats to meet their needs, some species are limited to core habitat within a plant community or at least require the presence of core habitat within their home

range. This typically requires that the patch size (overall aerial extent) of the habitat be large enough to exclude the edge effect from the surrounding habitats.

Wildlife dependent on core woodland and forest habitat consists primarily of species using trees as shelter or whose food sources are associated with trees. This includes amphibians and reptiles using downed woody debris for cover and whose food consists of insects associated with woody debris. Woodpeckers are obviously associated with woodlands but many other passerines (perching birds) also depend on woodland insects and plant material or are dependent on dense woodland for nesting sites and cover. Larger mammals such as deer and their predators typically require sites providing dense cover not provided by more open woodlands and grasslands.

The Komes property contains large tracts of Douglas fir forest and mixed oak woodland. Both of these provide excellent core habitat for a wide range of wildlife species as well as cover for larger mammals. **Appendix B** provides a list of wildlife species whose range includes the project area and who use the habitats available within the vineyard property.

- **Cover and Edge Habitat for Surrounding Communities:** Edge habitat consists of boundaries between structurally different vegetation types with particular emphasis on boundaries between woodland or forest and open habitats such as grasslands or shrublands. Edge areas often support an increased density and diversity of wildlife species due to the overlap of two different plant communities and the unique assemblages of wildlife they support. Many species such as raptors require edge. Raptors use tree canopies as perches from which they can scan adjacent grasslands for prey. Deer will feed in open grassland if nearby tree cover is available.

Edge habitat on the Komes property is limited to the few clearings in the western half of the property. These appear to have been historically cleared and would return to woodland and forest over the following decades if not maintained. Limited qualify edge exists between woodlands and vineyards but this is typically limited to raptor hunting habitat which is actually encouraged by vineyard operators as a means of rodent and rabbit control.

- **Value as a Wildlife Corridor:** The project area does not occur within any of the wildlife corridors identified as a *CalWild Linkage* shown in Map 4-2 of the Napa County BDR. It is important to note, however, that these linkage maps pertain to large-scale regional movement of wildlife (typically within valleys).

For local diurnal movement (daily movement between sources of food, cover, and water), wildlife generally follow stream courses when moving up and down slopes and use adjacent habitats (often preferring woodlands) for cover, browse, or hunting. **Figure 4** shows the most likely diurnal movement corridors into the project area. These are mapped as 250-foot radius zones along the principal stream courses. The actual width of usable corridors would continually change based on the density of vegetation, steepness of adjacent slopes or presence of unsuitable habitat such as fenced vineyards and residential areas.

Due primarily to the steepness of the slopes in this segment of the Mayacamas Range, the majority of the forests and woodland here remain undisturbed by agricultural and residential development. This continuous woodland and forest is accessed through the principal undeveloped canyons and associated watercourses.

Due to extensive agricultural and residential development within the Napa Valley, access to the Napa River along the eastern edge of the valley and to the Howell Mountain Range beyond is limited to a few remaining drainages that have retained at least a portion of their adjacent riparian habitat. Within the project area, the remaining access across the Napa Valley is Sulphur Creek. Bale Slough may provide access for reptiles and amphibians and small mammals, but in many locations it now persists as drainage ditches between vineyards with little vegetative cover and significantly reduced flows. While drainages persist due east of the Komes property, they no longer provide suitable habitat to serve as wildlife movement corridors.

- **Presence of Critical Plant Community or Wildlife Resources:**

- **Critical Plant Communities:**

- Old-growth Douglas fir forest is among the 23 plant communities considered sensitive in the Napa County Baseline Data Report. The Komes property contains 25.71 acres of Douglas fir forest. The question of whether this forest qualifies as “Old Growth” may be subjective in this case.

- This forest shares a number of characteristics with Old Growth forest including the following:

- It contains “larger” trees: The average Douglas fir diameter at breast height (DBH) within the sample plot is 27 inches, with some trees reaching 38 to 40 inches DBH (see **Table 9** and **Appendix C**). However,

depending on growing conditions, these trees can easily reach diameters of 48-60 inches or more. It is probable that the trees within this forest are not fully mature (the trees were not cored).

- Multilayered canopy: This forest supports a mature and diverse hardwood subcanopy (this canopy has been removed adjacent to the winery buildings).
- Presence of some dead and fallen trees: These trees increase the wildlife habitat value of a forest and are a characteristic of old growth forest when viewed in conjunction with other factors.

While the forest provides these characteristics of old growth forest, it is very likely, due to the moderate size of most Douglas fir (compared to the potential size of mature trees) and the intensive fire and logging history of this region, that this is a moderate age (~70-100+ years) Second Growth forest rather than a Primary or "Old Growth forest".

- **Coastal and Valley Freshwater Marsh:** These marshes are among the 23 sensitive plant communities listed in the Napa County BDR. The Komes Ranch Vineyard property contains the following marsh habitats:
  - Narrow-leaved cattail marsh (0.39 acres)
  - Two-tooth sedge marsh (2.54 acres)
  - Baltic rush marsh (0.18 acres)

Cattail marsh occurs along the shorelines of most of the reservoirs on the property and regular maintenance of these agricultural reservoirs is allowed as part of normal vineyard management. The two-tooth sedge marsh and Baltic rush marshes are located along the southern property boundary. These marshes qualify as wetland communities and are subject to regulation under the Clean Water Act. They also qualify as sensitive plant communities in Napa County.

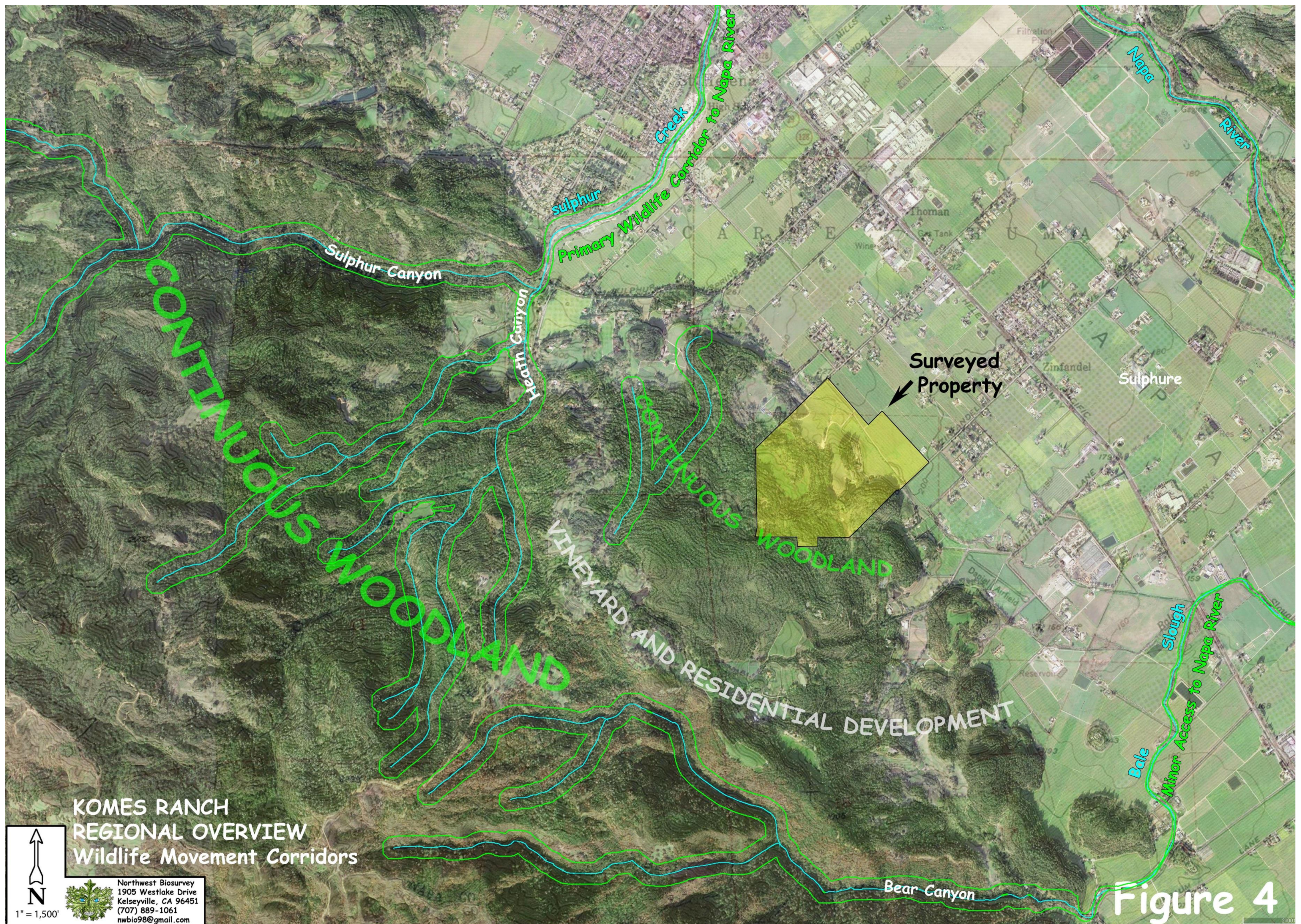
### **Critical Wildlife Resources:**

A survey for bat habitat was conducted as part of the field surveys for this project. The survey is discussed in Section 5.1 of this report. Several trees providing potential bat habitat occur within the proposed vineyard blocks. Pre-construction surveys for presence are recommended if clearing is proposed during periods when these trees may be used as roosts (see Mitigation Section for details).

Sources of upland summer and fall water are of particular importance to local wildlife. Reservoirs and marsh habitats on the property provide a valuable source

of upland summer water for wildlife. The reservoirs, which contain accessible water year-round are of particular wildlife value.

- **Woodland Age Class and Size:** A woodland assessment was conducted for this project (Section 7.0). Based on this assessment, each of the woodland and forest communities contain a mix of age classes. This mix indicates that these forests and woodlands are healthy and regenerating.
- **Trees with Unique Wildlife Value:** Woodlands on the property provide excellent wildlife value as discussed above in this section. As noted in the bat survey (Section 5.1), a number of trees within the proposed vineyard blocks provide suitable potential bat habitat.



## 8.0 CONFORMANCE WITH NAPA COUNTY BASELINE DATA REPORT (BDR)

Each of the pertinent sections of the Napa County Baseline Data Report was reviewed to determine whether the issues and biological resources with special status in Napa County have been addressed in this biological assessment.

**8.1 Sensitive Biotic Communities:** As discussed in Section 7.3, the property contains coastal and valley freshwater marsh, a community determined to be sensitive in the Napa County Baseline Data Report. Consequently, the CEQA Guidelines require review and mitigation for potential impacts to this community. Depending on the results of the regulatory agency review, the Douglas fir forest may be determined to qualify as “old growth”, which would qualify it as a sensitive community subject to CEQA review and mitigation. As noted in Section 7.3, it is our opinion that this forest is more appropriately termed “second growth” forest and is unlikely to qualify as primary, or old growth forest.

**8.2 Special Status Plants and Wildlife:** As noted in Section 2, Assessment Methodology, the pre-survey research conducted for this project included systematic reviews of the California Natural Diversity Database (CNDDDB), California Native Plant Society Electronic Inventory, and California Department of Fish and Wildlife’s Wildlife Habitat Relationships Program. The list of special status plants and wildlife used in the BDR is derived from the CNDDDB. Additionally, Tables 4-6 and 4-7 of the Special Status Plants and Wildlife sections of the BDR were reviewed to assure consistency between the lists. All species listed in the CNDDDB are subject to CEQA review pursuant to Section 15380 (d) of the CEQA Guidelines.

The floristic-level botanical survey conducted for this project identified 94 native and introduced plant taxa within the survey area. No species with sensitive regulatory status were found on the property during the surveys.

As noted in Section 5.1, a survey was conducted for bat habitat within the vineyard blocks. A number of trees within the blocks contain suitable bat roosting habitat although no sign of bats was seen during the visits.

The following wildlife species with sensitive regulatory status have a potential to occur on the Komes Ranch Vineyard property:

- |                     |                       |
|---------------------|-----------------------|
| ▪ Swainson’s hawk   | Lawrence’s gold finch |
| ▪ Lewis’ woodpecker | Loggerhead shrike     |
| ▪ Pallid bat        | Western pond turtle   |

**8.3     Potential Wildlife Movement Corridors:** The CalWild Linkage Map presented in Map 4-2 of the BDR was reviewed with respect to this project. The project area is not within a movement area as defined by the CalWild database. Local wildlife movement is discussed in detail in the Woodland Assessment, Section 7.3. The local wildlife movement corridors within the project area consist of up-slope and down-slope movement corridors within and along ephemeral stream channels. These corridors provide access to the continuous belt of forest and woodland along the eastern slope of the Mayacamas Range within the region.

**8.4.   Fisheries Resources:** There are no fisheries resources within the Komes Ranch property.

## 9.0 SUMMARY, IMPACT ANALYSIS, AND RECOMMENDATIONS

**9.1 Summary:** This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project:

- Review of current California Natural Diversity Database (CNDDDB) mapping of known sensitive plant and wildlife populations within the region.
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society *Electronic Inventory of Rare and Endangered Vascular Plants of California*, and the California Department of Fish and Wildlife's *California Wildlife Habitat Relationships System*.
- A California Department of Fish and Wildlife protocol, floristic-level field survey of the plants occurring within and in the immediate vicinity of the project.
- Surveys for sensitive bat habitat.
- A delineation of waters of the U.S. conducted according to the *Corps of Engineers Wetlands Delineation Manual, January 1987* as updated by the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, 2008*.
- A woodland assessment conducted in conformance with Napa County policy.
- Review of the Napa County Baseline Data Report (BDR), 2005.

**Sensitive Plants:** A total of 94 native and introduced plant taxa were identified on the property during the in-season, floristic-level botanical survey. No species with sensitive regulatory status were found on the property during the surveys.

As used here, the term sensitive includes species having state or federal regulatory status, defined as Rare Plant Ranks 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database. CNPS Rare Plant Rank 4 is a watch list of plants about which not enough is known to qualify them as "rare, threatened, or endangered" and consequently placed in Rare Plant Rank 1B.

**Sensitive Wildlife:** A total of 14 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDDB database for the quadrangle, inclusion in the WHR analysis, or were added based on local knowledge of the survey staff. Of these, six species have a potential to occur within the survey area. These are:

- |                         |                    |
|-------------------------|--------------------|
| ▪ Swainson's hawk       | White-tailed kite  |
| ▪ Lawrence's gold finch | Lewis's woodpecker |
| ▪ Loggerhead shrike     | Pallid bat         |

**Woodland Resources:** A Napa County Woodland Assessment was conducted for this project and is provided in Section 7.0. As shown in Table 1, the property contains a total of 25.71 acres of Douglas Fir Forest, 58.73 acres of Mixed Oak Woodland, 2.20 acres of Ghost Pine Forest, and 5.46 acres of Blue Oak Woodland. The proposed vineyard blocks contain a combined total of 4.40 acres (7.49-percent) of the Mixed Oak Woodland. Based on the woodland assessment, this vineyard acreage would contain an estimated 386 trees (see **Table 11**).

**Possible Waters of U.S.:** The total area of all delineated wetlands is **7.32 acres** in stream channels, ponds, and wetlands.

## 9.2 **Potential Impacts and Proposed Mitigation for Biological Resources:**

(For all recommended mitigation measures accepted as conditions of approval, the text should be modified to use declarative language, i.e. "should" should become "shall", etc.)

### • **Habitat Fragmentation**

**Potential Impacts:** The southwestern quarter of the property (south of proposed block O) is part of a continuous area of natural woodland and forest terrain along the western slopes of the Napa Valley. Access into this region from adjacent woodland should remain open and unfenced.

#### **Proposed Mitigation for Habitat Fragmentation:**

**Measure 1:** The use of deer fencing should be restricted to the perimeters of the proposed vineyard blocks. No deer fencing or other obstacles to wildlife passage should be installed that will restrict wildlife movement through the property or with adjacent properties.

### • **Woodland and Forest Resources**

**Potential Impact:** As shown in **Table 1**, The Komes Ranch property contains a total of 92.1 acres of forest and woodland habitats. Of this 4.40 acres (7.49-percent) of mixed oak woodland occurs within the two proposed vineyard blocks. These areas would account for an estimated 386 trees of various species as listed in **Table 11**.

### **Proposed Mitigation for Impacts to Woodland and Forest:**

**Measure 2:** The significance of this loss of woodland habitat must be determined by County staff to be in conformance with *Napa County General Plan policy CON-22*. Standard mitigation within the County of Napa calls for preservation of 70-percent of remaining woodlands. There is a combined area of 92.1 acres of forest and woodland on the property, 4.40 acres (5.03-percent) of which occurs within proposed vineyard blocks. Considering overall acreage of forest and woodland, the loss would be well within the allowable 30-percent. The final column in Table 1 shows percent loss within vineyard blocks by forest and woodland type.

- **Sensitive Plants and Wildlife**

#### **Potential Impacts:**

**Plants:** No plants with sensitive regulatory status were found within the survey area.

**Wildlife:** The following wildlife species have a potential to be present on the Komes Ranch property:

- |                         |                    |
|-------------------------|--------------------|
| ▪ Swainson's hawk       | White-tailed kite  |
| ▪ Lawrence's gold finch | Lewis's woodpecker |
| ▪ Loggerhead shrike     | Pallid bat         |

**Measure 3:** Under the Migratory Bird Treaty Act and California Fish and Game Code, nesting birds are protected from incidental take. Removal of trees during the nesting season (February 1 to August 31) must be preceded by a survey for nesting birds conducted by a qualified biologist. In the event that nesting birds are identified, a suitable construction buffer will be established around the nest site until either the end of the nesting season or upon determination by a qualified biologist that fledging has been completed, or that the nest has been abandoned. It is recommended that trees approved for removal be felled outside of the nesting season.

**Measure 4:** If work is proposed within 50 feet of woodland habitat during the maternity roosting season (April 1 through September 15), trees with features capable of supporting roosting bats shall be surveyed for bat roosts or evidence of bat roosting (guano, urine staining and scent, dead bats) by a qualified biologist within 14 days of the start of project activities or removal of vegetation. If active roosts are discovered, a buffer of 50 feet around the active roost should be established by the biologist. Removal may occur once active roosting ceases as determined by the biologist.

Downed trees should remain on the ground for 24 hours in order to allow any remaining bats to leave.

- **Waters of the U.S.**

**Potential Impacts:** Placement of fill within any of the possible waters of the U.S. mapped in Figure 3 would be regulated under the Clean Water Act.

**Proposed Mitigation for Impacts to Waters of the U.S.:**

**Measure 5:** It is recommended that all waterways mapped in **Figure 3** be avoided through the use of setbacks are required by Sonoma County regulations.

Placement of fill within Waters of the U.S. may require a Nationwide permit by the Corps of Engineers (possibly a non-reporting permit under the Nationwide Permit Program), along with a 401 Water Quality Certification from the Regional Water Quality Control Board, and 1604 Stream Alteration Agreement from the California Department of Fish and Wildlife. The County of Lake may require stream setbacks.

- **Erosion Control:**

**Potential Impacts:** Vegetation clearing and grading activities have a potential to result in sediment runoff to Benmore Creek.

**Proposed Mitigation for Erosion Control:**

**Measure 6:** All work in or near waterways and wetlands should incorporate extensive erosion control measures consistent with Napa County Grading Regulations in order to avoid erosion and the potential for transport of sediments to the Napa River and its tributaries. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required.

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## ***APPENDIX A***

**CNDDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE  
SURROUNDING CALIF. 7½' QUADS.**

### Surrounding 9-Quad List: Rutherford Quadrangle

| QUAD NAME | SCIENTIFIC NAME                                   | COMMON NAME                                | FEDERAL  | CALIF       | CDFW | CNPS |
|-----------|---------------------------------------------------|--------------------------------------------|----------|-------------|------|------|
| Calistoga | <i>Dicamptodon ensatus</i>                        | California giant salamander                | None     | None        | SSC  | -    |
| Calistoga | <i>Rana boylei</i>                                | foothill yellow-legged frog                | None     | Cand Threat | SSC  | -    |
| Calistoga | <i>Rana draytonii</i>                             | California red-legged frog                 | Threat   | None        | SSC  | -    |
| Calistoga | <i>Taricha rivularis</i>                          | red-bellied newt                           | None     | None        | SSC  | -    |
| Calistoga | <i>Accipiter striatus</i>                         | sharp-shinned hawk                         | None     | None        | WL   | -    |
| Calistoga | <i>Falco peregrinus anatum</i>                    | American peregrine falcon                  | Delisted | Delisted    | FP   | -    |
| Calistoga | <i>Syncaris pacifica</i>                          | California freshwater shrimp               | End      | End         | -    | -    |
| Calistoga | <i>Hysteroecarpus traski</i>                      | Russian River tule perch                   | None     | None        | SSC  | -    |
| Calistoga | <i>Entosphenus tridentatus</i>                    | Pacific lamprey                            | None     | None        | SSC  | -    |
| Calistoga | <i>Oncorhynchus kisutch</i> pop. 4                | coho salmon - central California coast ESU | End      | End         | -    | -    |
| Calistoga | <i>Oncorhynchus mykiss irideus</i> pop. 8         | steelhead - central California coast DPS   | Threat   | None        | -    | -    |
| Calistoga | <i>Bombus occidentalis</i>                        | western bumble bee                         | None     | None        | -    | -    |
| Calistoga | <i>Antrozous pallidus</i>                         | pallid bat                                 | None     | None        | SSC  | -    |
| Calistoga | <i>Corynorhinus townsendii</i>                    | Townsend's big-eared bat                   | None     | None        | SSC  | -    |
| Calistoga | <i>Myotis evotis</i>                              | long-eared myotis                          | None     | None        | -    | -    |
| Calistoga | <i>Myotis thysanodes</i>                          | fringed myotis                             | None     | None        | -    | -    |
| Calistoga | <i>Myotis yumanensis</i>                          | Yuma myotis                                | None     | None        | -    | -    |
| Calistoga | <i>Emys marmorata</i>                             | western pond turtle                        | None     | None        | SSC  | -    |
| Calistoga | <i>Coastal and Valley Freshwater Marsh</i>        | Coastal and Valley Freshwater Marsh        | None     | None        | -    | -    |
| Calistoga | <i>Eryngium constancei</i>                        | Loch Lomond button-celery                  | End      | End         | -    | 1B.1 |
| Calistoga | <i>Lomatium repostum</i>                          | Napa lomatium                              | None     | None        | -    | 4.3  |
| Calistoga | <i>Centromadia parryi</i> ssp. parryi             | pappose tarplant                           | None     | None        | -    | 1B.2 |
| Calistoga | <i>Erigeron biolettii</i>                         | streamside daisy                           | None     | None        | -    | 3    |
| Calistoga | <i>Harmonia nutans</i>                            | nodding harmonia                           | None     | None        | -    | 4.3  |
| Calistoga | <i>Lasthenia burkei</i>                           | Burke's goldfields                         | End      | End         | -    | 1B.1 |
| Calistoga | <i>Lessingia hololeuca</i>                        | woolly-headed lessingia                    | None     | None        | -    | 3    |
| Calistoga | <i>Plagiobothrys strictus</i>                     | Calistoga popcornflower                    | End      | Threat      | -    | 1B.1 |
| Calistoga | <i>Spergularia macrotheca</i> var. longistyla     | long-styled sand-spurrey                   | None     | None        | -    | 1B.2 |
| Calistoga | <i>Arctostaphylos stanfordiana</i> ssp. decumbens | Rincon Ridge manzanita                     | None     | None        | -    | 1B.1 |
| Calistoga | <i>Amorpha californica</i> var. napensis          | Napa false indigo                          | None     | None        | -    | 1B.2 |
| Calistoga | <i>Astragalus breweri</i>                         | Brewer's milk-vetch                        | None     | None        | -    | 4.2  |
| Calistoga | <i>Astragalus claranus</i>                        | Clara Hunt's milk-vetch                    | End      | Threat      | -    | 1B.1 |
| Calistoga | <i>Lupinus sericatus</i>                          | Cobb Mountain lupine                       | None     | None        | -    | 1B.2 |
| Calistoga | <i>Trifolium hydrophilum</i>                      | saline clover                              | None     | None        | -    | 1B.2 |
| Calistoga | <i>Monardella viridis</i>                         | green monardella                           | None     | None        | -    | 4.3  |
| Calistoga | <i>Erythronium helenae</i>                        | St. Helena fawn lily                       | None     | None        | -    | 4.2  |
| Calistoga | <i>Fritillaria purdyi</i>                         | Purdy's fritillary                         | None     | None        | -    | 4.3  |
| Calistoga | <i>Limnanthes vincularis</i>                      | Sebastopol meadowfoam                      | End      | End         | -    | 1B.1 |
| Calistoga | <i>Sidalcea hickmanii</i> ssp. napensis           | Napa checkerbloom                          | None     | None        | -    | 1B.1 |

| QUAD NAME     | SCIENTIFIC NAME                                   | COMMON NAME                    | FEDERAL | CALIF       | CDFW    | CNPS |
|---------------|---------------------------------------------------|--------------------------------|---------|-------------|---------|------|
| Calistoga     | <i>Clarkia breweri</i>                            | Brewer's clarkia               | None    | None        | -       | 4.2  |
| Calistoga     | <i>Penstemon newberryi</i> var. <i>sonomensis</i> | Sonoma beardtongue             | None    | None        | -       | 1B.3 |
| Calistoga     | <i>Calamagrostis ophitidis</i>                    | serpentine reed grass          | None    | None        | -       | 4.3  |
| Calistoga     | <i>Poa napensis</i>                               | Napa blue grass                | End     | End         | -       | 1B.1 |
| Calistoga     | <i>Puccinellia simplex</i>                        | California alkali grass        | None    | None        | -       | 1B.2 |
| Calistoga     | <i>Leptosiphon acicularis</i>                     | bristly leptosiphon            | None    | None        | -       | 4.2  |
| Calistoga     | <i>Leptosiphon jepsonii</i>                       | Jepson's leptosiphon           | None    | None        | -       | 1B.2 |
| Calistoga     | <i>Leptosiphon latisectus</i>                     | broad-lobed leptosiphon        | None    | None        | -       | 4.3  |
| Calistoga     | <i>Navarretia leucocephala</i> ssp. <i>bakeri</i> | Baker's navarretia             | None    | None        | -       | 1B.1 |
| Calistoga     | <i>Ranunculus lobbii</i>                          | Lobb's aquatic buttercup       | None    | None        | -       | 4.2  |
| Calistoga     | <i>Ceanothus confusus</i>                         | Rincon Ridge ceanothus         | None    | None        | -       | 1B.1 |
| Calistoga     | <i>Ceanothus divergens</i>                        | Calistoga ceanothus            | None    | None        | -       | 1B.2 |
| Calistoga     | <i>Ceanothus sonomensis</i>                       | Sonoma ceanothus               | None    | None        | -       | 1B.2 |
| Calistoga     | <i>Brodiaea leptandra</i>                         | narrow-anthered brodiaea       | None    | None        | -       | 1B.2 |
| Calistoga     | <i>Triteleia lugens</i>                           | dark-mouthed triteleia         | None    | None        | -       | 4.3  |
| Chiles Valley | <i>Rana boylei</i>                                | foothill yellow-legged frog    | None    | Cand Threat | SSC     | -    |
| Chiles Valley | <i>Rana draytonii</i>                             | California red-legged frog     | Threat  | None        | SSC     | -    |
| Chiles Valley | <i>Aquila chrysaetos</i>                          | golden eagle                   | None    | None        | FP ; WL | -    |
| Chiles Valley | <i>Elanus leucurus</i>                            | white-tailed kite              | None    | None        | FP      | -    |
| Chiles Valley | <i>Pandion haliaetus</i>                          | osprey                         | None    | None        | WL      | -    |
| Chiles Valley | <i>Ardea herodias</i>                             | great blue heron               | None    | None        | -       | -    |
| Chiles Valley | <i>Agelaius tricolor</i>                          | tricolored blackbird           | None    | Cand End    | SSC     | -    |
| Chiles Valley | <i>Bombus caliginosus</i>                         | obscure bumble bee             | None    | None        | -       | -    |
| Chiles Valley | <i>Antrozous pallidus</i>                         | pallid bat                     | None    | None        | SSC     | -    |
| Chiles Valley | <i>Myotis evotis</i>                              | long-eared myotis              | None    | None        | -       | -    |
| Chiles Valley | <i>Myotis yumanensis</i>                          | Yuma myotis                    | None    | None        | -       | -    |
| Chiles Valley | <i>Anodonta californiensis</i>                    | California floater             | None    | None        | -       | -    |
| Chiles Valley | <i>Anodonta oregonensis</i>                       | Oregon floater                 | None    | None        | -       | -    |
| Chiles Valley | <i>Gonidea angulata</i>                           | western ridged mussel          | None    | None        | -       | -    |
| Chiles Valley | <i>Emys marmorata</i>                             | western pond turtle            | None    | None        | SSC     | -    |
| Chiles Valley | <i>Northern Vernal Pool</i>                       | Northern Vernal Pool           | None    | None        | -       | -    |
| Chiles Valley | <i>Erigeron greenei</i>                           | Greene's narrow-leaved daisy   | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Helianthus exilis</i>                          | serpentine sunflower           | None    | None        | -       | 4.2  |
| Chiles Valley | <i>Layia septentrionalis</i>                      | Colusa layia                   | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Streptanthus hesperidis</i>                    | green jewelflower              | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Calystegia collina</i> ssp. <i>oxyphylla</i>   | Mt. Saint Helena morning-glory | None    | None        | -       | 4.2  |
| Chiles Valley | <i>Astragalus breweri</i>                         | Brewer's milk-vetch            | None    | None        | -       | 4.2  |
| Chiles Valley | <i>Fritillaria purdyi</i>                         | Purdy's fritillary             | None    | None        | -       | 4.3  |
| Chiles Valley | <i>Hesperolinon sharsmithiae</i>                  | Sharsmith's western flax       | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Clarkia gracilis</i> ssp. <i>tracyi</i>        | Tracy's clarkia                | None    | None        | -       | 4.2  |
| Chiles Valley | <i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>   | serpentine bird's-beak         | None    | None        | -       | 4.3  |

| QUAD NAME     | SCIENTIFIC NAME                           | COMMON NAME                              | FEDERAL | CALIF       | CDFW    | CNPS |
|---------------|-------------------------------------------|------------------------------------------|---------|-------------|---------|------|
| Chiles Valley | <i>Calamagrostis ophitidis</i>            | serpentine reed grass                    | None    | None        | -       | 4.3  |
| Chiles Valley | <i>Collomia diversifolia</i>              | serpentine collomia                      | None    | None        | -       | 4.3  |
| Chiles Valley | <i>Leptosiphon jepsonii</i>               | Jepson's leptosiphon                     | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Leptosiphon latisectus</i>             | broad-lobed leptosiphon                  | None    | None        | -       | 4.3  |
| Chiles Valley | <i>Navarretia rosulata</i>                | Marin County navarretia                  | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Delphinium uliginosum</i>              | swamp larkspur                           | None    | None        | -       | 4.2  |
| Chiles Valley | <i>Ranunculus lobbii</i>                  | Lobb's aquatic buttercup                 | None    | None        | -       | 4.2  |
| Chiles Valley | <i>Ceanothus sonomensis</i>               | Sonoma ceanothus                         | None    | None        | -       | 1B.2 |
| Chiles Valley | <i>Brodiaea leptandra</i>                 | narrow-anthered brodiaea                 | None    | None        | -       | 1B.2 |
| Glen Ellen    | <i>Ambystoma californiense</i>            | California tiger salamander              | Threat  | Threat      | WL      | -    |
| Glen Ellen    | <i>Dicamptodon ensatus</i>                | California giant salamander              | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Rana boylei</i>                        | foothill yellow-legged frog              | None    | Cand Threat | SSC     | -    |
| Glen Ellen    | <i>Rana draytonii</i>                     | California red-legged frog               | Threat  | None        | SSC     | -    |
| Glen Ellen    | <i>Taricha rivularis</i>                  | red-bellied newt                         | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Accipiter cooperii</i>                 | Cooper's hawk                            | None    | None        | WL      | -    |
| Glen Ellen    | <i>Aquila chrysaetos</i>                  | golden eagle                             | None    | None        | FP ; WL | -    |
| Glen Ellen    | <i>Buteo regalis</i>                      | ferruginous hawk                         | None    | None        | WL      | -    |
| Glen Ellen    | <i>Elanus leucurus</i>                    | white-tailed kite                        | None    | None        | FP      | -    |
| Glen Ellen    | <i>Eremophila alpestris actia</i>         | California horned lark                   | None    | None        | WL      | -    |
| Glen Ellen    | <i>Ardea herodias</i>                     | great blue heron                         | None    | None        | -       | -    |
| Glen Ellen    | <i>Coccyzus americanus occidentalis</i>   | western yellow-billed cuckoo             | Threat  | End         | -       | -    |
| Glen Ellen    | <i>Ammodramus savannarum</i>              | grasshopper sparrow                      | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Riparia riparia</i>                    | bank swallow                             | None    | Threat      | -       | -    |
| Glen Ellen    | <i>Asio flammeus</i>                      | short-eared owl                          | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Athene cunicularia</i>                 | burrowing owl                            | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Caecidotea tomalensis</i>              | Tomales isopod                           | None    | None        | -       | -    |
| Glen Ellen    | <i>Syncaris pacifica</i>                  | California freshwater shrimp             | End     | End         | -       | -    |
| Glen Ellen    | <i>Linderiella occidentalis</i>           | California linderiella                   | None    | None        | -       | -    |
| Glen Ellen    | <i>Lavinia symmetricus ssp. 3</i>         | Red Hills roach                          | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Oncorhynchus mykiss irideus pop. 8</i> | steelhead - central California coast DPS | Threat  | None        | -       | -    |
| Glen Ellen    | <i>Bombus crotchii</i>                    | Crotch bumble bee                        | None    | None        | -       | -    |
| Glen Ellen    | <i>Bombus occidentalis</i>                | western bumble bee                       | None    | None        | -       | -    |
| Glen Ellen    | <i>Hydrochara rickseckeri</i>             | Ricksecker's water scavenger beetle      | None    | None        | -       | -    |
| Glen Ellen    | <i>Vulpes vulpes patwin</i>               | Sacramento Valley red fox                | None    | None        | -       | -    |
| Glen Ellen    | <i>Taxidea taxus</i>                      | American badger                          | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Antrozous pallidus</i>                 | pallid bat                               | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Myotis thysanodes</i>                  | fringed myotis                           | None    | None        | -       | -    |
| Glen Ellen    | <i>Myotis volans</i>                      | long-legged myotis                       | None    | None        | -       | -    |
| Glen Ellen    | <i>Myotis yumanensis</i>                  | Yuma myotis                              | None    | None        | -       | -    |
| Glen Ellen    | <i>Emys marmorata</i>                     | western pond turtle                      | None    | None        | SSC     | -    |
| Glen Ellen    | <i>Northern Vernal Pool</i>               | Northern Vernal Pool                     | None    | None        | -       | -    |

| QUAD NAME  | SCIENTIFIC NAME                                   | COMMON NAME                              | FEDERAL | CALIF       | CDFW | CNPS |
|------------|---------------------------------------------------|------------------------------------------|---------|-------------|------|------|
| Glen Ellen | <i>Blennosperma bakeri</i>                        | Sonoma sunshine                          | End     | End         | -    | 1B.1 |
| Glen Ellen | <i>Hemizonia congesta ssp. congesta</i>           | congested-headed hayfield tarplant       | None    | None        | -    | 1B.2 |
| Glen Ellen | <i>Downingia pusilla</i>                          | dwarf downingia                          | None    | None        | -    | 2B.2 |
| Glen Ellen | <i>Legenere limosa</i>                            | legenere                                 | None    | None        | -    | 1B.1 |
| Glen Ellen | <i>Amorpha californica var. napensis</i>          | Napa false indigo                        | None    | None        | -    | 1B.2 |
| Glen Ellen | <i>Iris longipetala</i>                           | coast iris                               | None    | None        | -    | 4.2  |
| Glen Ellen | <i>Fritillaria liliacea</i>                       | fragrant fritillary                      | None    | None        | -    | 1B.2 |
| Glen Ellen | <i>Leptosiphon acicularis</i>                     | bristly leptosiphon                      | None    | None        | -    | 4.2  |
| Glen Ellen | <i>Leptosiphon jepsonii</i>                       | Jepson's leptosiphon                     | None    | None        | -    | 1B.2 |
| Glen Ellen | <i>Navarretia cotulifolia</i>                     | cotula navarretia                        | None    | None        | -    | 4.2  |
| Glen Ellen | <i>Ranunculus lobbii</i>                          | Lobb's aquatic buttercup                 | None    | None        | -    | 4.2  |
| Glen Ellen | <i>Ceanothus sonomensis</i>                       | Sonoma ceanothus                         | None    | None        | -    | 1B.2 |
| Glen Ellen | <i>Brodiaea leptandra</i>                         | narrow-anthered brodiaea                 | None    | None        | -    | 1B.2 |
| Glen Ellen | <i>Triteleia lugens</i>                           | dark-mouthed triteleia                   | None    | None        | -    | 4.3  |
| Kenwood    | <i>Dicamptodon ensatus</i>                        | California giant salamander              | None    | None        | SSC  | -    |
| Kenwood    | <i>Rana boylei</i>                                | foothill yellow-legged frog              | None    | Cand Threat | SSC  | -    |
| Kenwood    | <i>Rana draytonii</i>                             | California red-legged frog               | Threat  | None        | SSC  | -    |
| Kenwood    | <i>Taricha rivularis</i>                          | red-bellied newt                         | None    | None        | SSC  | -    |
| Kenwood    | <i>Taricha torosa</i>                             | Coast Range newt                         | None    | None        | SSC  | -    |
| Kenwood    | <i>Ardea herodias</i>                             | great blue heron                         | None    | None        | -    | -    |
| Kenwood    | <i>Strix occidentalis caurina</i>                 | northern spotted owl                     | Threat  | Threat      | SSC  | -    |
| Kenwood    | <i>Syncaris pacifica</i>                          | California freshwater shrimp             | End     | End         | -    | -    |
| Kenwood    | <i>Hysteroecarpus traski poma</i>                 | Russian River tule perch                 | None    | None        | SSC  | -    |
| Kenwood    | <i>Oncorhynchus mykiss irideus pop. 8</i>         | steelhead - central California coast DPS | Threat  | None        | -    | -    |
| Kenwood    | <i>Oncorhynchus tshawytscha pop. 17</i>           | chinook salmon - California coastal ESU  | Threat  | None        | -    | -    |
| Kenwood    | <i>Bombus occidentalis</i>                        | western bumble bee                       | None    | None        | -    | -    |
| Kenwood    | <i>Hydroporus leechi</i>                          | Leech's skyline diving beetle            | None    | None        | -    | -    |
| Kenwood    | <i>Antrozous pallidus</i>                         | pallid bat                               | None    | None        | SSC  | -    |
| Kenwood    | <i>Emys marmorata</i>                             | western pond turtle                      | None    | None        | SSC  | -    |
| Kenwood    | <i>Northern Vernal Pool</i>                       | Northern Vernal Pool                     | None    | None        | -    | -    |
| Kenwood    | <i>Valley Needlegrass Grassland</i>               | Valley Needlegrass Grassland             | None    | None        | -    | -    |
| Kenwood    | <i>Allium peninsulare var. franciscanum</i>       | Franciscan onion                         | None    | None        | -    | 1B.2 |
| Kenwood    | <i>Lomatium repostum</i>                          | Napa lomatium                            | None    | None        | -    | 4.3  |
| Kenwood    | <i>Erigeron biolettii</i>                         | streamside daisy                         | None    | None        | -    | 3    |
| Kenwood    | <i>Harmonia nutans</i>                            | nodding harmony                          | None    | None        | -    | 4.3  |
| Kenwood    | <i>Layia septentrionalis</i>                      | Colusa layia                             | None    | None        | -    | 1B.2 |
| Kenwood    | <i>Downingia pusilla</i>                          | dwarf downingia                          | None    | None        | -    | 2B.2 |
| Kenwood    | <i>Viburnum ellipticum</i>                        | oval-leaved viburnum                     | None    | None        | -    | 2B.3 |
| Kenwood    | <i>Arctostaphylos stanfordiana ssp. decumbens</i> | Rincon Ridge manzanita                   | None    | None        | -    | 1B.1 |
| Kenwood    | <i>Amorpha californica var. napensis</i>          | Napa false indigo                        | None    | None        | -    | 1B.2 |
| Kenwood    | <i>Hosackia gracilis</i>                          | harlequin lotus                          | None    | None        | -    | 4.2  |

| QUAD NAME | SCIENTIFIC NAME                            | COMMON NAME                      | FEDERAL | CALIF       | CDFW | CNPS |
|-----------|--------------------------------------------|----------------------------------|---------|-------------|------|------|
| Kenwood   | <i>Trifolium amoenum</i>                   | two-fork clover                  | End     | None        | -    | 1B.1 |
| Kenwood   | <i>Iris longipetala</i>                    | coast iris                       | None    | None        | -    | 4.2  |
| Kenwood   | <i>Juglans hindsii</i>                     | Northern California black walnut | None    | None        | -    | 1B.1 |
| Kenwood   | <i>Trichostema ruygtii</i>                 | Napa bluecurls                   | None    | None        | -    | 1B.2 |
| Kenwood   | <i>Calochortus uniflorus</i>               | pink star-tulip                  | None    | None        | -    | 4.2  |
| Kenwood   | <i>Sidalcea oregana ssp. valida</i>        | Kenwood Marsh checkerbloom       | End     | End         | -    | 1B.1 |
| Kenwood   | <i>Calandrinia breweri</i>                 | Brewer's calandrinia             | None    | None        | -    | 4.2  |
| Kenwood   | <i>Clarkia breweri</i>                     | Brewer's clarkia                 | None    | None        | -    | 4.2  |
| Kenwood   | <i>Castilleja ambigua var. ambigua</i>     | johnny-nip                       | None    | None        | -    | 4.2  |
| Kenwood   | <i>Cordylanthus tenuis ssp. brunneus</i>   | serpentine bird's-beak           | None    | None        | -    | 4.3  |
| Kenwood   | <i>Penstemon newberryi var. sonomensis</i> | Sonoma beardtongue               | None    | None        | -    | 1B.3 |
| Kenwood   | <i>Alopecurus aequalis var. sonomensis</i> | Sonoma alopecurus                | End     | None        | -    | 1B.1 |
| Kenwood   | <i>Calamagrostis ophitidis</i>             | serpentine reed grass            | None    | None        | -    | 4.3  |
| Kenwood   | <i>Leptosiphon acicularis</i>              | bristly leptosiphon              | None    | None        | -    | 4.2  |
| Kenwood   | <i>Leptosiphon jepsonii</i>                | Jepson's leptosiphon             | None    | None        | -    | 1B.2 |
| Kenwood   | <i>Leptosiphon latisectus</i>              | broad-lobed leptosiphon          | None    | None        | -    | 4.3  |
| Kenwood   | <i>Navarretia heterandra</i>               | Tehama navarretia                | None    | None        | -    | 4.3  |
| Kenwood   | <i>Navarretia leucocephala ssp. bakeri</i> | Baker's navarretia               | None    | None        | -    | 1B.1 |
| Kenwood   | <i>Ranunculus lobbii</i>                   | Lobb's aquatic buttercup         | None    | None        | -    | 4.2  |
| Kenwood   | <i>Ceanothus confusus</i>                  | Rincon Ridge ceanothus           | None    | None        | -    | 1B.1 |
| Kenwood   | <i>Ceanothus divergens</i>                 | Calistoga ceanothus              | None    | None        | -    | 1B.2 |
| Kenwood   | <i>Ceanothus gloriosus var. exaltatus</i>  | glory brush                      | None    | None        | -    | 4.3  |
| Kenwood   | <i>Ceanothus purpureus</i>                 | holly-leaved ceanothus           | None    | None        | -    | 1B.2 |
| Kenwood   | <i>Ceanothus sonomensis</i>                | Sonoma ceanothus                 | None    | None        | -    | 1B.2 |
| Kenwood   | <i>Brodiaea leptandra</i>                  | narrow-anthered brodiaea         | None    | None        | -    | 1B.2 |
| Napa      | <i>Dicamptodon ensatus</i>                 | California giant salamander      | None    | None        | SSC  | -    |
| Napa      | <i>Rana boylei</i>                         | foothill yellow-legged frog      | None    | Cand Threat | SSC  | -    |
| Napa      | <i>Rana draytonii</i>                      | California red-legged frog       | Threat  | None        | SSC  | -    |
| Napa      | <i>Accipiter cooperii</i>                  | Cooper's hawk                    | None    | None        | WL   | -    |
| Napa      | <i>Buteo swainsoni</i>                     | Swainson's hawk                  | None    | Threat      | -    | -    |
| Napa      | <i>Elanus leucurus</i>                     | white-tailed kite                | None    | None        | FP   | -    |
| Napa      | <i>Pandion haliaetus</i>                   | osprey                           | None    | None        | WL   | -    |
| Napa      | <i>Ardea alba</i>                          | great egret                      | None    | None        | -    | -    |
| Napa      | <i>Ardea herodias</i>                      | great blue heron                 | None    | None        | -    | -    |
| Napa      | <i>Egretta thula</i>                       | snowy egret                      | None    | None        | -    | -    |
| Napa      | <i>Nycticorax nycticorax</i>               | black-crowned night heron        | None    | None        | -    | -    |
| Napa      | <i>Melospiza melodia samuelis</i>          | San Pablo song sparrow           | None    | None        | SSC  | -    |
| Napa      | <i>Riparia riparia</i>                     | bank swallow                     | None    | Threat      | -    | -    |
| Napa      | <i>Baeolophus inornatus</i>                | oak titmouse                     | None    | None        | -    | -    |
| Napa      | <i>Geothlypis trichas sinuosa</i>          | saltmarsh common yellowthroat    | None    | None        | SSC  | -    |
| Napa      | <i>Setophaga petechia</i>                  | yellow warbler                   | None    | None        | SSC  | -    |

| QUAD NAME  | SCIENTIFIC NAME                                    | COMMON NAME                              | FEDERAL | CALIF       | CDFW | CNPS |
|------------|----------------------------------------------------|------------------------------------------|---------|-------------|------|------|
| Napa       | <i>Calasellus californicus</i>                     | An isopod                                | None    | None        | -    | -    |
| Napa       | <i>Syncaris pacifica</i>                           | California freshwater shrimp             | End     | End         | -    | -    |
| Napa       | <i>Mylopharodon conocephalus</i>                   | hardhead                                 | None    | None        | SSC  | -    |
| Napa       | <i>Pogonichthys macrolepidotus</i>                 | Sacramento splittail                     | None    | None        | SSC  | -    |
| Napa       | <i>Hysterocarpus traski</i>                        | Russian River tule perch                 | None    | None        | SSC  | -    |
| Napa       | <i>Hypomesus transpacificus</i>                    | Delta smelt                              | Threat  | End         | -    | -    |
| Napa       | <i>Spirinchus thaleichthys</i>                     | longfin smelt                            | Cand    | Threat      | SSC  | -    |
| Napa       | <i>Entosphenus tridentatus</i>                     | Pacific lamprey                          | None    | None        | SSC  | -    |
| Napa       | <i>Lampetra ayresii</i>                            | river lamprey                            | None    | None        | SSC  | -    |
| Napa       | <i>Oncorhynchus mykiss irideus</i> pop. 8          | steelhead - central California coast DPS | Threat  | None        | -    | -    |
| Napa       | <i>Bombus occidentalis</i>                         | western bumble bee                       | None    | None        | -    | -    |
| Napa       | <i>Taxidea taxus</i>                               | American badger                          | None    | None        | SSC  | -    |
| Napa       | <i>Antrozous pallidus</i>                          | pallid bat                               | None    | None        | SSC  | -    |
| Napa       | <i>Emys marmorata</i>                              | western pond turtle                      | None    | None        | SSC  | -    |
| Napa       | <i>Allium peninsulare</i> var. <i>franciscanum</i> | Franciscan onion                         | None    | None        | -    | 1B.2 |
| Napa       | <i>Lilaeopsis masonii</i>                          | Mason's lilaeopsis                       | None    | Rare        | -    | 1B.1 |
| Napa       | <i>Erigeron greenei</i>                            | Greene's narrow-leaved daisy             | None    | None        | -    | 1B.2 |
| Napa       | <i>Harmonia nutans</i>                             | nodding harmonia                         | None    | None        | -    | 4.3  |
| Napa       | <i>Lasthenia conjugens</i>                         | Contra Costa goldfields                  | End     | None        | -    | 1B.1 |
| Napa       | <i>Symphyotrichum lentum</i>                       | Suisun Marsh aster                       | None    | None        | -    | 1B.2 |
| Napa       | <i>Downingia pusilla</i>                           | dwarf downingia                          | None    | None        | -    | 2B.2 |
| Napa       | <i>Extriplex joaquinana</i>                        | San Joaquin spearscale                   | None    | None        | -    | 1B.2 |
| Napa       | <i>Eleocharis parvula</i>                          | small spikerush                          | None    | None        | -    | 4.3  |
| Napa       | <i>Astragalus tener</i> var. <i>tener</i>          | alkali milk-vetch                        | None    | None        | -    | 1B.2 |
| Napa       | <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>      | Delta tule pea                           | None    | None        | -    | 1B.2 |
| Napa       | <i>Trifolium amoenum</i>                           | two-fork clover                          | End     | None        | -    | 1B.1 |
| Napa       | <i>Trifolium hydrophilum</i>                       | saline clover                            | None    | None        | -    | 1B.2 |
| Napa       | <i>Juglans hindsii</i>                             | Northern California black walnut         | None    | None        | -    | 1B.1 |
| Napa       | <i>Trichostema ruygtii</i>                         | Napa bluecurls                           | None    | None        | -    | 1B.2 |
| Napa       | <i>Erythronium helenae</i>                         | St. Helena fawn lily                     | None    | None        | -    | 4.2  |
| Napa       | <i>Calandrinia breweri</i>                         | Brewer's calandrinia                     | None    | None        | -    | 4.2  |
| Napa       | <i>Clarkia gracilis</i> ssp. <i>tracyi</i>         | Tracy's clarkia                          | None    | None        | -    | 4.2  |
| Napa       | <i>Leptosiphon acicularis</i>                      | bristly leptosiphon                      | None    | None        | -    | 4.2  |
| Napa       | <i>Leptosiphon jepsonii</i>                        | Jepson's leptosiphon                     | None    | None        | -    | 1B.2 |
| Napa       | <i>Ranunculus lobbii</i>                           | Lobb's aquatic buttercup                 | None    | None        | -    | 4.2  |
| Napa       | <i>Brodiaea leptandra</i>                          | narrow-anthered brodiaea                 | None    | None        | -    | 1B.2 |
| Rutherford | <i>Dicamptodon ensatus</i>                         | California giant salamander              | None    | None        | SSC  | -    |
| Rutherford | <i>Rana boylei</i>                                 | foothill yellow-legged frog              | None    | Cand Threat | SSC  | -    |
| Rutherford | <i>Taricha rivularis</i>                           | red-bellied newt                         | None    | None        | SSC  | -    |
| Rutherford | <i>Buteo swainsoni</i>                             | Swainson's hawk                          | None    | Threat      | -    | -    |
| Rutherford | <i>Elanus leucurus</i>                             | white-tailed kite                        | None    | None        | FP   | -    |

| QUAD NAME  | SCIENTIFIC NAME                                          | COMMON NAME                              | FEDERAL  | CALIF       | CDFW | CNPS |
|------------|----------------------------------------------------------|------------------------------------------|----------|-------------|------|------|
| Rutherford | <i>Haliaeetus leucocephalus</i>                          | bald eagle                               | Delisted | End         | FP   | -    |
| Rutherford | <i>Cypseloides niger</i>                                 | black swift                              | None     | None        | SSC  | -    |
| Rutherford | <i>Ardea herodias</i>                                    | great blue heron                         | None     | None        | -    | -    |
| Rutherford | <i>Nycticorax nycticorax</i>                             | black-crowned night heron                | None     | None        | -    | -    |
| Rutherford | <i>Icteria virens</i>                                    | yellow-breasted chat                     | None     | None        | SSC  | -    |
| Rutherford | <i>Setophaga petechia</i>                                | yellow warbler                           | None     | None        | SSC  | -    |
| Rutherford | <i>Mylopharodon conocephalus</i>                         | hardhead                                 | None     | None        | SSC  | -    |
| Rutherford | <i>Hysterocarpus traski</i> pomo                         | Russian River tule perch                 | None     | None        | SSC  | -    |
| Rutherford | <i>Entosphenus tridentatus</i>                           | Pacific lamprey                          | None     | None        | SSC  | -    |
| Rutherford | <i>Lampetra ayresii</i>                                  | river lamprey                            | None     | None        | SSC  | -    |
| Rutherford | <i>Oncorhynchus mykiss irideus</i> pop. 8                | steelhead - central California coast DPS | Threat   | None        | -    | -    |
| Rutherford | <i>Bombus caliginosus</i>                                | obscure bumble bee                       | None     | None        | -    | -    |
| Rutherford | <i>Erethizon dorsatum</i>                                | North American porcupine                 | None     | None        | -    | -    |
| Rutherford | <i>Antrozous pallidus</i>                                | pallid bat                               | None     | None        | SSC  | -    |
| Rutherford | <i>Gonidea angulata</i>                                  | western ridged mussel                    | None     | None        | -    | -    |
| Rutherford | <i>Emys marmorata</i>                                    | western pond turtle                      | None     | None        | SSC  | -    |
| Rutherford | <i>Eryngium jepsonii</i>                                 | Jepson's coyote-thistle                  | None     | None        | -    | 1B.2 |
| Rutherford | <i>Erigeron biolettii</i>                                | streamside daisy                         | None     | None        | -    | 3    |
| Rutherford | <i>Erigeron greenei</i>                                  | Greene's narrow-leaved daisy             | None     | None        | -    | 1B.2 |
| Rutherford | <i>Harmonia nutans</i>                                   | nodding harmonia                         | None     | None        | -    | 4.3  |
| Rutherford | <i>Helianthus exilis</i>                                 | serpentine sunflower                     | None     | None        | -    | 4.2  |
| Rutherford | <i>Amsinckia lunaris</i>                                 | bent-flowered fiddleneck                 | None     | None        | -    | 1B.2 |
| Rutherford | <i>Streptanthus hesperidis</i>                           | green jewelflower                        | None     | None        | -    | 1B.2 |
| Rutherford | <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> | Rincon Ridge manzanita                   | None     | None        | -    | 1B.1 |
| Rutherford | <i>Amorpha californica</i> var. <i>napensis</i>          | Napa false indigo                        | None     | None        | -    | 1B.2 |
| Rutherford | <i>Astragalus claranus</i>                               | Clara Hunt's milk-vetch                  | End      | Threat      | -    | 1B.1 |
| Rutherford | <i>Lupinus sericatus</i>                                 | Cobb Mountain lupine                     | None     | None        | -    | 1B.2 |
| Rutherford | <i>Clarkia breweri</i>                                   | Brewer's clarkia                         | None     | None        | -    | 4.2  |
| Rutherford | <i>Leptosiphon acicularis</i>                            | bristly leptosiphon                      | None     | None        | -    | 4.2  |
| Rutherford | <i>Leptosiphon jepsonii</i>                              | Jepson's leptosiphon                     | None     | None        | -    | 1B.2 |
| Rutherford | <i>Ranunculus lobbii</i>                                 | Lobb's aquatic buttercup                 | None     | None        | -    | 4.2  |
| Rutherford | <i>Ceanothus confusus</i>                                | Rincon Ridge ceanothus                   | None     | None        | -    | 1B.1 |
| Rutherford | <i>Ceanothus divergens</i>                               | Calistoga ceanothus                      | None     | None        | -    | 1B.2 |
| Rutherford | <i>Ceanothus sonomensis</i>                              | Sonoma ceanothus                         | None     | None        | -    | 1B.2 |
| Rutherford | <i>Brodiaea leptandra</i>                                | narrow-anthered brodiaea                 | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Dicamptodon ensatus</i>                               | California giant salamander              | None     | None        | SSC  | -    |
| Sonoma     | <i>Rana boylei</i>                                       | foothill yellow-legged frog              | None     | Cand Threat | SSC  | -    |
| Sonoma     | <i>Rana draytonii</i>                                    | California red-legged frog               | Threat   | None        | SSC  | -    |
| Sonoma     | <i>Taricha rivularis</i>                                 | red-bellied newt                         | None     | None        | SSC  | -    |
| Sonoma     | <i>Cypseloides niger</i>                                 | black swift                              | None     | None        | SSC  | -    |
| Sonoma     | <i>Melospiza melodia</i> <i>samuelis</i>                 | San Pablo song sparrow                   | None     | None        | SSC  | -    |

| QUAD NAME  | SCIENTIFIC NAME                             | COMMON NAME                              | FEDERAL  | CALIF       | CDFW | CNPS |
|------------|---------------------------------------------|------------------------------------------|----------|-------------|------|------|
| Sonoma     | <i>Passerculus sandwichensis alaudinus</i>  | Bryant's savannah sparrow                | None     | None        | SSC  | -    |
| Sonoma     | <i>Falco columbarius</i>                    | merlin                                   | None     | None        | WL   | -    |
| Sonoma     | <i>Spinus lawrencei</i>                     | Lawrence's goldfinch                     | None     | None        | -    | -    |
| Sonoma     | <i>Riparia riparia</i>                      | bank swallow                             | None     | Threat      | -    | -    |
| Sonoma     | <i>Coturnicops noveboracensis</i>           | yellow rail                              | None     | None        | SSC  | -    |
| Sonoma     | <i>Selasphorus rufus</i>                    | rufous hummingbird                       | None     | None        | -    | -    |
| Sonoma     | <i>Syncaris pacifica</i>                    | California freshwater shrimp             | End      | End         | -    | -    |
| Sonoma     | <i>Oncorhynchus mykiss irideus pop. 8</i>   | steelhead - central California coast DPS | Threat   | None        | -    | -    |
| Sonoma     | <i>Bombus caliginosus</i>                   | obscure bumble bee                       | None     | None        | -    | -    |
| Sonoma     | <i>Bombus occidentalis</i>                  | western bumble bee                       | None     | None        | -    | -    |
| Sonoma     | <i>Antrozous pallidus</i>                   | pallid bat                               | None     | None        | SSC  | -    |
| Sonoma     | <i>Emys marmorata</i>                       | western pond turtle                      | None     | None        | SSC  | -    |
| Sonoma     | <i>Allium peninsulare var. franciscanum</i> | Franciscan onion                         | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Lomatium repostum</i>                    | Napa lomatium                            | None     | None        | -    | 4.3  |
| Sonoma     | <i>Balsamorhiza macrolepis</i>              | big-scale balsamroot                     | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Blennosperma bakeri</i>                  | Sonoma sunshine                          | End      | End         | -    | 1B.1 |
| Sonoma     | <i>Erigeron biolettii</i>                   | streamside daisy                         | None     | None        | -    | 3    |
| Sonoma     | <i>Harmonia nutans</i>                      | nodding harmonia                         | None     | None        | -    | 4.3  |
| Sonoma     | <i>Hemizonia congesta ssp. congesta</i>     | congested-headed hayfield tarplant       | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Downingia pusilla</i>                    | dwarf downingia                          | None     | None        | -    | 2B.2 |
| Sonoma     | <i>Viburnum ellipticum</i>                  | oval-leaved viburnum                     | None     | None        | -    | 2B.3 |
| Sonoma     | <i>Amorpha californica var. napensis</i>    | Napa false indigo                        | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Lupinus sericatus</i>                    | Cobb Mountain lupine                     | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Monardella viridis</i>                   | green monardella                         | None     | None        | -    | 4.3  |
| Sonoma     | <i>Lilium rubescens</i>                     | redwood lily                             | None     | None        | -    | 4.2  |
| Sonoma     | <i>Sidalcea hickmanii ssp. napensis</i>     | Napa checkerbloom                        | None     | None        | -    | 1B.1 |
| Sonoma     | <i>Calandrinia breweri</i>                  | Brewer's calandrinia                     | None     | None        | -    | 4.2  |
| Sonoma     | <i>Antirrhinum virga</i>                    | twig-like snapdragon                     | None     | None        | -    | 4.3  |
| Sonoma     | <i>Leptosiphon acicularis</i>               | bristly leptosiphon                      | None     | None        | -    | 4.2  |
| Sonoma     | <i>Ceanothus confusus</i>                   | Rincon Ridge ceanothus                   | None     | None        | -    | 1B.1 |
| Sonoma     | <i>Ceanothus sonomensis</i>                 | Sonoma ceanothus                         | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Horkelia tenuiloba</i>                   | thin-lobed horkelia                      | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Brodiaea leptandra</i>                   | narrow-anthered brodiaea                 | None     | None        | -    | 1B.2 |
| Sonoma     | <i>Triteleia lugens</i>                     | dark-mouthed triteleia                   | None     | None        | -    | 4.3  |
| St. Helena | <i>Dicamptodon ensatus</i>                  | California giant salamander              | None     | None        | SSC  | -    |
| St. Helena | <i>Rana boylei</i>                          | foothill yellow-legged frog              | None     | Cand Threat | SSC  | -    |
| St. Helena | <i>Rana draytonii</i>                       | California red-legged frog               | Threat   | None        | SSC  | -    |
| St. Helena | <i>Haliaeetus leucocephalus</i>             | bald eagle                               | Delisted | End         | FP   | -    |
| St. Helena | <i>Ardea herodias</i>                       | great blue heron                         | None     | None        | -    | -    |
| St. Helena | <i>Progne subis</i>                         | purple martin                            | None     | None        | SSC  | -    |
| St. Helena | <i>Setophaga petechia</i>                   | yellow warbler                           | None     | None        | SSC  | -    |

| QUAD NAME  | SCIENTIFIC NAME                            | COMMON NAME                              | FEDERAL | CALIF  | CDFW | CNPS |
|------------|--------------------------------------------|------------------------------------------|---------|--------|------|------|
| St. Helena | <i>Athene cunicularia</i>                  | burrowing owl                            | None    | None   | SSC  | -    |
| St. Helena | <i>Strix occidentalis caurina</i>          | northern spotted owl                     | Threat  | Threat | SSC  | -    |
| St. Helena | <i>Oncorhynchus mykiss irideus pop. 8</i>  | steelhead - central California coast DPS | Threat  | None   | -    | -    |
| St. Helena | <i>Bombus caliginosus</i>                  | obscure bumble bee                       | None    | None   | -    | -    |
| St. Helena | <i>Erethizon dorsatum</i>                  | North American porcupine                 | None    | None   | -    | -    |
| St. Helena | <i>Antrozous pallidus</i>                  | pallid bat                               | None    | None   | SSC  | -    |
| St. Helena | <i>Corynorhinus townsendii</i>             | Townsend's big-eared bat                 | None    | None   | SSC  | -    |
| St. Helena | <i>Myotis evotis</i>                       | long-eared myotis                        | None    | None   | -    | -    |
| St. Helena | <i>Myotis thysanodes</i>                   | fringed myotis                           | None    | None   | -    | -    |
| St. Helena | <i>Myotis yumanensis</i>                   | Yuma myotis                              | None    | None   | -    | -    |
| St. Helena | <i>Emys marmorata</i>                      | western pond turtle                      | None    | None   | SSC  | -    |
| St. Helena | <i>Northern Vernal Pool</i>                | Northern Vernal Pool                     | None    | None   | -    | -    |
| St. Helena | <i>Eryngium jepsonii</i>                   | Jepson's coyote-thistle                  | None    | None   | -    | 1B.2 |
| St. Helena | <i>Lomatium repostum</i>                   | Napa lomatium                            | None    | None   | -    | 4.3  |
| St. Helena | <i>Erigeron biolettii</i>                  | streamside daisy                         | None    | None   | -    | 3    |
| St. Helena | <i>Erigeron greenei</i>                    | Greene's narrow-leaved daisy             | None    | None   | -    | 1B.2 |
| St. Helena | <i>Harmonia nutans</i>                     | nodding harmonia                         | None    | None   | -    | 4.3  |
| St. Helena | <i>Helianthus exilis</i>                   | serpentine sunflower                     | None    | None   | -    | 4.2  |
| St. Helena | <i>Layia septentrionalis</i>               | Colusa layia                             | None    | None   | -    | 1B.2 |
| St. Helena | <i>Streptanthus hesperidis</i>             | green jewelflower                        | None    | None   | -    | 1B.2 |
| St. Helena | <i>Amorpha californica var. napensis</i>   | Napa false indigo                        | None    | None   | -    | 1B.2 |
| St. Helena | <i>Astragalus breweri</i>                  | Brewer's milk-vetch                      | None    | None   | -    | 4.2  |
| St. Helena | <i>Astragalus claranus</i>                 | Clara Hunt's milk-vetch                  | End     | Threat | -    | 1B.1 |
| St. Helena | <i>Astragalus clevelandii</i>              | Cleveland's milk-vetch                   | None    | None   | -    | 4.3  |
| St. Helena | <i>Lupinus sericatus</i>                   | Cobb Mountain lupine                     | None    | None   | -    | 1B.2 |
| St. Helena | <i>Trichostema ruygtii</i>                 | Napa bluecurls                           | None    | None   | -    | 1B.2 |
| St. Helena | <i>Erythronium helenae</i>                 | St. Helena fawn lily                     | None    | None   | -    | 4.2  |
| St. Helena | <i>Hesperolinon sharsmithiae</i>           | Sharsmith's western flax                 | None    | None   | -    | 1B.2 |
| St. Helena | <i>Sidalcea oregana ssp. hydrophila</i>    | marsh checkerbloom                       | None    | None   | -    | 1B.2 |
| St. Helena | <i>Toxicoscordion fontanum</i>             | marsh zigadenus                          | None    | None   | -    | 4.2  |
| St. Helena | <i>Clarkia gracilis ssp. tracyi</i>        | Tracy's clarkia                          | None    | None   | -    | 4.2  |
| St. Helena | <i>Castilleja ambigua var. ambigua</i>     | johnny-nip                               | None    | None   | -    | 4.2  |
| St. Helena | <i>Cordylanthus tenuis ssp. brunneus</i>   | serpentine bird's-beak                   | None    | None   | -    | 4.3  |
| St. Helena | <i>Penstemon newberryi var. sonomensis</i> | Sonoma beardtongue                       | None    | None   | -    | 1B.3 |
| St. Helena | <i>Calamagrostis ophitidis</i>             | serpentine reed grass                    | None    | None   | -    | 4.3  |
| St. Helena | <i>Collomia diversifolia</i>               | serpentine collomia                      | None    | None   | -    | 4.3  |
| St. Helena | <i>Leptosiphon jepsonii</i>                | Jepson's leptosiphon                     | None    | None   | -    | 1B.2 |
| St. Helena | <i>Navarretia cotulifolia</i>              | cotula navarretia                        | None    | None   | -    | 4.2  |
| St. Helena | <i>Navarretia leucocephala ssp. bakeri</i> | Baker's navarretia                       | None    | None   | -    | 1B.1 |
| St. Helena | <i>Delphinium uliginosum</i>               | swamp larkspur                           | None    | None   | -    | 4.2  |
| St. Helena | <i>Ranunculus lobbii</i>                   | Lobb's aquatic buttercup                 | None    | None   | -    | 4.2  |

| QUAD NAME  | SCIENTIFIC NAME                                | COMMON NAME                              | FEDERAL  | CALIF       | CDFW | CNPS |
|------------|------------------------------------------------|------------------------------------------|----------|-------------|------|------|
| St. Helena | <i>Ceanothus confusus</i>                      | Rincon Ridge ceanothus                   | None     | None        | -    | 1B.1 |
| St. Helena | <i>Ceanothus divergens</i>                     | Calistoga ceanothus                      | None     | None        | -    | 1B.2 |
| St. Helena | <i>Ceanothus pinetorum</i>                     | Kern ceanothus                           | None     | None        | -    | 4.3  |
| St. Helena | <i>Ceanothus purpureus</i>                     | holly-leaved ceanothus                   | None     | None        | -    | 1B.2 |
| St. Helena | <i>Ceanothus sonomensis</i>                    | Sonoma ceanothus                         | None     | None        | -    | 1B.2 |
| St. Helena | <i>Brodiaea leptandra</i>                      | narrow-anthered brodiaea                 | None     | None        | -    | 1B.2 |
| St. Helena | <i>Triteleia lugens</i>                        | dark-mouthed triteleia                   | None     | None        | -    | 4.3  |
| Yountville | <i>Rana boylei</i>                             | foothill yellow-legged frog              | None     | Cand Threat | SSC  | -    |
| Yountville | <i>Elanus leucurus</i>                         | white-tailed kite                        | None     | None        | FP   | -    |
| Yountville | <i>Haliaeetus leucocephalus</i>                | bald eagle                               | Delisted | End         | FP   | -    |
| Yountville | <i>Ardea alba</i>                              | great egret                              | None     | None        | -    | -    |
| Yountville | <i>Ardea herodias</i>                          | great blue heron                         | None     | None        | -    | -    |
| Yountville | <i>Falco peregrinus anatum</i>                 | American peregrine falcon                | Delisted | Delisted    | FP   | -    |
| Yountville | <i>Icteria virens</i>                          | yellow-breasted chat                     | None     | None        | SSC  | -    |
| Yountville | <i>Setophaga petechia</i>                      | yellow warbler                           | None     | None        | SSC  | -    |
| Yountville | <i>Phalacrocorax auritus</i>                   | double-crested cormorant                 | None     | None        | WL   | -    |
| Yountville | <i>Oncorhynchus mykiss irideus pop. 8</i>      | steelhead - central California coast DPS | Threat   | None        | -    | -    |
| Yountville | <i>Bombus caliginosus</i>                      | obscure bumble bee                       | None     | None        | -    | -    |
| Yountville | <i>Antrozous pallidus</i>                      | pallid bat                               | None     | None        | SSC  | -    |
| Yountville | <i>Emys marmorata</i>                          | western pond turtle                      | None     | None        | SSC  | -    |
| Yountville | <i>Sagittaria sanfordii</i>                    | Sanford's arrowhead                      | None     | None        | -    | 1B.2 |
| Yountville | <i>Eryngium jepsonii</i>                       | Jepson's coyote-thistle                  | None     | None        | -    | 1B.2 |
| Yountville | <i>Lomatium repostum</i>                       | Napa lomatium                            | None     | None        | -    | 4.3  |
| Yountville | <i>Erigeron greenei</i>                        | Greene's narrow-leaved daisy             | None     | None        | -    | 1B.2 |
| Yountville | <i>Harmonia nutans</i>                         | nodding harmonia                         | None     | None        | -    | 4.3  |
| Yountville | <i>Micropus amphibolus</i>                     | Mt. Diablo cottonweed                    | None     | None        | -    | 3.2  |
| Yountville | <i>Streptanthus hesperidis</i>                 | green jewelflower                        | None     | None        | -    | 1B.2 |
| Yountville | <i>Downingia pusilla</i>                       | dwarf downingia                          | None     | None        | -    | 2B.2 |
| Yountville | <i>Astragalus clevelandii</i>                  | Cleveland's milk-vetch                   | None     | None        | -    | 4.3  |
| Yountville | <i>Monardella viridis</i>                      | green monardella                         | None     | None        | -    | 4.3  |
| Yountville | <i>Trichostema ruygtii</i>                     | Napa bluecurls                           | None     | None        | -    | 1B.2 |
| Yountville | <i>Limnanthes vincularis</i>                   | Sebastopol meadowfoam                    | End      | End         | -    | 1B.1 |
| Yountville | <i>Hesperolinon sharsmithiae</i>               | Sharsmith's western flax                 | None     | None        | -    | 1B.2 |
| Yountville | <i>Clarkia gracilis ssp. tracyi</i>            | Tracy's clarkia                          | None     | None        | -    | 4.2  |
| Yountville | <i>Castilleja ambigua var. ambigua</i>         | johnny-nip                               | None     | None        | -    | 4.2  |
| Yountville | <i>Castilleja ambigua var. meadii</i>          | Mead's owls-clover                       | None     | None        | -    | 1B.1 |
| Yountville | <i>Penstemon newberryi var. sonomensis</i>     | Sonoma beardtongue                       | None     | None        | -    | 1B.3 |
| Yountville | <i>Leptosiphon acicularis</i>                  | bristly leptosiphon                      | None     | None        | -    | 4.2  |
| Yountville | <i>Leptosiphon jepsonii</i>                    | Jepson's leptosiphon                     | None     | None        | -    | 1B.2 |
| Yountville | <i>Leptosiphon latisectus</i>                  | broad-lobed leptosiphon                  | None     | None        | -    | 4.3  |
| Yountville | <i>Navarretia leucocephala ssp. pauciflora</i> | few-flowered navarretia                  | End      | Threat      | -    | 1B.1 |

| QUAD NAME  | SCIENTIFIC NAME            | COMMON NAME              | FEDERAL | CALIF | CDFW | CNPS |
|------------|----------------------------|--------------------------|---------|-------|------|------|
| Yountville | <i>Ranunculus lobbii</i>   | Lobb's aquatic buttercup | None    | None  | -    | 4.2  |
| Yountville | <i>Ceanothus purpureus</i> | holly-leaved ceanothus   | None    | None  | -    | 1B.2 |
| Yountville | <i>Brodiaea leptandra</i>  | narrow-anthered brodiaea | None    | None  | -    | 1B.2 |

#### KEY FOR 9-QUAD LIST:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California  
 1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California  
 1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California  
 2A = Presumed extinct in California, but extant elsewhere  
 2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.  
 2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.  
 2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.  
 3 = Plants about which we need more information (Review List)  
 3.1 = Plants about which we need more information (Review List); seriously threatened in California  
 3.2 = Plants about which we need more information (Review List); fairly threatened in California  
 3.3 = Plants about which we need more information (Review List); not very threatened in California  
 4.2 = Plants of limited distribution (watch list); fairly threatened in California  
 4.3 = Plants of limited distribution (watch list); not very threatened in California

SE/ST/SD=State Endangered/Threatened/Delisted

SSC=CDFW Species of Special Concern

WL=CDFW Watch List

FPE/FPT/FPD/FP=Federal Proposed Endangered/Threatened/Delisting

Thrt=Threatened

Cand=Candidate

SC/SCD=State Candidate for Listing/Delisting

SFP=State Fully Protected

FE/FT/FD=Federal Endangered/Threatened/Delisted

FC=Federal Candidate

End=Endangered

Prop=Proposed

## ***APPENDIX B***

### **WILDLIFE HABITAT RELATIONSHIPS SYSTEM RESULTS**



**CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM**  
 supported by the  
**CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP**  
 and maintained by the  
**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**  
**Database Version: 9.0**

**SPECIES SUMMARY REPORT**

FE = Federal Endangered      CF = California Fully Protected      PT = Federally-Proposed Threatened      CD = CDF Sensitive  
 FT = Federal Threatened      CP = California Protected      FC = Federal Candidate      HA = Harvest  
 CE = California Endangered      SC = California Species of Special Concern      BL = BLM Sensitive  
 CT = California Threatened      PE = Federally-Proposed Endangered      FS = USFS Sensitive

Note: Any given status code for a species may apply to the full species or to only one or more subspecies or distinct population segments.

| ID   | Species Name                  | Status |    |          | Native/Introduced |
|------|-------------------------------|--------|----|----------|-------------------|
| A001 | CALIFORNIA TIGER SALAMANDER   | FE FT  | CT | SC       | NATIVE            |
| A004 | CALIFORNIA GIANT SALAMANDER   |        |    |          | NATIVE            |
| A006 | ROUGH-SKINNED NEWT            |        |    |          | NATIVE            |
| A007 | CALIFORNIA NEWT               |        |    | SC       | NATIVE            |
| A012 | COMMON ENSATINA               |        |    | SC BL FS | NATIVE            |
| A014 | CALIFORNIA SLENDER SALAMANDER |        |    |          | NATIVE            |
| A020 | SPECKLED BLACK SALAMANDER     |        |    |          | NATIVE            |
| A022 | ARBOREAL SALAMANDER           |        |    |          | NATIVE            |
| A028 | WESTERN SPADEFOOT             |        |    | SC BL    | NATIVE            |
| B006 | PIED-BILLED GREBE             |        |    |          | NATIVE            |
| B009 | EARED GREBE                   |        |    |          | NATIVE            |
| B010 | WESTERN GREBE                 |        |    |          | NATIVE            |
| B044 | DOUBLE-CRESTED CORMORANT      |        |    |          | NATIVE            |
| B049 | AMERICAN BITTERN              |        |    |          | NATIVE            |
| B051 | GREAT BLUE HERON              |        |    | CD       | NATIVE            |
| B052 | GREAT EGRET                   |        |    | CD       | NATIVE            |
| B053 | SNOWY EGRET                   |        |    |          | NATIVE            |
| B057 | CATTLE EGRET                  |        |    |          | NATIVE            |
| B058 | GREEN HERON                   |        |    |          | NATIVE            |
| B059 | BLACK-CROWNED NIGHT HERON     |        |    |          | NATIVE            |
| B067 | TUNDRA SWAN                   |        |    |          | NATIVE            |
| B070 | GREATER WHITE-FRONTED GOOSE   |        |    | SC HA    | NATIVE            |
| B071 | SNOW GOOSE                    |        |    | HA       | NATIVE            |
| B072 | ROSS' S GOOSE                 |        |    | HA       | NATIVE            |
| B075 | CANADA GOOSE                  |        |    | HA       | NATIVE            |
| B076 | WOOD DUCK                     |        |    | HA       | NATIVE            |
| B077 | GREEN-WINGED TEAL             |        |    | HA       | NATIVE            |
| B079 | MALLARD                       |        |    | HA       | NATIVE            |
| B080 | NORTHERN PINTAIL              |        |    | HA       | NATIVE            |
| B082 | BLUE-WINGED TEAL              |        |    | HA       | NATIVE            |
| B083 | CINNAMON TEAL                 |        |    | HA       | NATIVE            |
| B085 | GADWALL                       |        |    | HA       | NATIVE            |
| B086 | EURASIAN WIGEON               |        |    | HA       | NATIVE            |

|      |                     |             |          |        |
|------|---------------------|-------------|----------|--------|
| B087 | AMERICAN WIGEON     |             | HA       | NATIVE |
| B089 | CANVASBACK          |             | HA       | NATIVE |
| B090 | REDHEAD             | SC          | HA       | NATIVE |
| B091 | RING-NECKED DUCK    |             | HA       | NATIVE |
| B094 | LESSER SCAUP        |             | HA       | NATIVE |
| B103 | BUFFLEHEAD          |             | HA       | NATIVE |
| B104 | HOODED MERGANSER    |             | HA       | NATIVE |
| B105 | COMMON MERGANSER    |             | HA       | NATIVE |
| B107 | RUDDY DUCK          |             | HA       | NATIVE |
| B108 | TURKEY VULTURE      |             |          | NATIVE |
| B110 | OSPREY              |             | CD       | NATIVE |
| B111 | WHITE-TAILED KITE   | CF          | BL       | NATIVE |
| B113 | BALD EAGLE          | CE<br>CF    | BL FS CD | NATIVE |
| B114 | NORTHERN HARRIER    | SC          |          | NATIVE |
| B115 | SHARP-SHINNED HAWK  |             |          | NATIVE |
| B116 | COOPER'S HAWK       |             |          | NATIVE |
| B119 | RED-SHOULDERED HAWK |             |          | NATIVE |
| B123 | RED-TAILED HAWK     |             |          | NATIVE |
| B124 | FERRUGINOUS HAWK    |             |          | NATIVE |
| B125 | ROUGH-LEGGED HAWK   |             |          | NATIVE |
| B126 | GOLDEN EAGLE        | CF          | BL CD    | NATIVE |
| B127 | AMERICAN KESTREL    |             |          | NATIVE |
| B128 | MERLIN              |             |          | NATIVE |
| B131 | PRAIRIE FALCON      |             |          | NATIVE |
| B140 | CALIFORNIA QUAIL    | SC          | HA       | NATIVE |
| B141 | MOUNTAIN QUAIL      |             | HA       | NATIVE |
| B143 | BLACK RAIL          | CT CF       | BL       | NATIVE |
| B144 | CLAPPER RAIL        | FE CE CT CF |          | NATIVE |
| B145 | VIRGINIA RAIL       |             |          | NATIVE |
| B146 | SORA                |             |          | NATIVE |
| B148 | COMMON GALLINULE    |             | HA       | NATIVE |
| B149 | AMERICAN COOT       |             | HA       | NATIVE |
| B156 | SEMIPALMATED PLOVER |             |          | NATIVE |
| B158 | KILLDEER            |             |          | NATIVE |
| B159 | MOUNTAIN PLOVER     | SC          | BL       | NATIVE |
| B165 | GREATER YELLOWLEGS  |             |          | NATIVE |
| B166 | LESSER YELLOWLEGS   |             |          | NATIVE |
| B168 | WILLET              |             |          | NATIVE |
| B170 | SPOTTED SANDPIPER   |             |          | NATIVE |
| B172 | WHIMBREL            |             |          | NATIVE |
| B173 | LONG-BILLED CURLEW  |             |          | NATIVE |
| B176 | MARBLED GODWIT      |             |          | NATIVE |
| B183 | WESTERN SANDPIPER   |             |          | NATIVE |
| B185 | LEAST SANDPIPER     |             |          | NATIVE |

|      |                           |    |             |        |
|------|---------------------------|----|-------------|--------|
| B196 | SHORT-BILLED DOWITCHER    |    |             | NATIVE |
| B197 | LONG-BILLED DOWITCHER     |    |             | NATIVE |
| B199 | WILSON'S SNIPE            |    |             | NATIVE |
| B200 | WILSON'S PHALAROPE        |    |             | NATIVE |
| B211 | BONAPARTE'S GULL          |    |             | NATIVE |
| B214 | RING-BILLED GULL          |    |             | NATIVE |
| B215 | CALIFORNIA GULL           |    |             | NATIVE |
| B227 | CASPIAN TERN              |    |             | NATIVE |
| B231 | COMMON TERN               |    |             | NATIVE |
| B233 | FORSTER'S TERN            |    |             | NATIVE |
| B251 | BAND-TAILED PIGEON        |    | HA          | NATIVE |
| B255 | MOURNING DOVE             |    | HA          | NATIVE |
| B260 | GREATER ROADRUNNER        |    |             | NATIVE |
| B262 | BARN OWL                  |    |             | NATIVE |
| B264 | WESTERN SCREECH OWL       |    |             | NATIVE |
| B265 | GREAT HORNED OWL          |    |             | NATIVE |
| B267 | NORTHERN PYGMY OWL        |    |             | NATIVE |
| B269 | BURROWING OWL             |    | SC BL       | NATIVE |
| B270 | SPOTTED OWL               | FT | SC BL FS CD | NATIVE |
| B272 | LONG-EARED OWL            |    | SC          | NATIVE |
| B273 | SHORT-EARED OWL           |    | SC          | NATIVE |
| B274 | NORTHERN SAW-WHET OWL     |    |             | NATIVE |
| B277 | COMMON POORWILL           |    |             | NATIVE |
| B286 | BLACK-CHINNED HUMMINGBIRD |    |             | NATIVE |
| B287 | ANNA'S HUMMINGBIRD        |    |             | NATIVE |
| B289 | CALLIOPE HUMMINGBIRD      |    |             | NATIVE |
| B291 | RUFIOUS HUMMINGBIRD       |    |             | NATIVE |
| B292 | ALLEN'S HUMMINGBIRD       |    |             | NATIVE |
| B293 | BELTED KINGFISHER         |    |             | NATIVE |
| B294 | LEWIS' S WOODPECKER       |    |             | NATIVE |
| B296 | ACORN WOODPECKER          |    |             | NATIVE |
| B299 | RED-BREASTED SAPSUCKER    |    |             | NATIVE |
| B302 | NUTTALL'S WOODPECKER      |    |             | NATIVE |
| B303 | DOWNY WOODPECKER          |    |             | NATIVE |
| B304 | HAIRY WOODPECKER          |    |             | NATIVE |
| B307 | NORTHERN FLICKER          |    |             | NATIVE |
| B308 | PILEATED WOODPECKER       |    |             | NATIVE |
| B309 | OLIVE-SIDED FLYCATCHER    |    | SC          | NATIVE |
| B311 | WESTERN WOOD-PEWEE        |    |             | NATIVE |
| B318 | DUSKY FLYCATCHER          |    |             | NATIVE |
| B320 | PACIFIC-SLOPE FLYCATCHER  |    |             | NATIVE |
| B321 | BLACK PHOEBE              |    |             | NATIVE |
| B323 | SAY'S PHOEBE              |    |             | NATIVE |
| B326 | ASH-THROATED FLYCATCHER   |    |             | NATIVE |

|      |                               |       |        |
|------|-------------------------------|-------|--------|
| B333 | WESTERN KINGBIRD              |       | NATIVE |
| B337 | HORNED LARK                   |       | NATIVE |
| B338 | PURPLE MARTIN                 | SC    | NATIVE |
| B339 | TREE SWALLOW                  |       | NATIVE |
| B340 | VIOLET-GREEN SWALLOW          |       | NATIVE |
| B341 | NORTHERN ROUGH-WINGED SWALLOW |       | NATIVE |
| B342 | BANK SWALLOW                  | CT BL | NATIVE |
| B343 | CLIFF SWALLOW                 |       | NATIVE |
| B346 | STELLER'S JAY                 |       | NATIVE |
| B348 | WESTERN SCRUB-JAY             |       | NATIVE |
| B352 | YELLOW-BILLED MAGPIE          |       | NATIVE |
| B353 | AMERICAN CROW                 | HA    | NATIVE |
| B354 | COMMON RAVEN                  |       | NATIVE |
| B357 | CHESTNUT-BACKED CHICKADEE     |       | NATIVE |
| B358 | OAK TITMOUSE                  |       | NATIVE |
| B360 | BUSHTIT                       |       | NATIVE |
| B361 | RED-BREASTED NUTHATCH         |       | NATIVE |
| B362 | WHITE-BREASTED NUTHATCH       |       | NATIVE |
| B364 | BROWN CREEPER                 |       | NATIVE |
| B367 | CANYON WREN                   |       | NATIVE |
| B368 | BEWICK'S WREN                 | SC    | NATIVE |
| B369 | HOUSE WREN                    |       | NATIVE |
| B370 | WINTER WREN                   |       | NATIVE |
| B372 | MARSH WREN                    | SC    | NATIVE |
| B375 | GOLDEN-CROWNED KINGLET        |       | NATIVE |
| B376 | RUBY-CROWNED KINGLET          |       | NATIVE |
| B377 | BLUE-GRAY GNATCATCHER         |       | NATIVE |
| B380 | WESTERN BLUEBIRD              |       | NATIVE |
| B381 | MOUNTAIN BLUEBIRD             |       | NATIVE |
| B382 | TOWNSEND'S SOLITAIRE          |       | NATIVE |
| B385 | SWAINSON'S THRUSH             |       | NATIVE |
| B386 | HERMIT THRUSH                 |       | NATIVE |
| B389 | AMERICAN ROBIN                |       | NATIVE |
| B390 | VARIED THRUSH                 |       | NATIVE |
| B391 | WRENTIT                       |       | NATIVE |
| B393 | NORTHERN MOCKINGBIRD          |       | NATIVE |
| B398 | CALIFORNIA THRASHER           |       | NATIVE |
| B404 | AMERICAN PIPIT                |       | NATIVE |
| B407 | CEDAR WAXWING                 |       | NATIVE |
| B408 | PHAINOPEPLA                   |       | NATIVE |
| B410 | LOGGERHEAD SHRIKE             | FE SC | NATIVE |
| B415 | CASSIN'S VIREO                |       | NATIVE |
| B417 | HUTTON'S VIREO                | SC    | NATIVE |
| B418 | WARBLING VIREO                |       | NATIVE |

|      |                             |       |        |
|------|-----------------------------|-------|--------|
| B425 | ORANGE-CROWNED WARBLER      |       | NATIVE |
| B426 | NASHVILLE WARBLER           |       | NATIVE |
| B430 | YELLOW WARBLER              | SC    | NATIVE |
| B435 | YELLOW-RUMPED WARBLER       |       | NATIVE |
| B436 | BLACK-THROATED GRAY WARBLER |       | NATIVE |
| B437 | TOWNSEND'S WARBLER          |       | NATIVE |
| B438 | HERMIT WARBLER              |       | NATIVE |
| B460 | MACGILLIVRAY'S WARBLER      |       | NATIVE |
| B461 | COMMON YELLOWTHROAT         | SC    | NATIVE |
| B463 | WILSON'S WARBLER            |       | NATIVE |
| B471 | WESTERN TANAGER             |       | NATIVE |
| B475 | BLACK-HEADED GROSBEAK       |       | NATIVE |
| B477 | LAZULI BUNTING              |       | NATIVE |
| B483 | SPOTTED TOWHEE              | SC    | NATIVE |
| B484 | CALIFORNIA TOWHEE           | FT CE | NATIVE |
| B487 | RUFIOUS-CROWNED SPARROW     | SC    | NATIVE |
| B489 | CHIPPING SPARROW            |       | NATIVE |
| B494 | VESPER SPARROW              | SC    | NATIVE |
| B495 | LARK SPARROW                |       | NATIVE |
| B499 | SAVANNAH SPARROW            | CE SC | NATIVE |
| B501 | GRASSHOPPER SPARROW         | SC    | NATIVE |
| B504 | FOX SPARROW                 |       | NATIVE |
| B505 | SONG SPARROW                | SC    | NATIVE |
| B506 | LINCOLN'S SPARROW           |       | NATIVE |
| B509 | GOLDEN-CROWNED SPARROW      |       | NATIVE |
| B510 | WHITE-CROWNED SPARROW       |       | NATIVE |
| B512 | DARK-EYED JUNCO             |       | NATIVE |
| B519 | RED-WINGED BLACKBIRD        | SC    | NATIVE |
| B520 | TRICOLORED BLACKBIRD        | SC BL | NATIVE |
| B521 | WESTERN MEADOWLARK          |       | NATIVE |
| B522 | YELLOW-HEADED BLACKBIRD     | SC    | NATIVE |
| B524 | BREWER'S BLACKBIRD          |       | NATIVE |
| B528 | BROWN-HEADED COWBIRD        |       | NATIVE |
| B532 | BULLOCK'S ORIOLE            |       | NATIVE |
| B536 | PURPLE FINCH                |       | NATIVE |
| B538 | HOUSE FINCH                 |       | NATIVE |
| B539 | RED CROSSBILL               |       | NATIVE |
| B542 | PINE SISKIN                 |       | NATIVE |
| B543 | LESSER GOLDFINCH            |       | NATIVE |
| B544 | LAWRENCE'S GOLDFINCH        |       | NATIVE |
| B545 | AMERICAN GOLDFINCH          |       | NATIVE |
| B546 | EVENING GROSBEAK            |       | NATIVE |
| B548 | CLARK'S GREBE               |       | NATIVE |
| B554 | PLUMBEOUS VIREO             |       | NATIVE |

|      |                            |    |          |        |
|------|----------------------------|----|----------|--------|
| B629 | PACIFIC GOLDEN-PLOVER      |    |          | NATIVE |
| B656 | RED PHALAROPE              |    |          | NATIVE |
| B699 | BARRED OWL                 |    |          | NATIVE |
| B773 | AMERICAN REDSTART          |    |          | NATIVE |
| B798 | WHITE-THROATED SPARROW     |    |          | NATIVE |
| B799 | HARRIS'S SPARROW           |    |          | NATIVE |
| B809 | INDIGO BUNTING             |    |          | NATIVE |
| B864 | CAACKLING GOOSE            |    |          | NATIVE |
| M006 | ORNATE SHREW               | FE | SC       | NATIVE |
| M012 | TROWBRIDGE'S SHREW         |    |          | NATIVE |
| M015 | SHREW-MOLE                 |    |          | NATIVE |
| M018 | BROAD-FOOTED MOLE          |    | SC       | NATIVE |
| M021 | LITTLE BROWN BAT           |    |          | NATIVE |
| M023 | YUMA MYOTIS                |    | BL       | NATIVE |
| M025 | LONG-EARED MYOTIS          |    | BL       | NATIVE |
| M027 | LONG-LEGGED MYOTIS         |    |          | NATIVE |
| M028 | CALIFORNIA MYOTIS          |    |          | NATIVE |
| M031 | CANYON BAT                 |    |          | NATIVE |
| M032 | BIG BROWN BAT              |    |          | NATIVE |
| M033 | WESTERN RED BAT            |    | SC FS    | NATIVE |
| M034 | HOARY BAT                  |    |          | NATIVE |
| M037 | TOWNSEND'S BIG-EARED BAT   |    | SC BL FS | NATIVE |
| M038 | PALLID BAT                 |    | SC BL FS | NATIVE |
| M039 | BRAZILIAN FREE-TAILED BAT  |    |          | NATIVE |
| M045 | BRUSH RABBIT               | FE | CE HA    | NATIVE |
| M047 | AUDUBON'S COTTONTAIL       |    | HA       | NATIVE |
| M051 | BLACK-TAILED JACKRABBIT    |    | SC HA    | NATIVE |
| M059 | SONOMA CHIPMUNK            |    |          | NATIVE |
| M072 | CALIFORNIA GROUND SQUIRREL |    |          | NATIVE |
| M077 | WESTERN GRAY SQUIRREL      |    | HA       | NATIVE |
| M081 | BOTTA'S POCKET GOPHER      |    |          | NATIVE |
| M087 | SAN JOAQUIN POCKET MOUSE   |    | SC BL    | NATIVE |
| M105 | CALIFORNIA KANGAROO RAT    |    | SC       | NATIVE |
| M112 | AMERICAN BEAVER            |    | HA       | NATIVE |
| M113 | WESTERN HARVEST MOUSE      |    |          | NATIVE |
| M116 | CALIFORNIA MOUSE           |    |          | NATIVE |
| M117 | DEER MOUSE                 |    | SC       | NATIVE |
| M119 | BRUSH MOUSE                |    |          | NATIVE |
| M120 | PINYON MOUSE               |    |          | NATIVE |
| M127 | DUSKY-FOOTED WOODRAT       | FE | SC       | NATIVE |
| M134 | CALIFORNIA VOLE            | FE | CE SC BL | NATIVE |
| M139 | COMMON MUSKRAT             |    | HA       | NATIVE |
| M146 | COYOTE                     |    | HA       | NATIVE |
| M147 | RED FOX                    | CT | FS HA    | NATIVE |

|      |                               |    |          |        |
|------|-------------------------------|----|----------|--------|
| M149 | GRAY FOX                      |    | HA       | NATIVE |
| M151 | BLACK BEAR                    |    | HA       | NATIVE |
| M152 | RINGTAIL                      | CF |          | NATIVE |
| M153 | RACCOON                       |    | HA       | NATIVE |
| M157 | LONG-TAILED WEASEL            |    | HA       | NATIVE |
| M158 | AMERICAN MINK                 |    | HA       | NATIVE |
| M160 | AMERICAN BADGER               | SC | HA       | NATIVE |
| M162 | STRIPED SKUNK                 |    | HA       | NATIVE |
| M165 | MOUNTAIN LION                 | SC |          | NATIVE |
| M166 | BOBCAT                        |    | HA       | NATIVE |
| M177 | ELK                           |    | HA       | NATIVE |
| M181 | MULE DEER                     |    | HA       | NATIVE |
| R022 | WESTERN FENCE LIZARD          |    |          | NATIVE |
| R023 | COMMON SAGEBRUSH LIZARD       |    | BL       | NATIVE |
| R036 | WESTERN SKINK                 | SC | BL       | NATIVE |
| R039 | TIGER WHIPTAIL                |    |          | NATIVE |
| R040 | SOUTHERN ALLIGATOR LIZARD     |    |          | NATIVE |
| R042 | NORTHERN ALLIGATOR LIZARD     |    |          | NATIVE |
| R046 | NORTHERN RUBBER BOA           | CT | FS       | NATIVE |
| R048 | RING-NECKED SNAKE             |    | FS       | NATIVE |
| R049 | COMMON SHARP-TAILED SNAKE     |    |          | NATIVE |
| R051 | NORTH AMERICAN RACER          |    |          | NATIVE |
| R053 | STRIPED RACER                 | FT | CT       | NATIVE |
| R057 | GOPHERSNAKE                   |    | SC       | NATIVE |
| R058 | EASTERN KINGSNAKE             |    |          | NATIVE |
| R059 | CALIFORNIA MOUNTAIN KINGSNAKE |    | SC BL FS | NATIVE |
| R060 | LONG-NOSED SNAKE              |    |          | NATIVE |
| R061 | COMMON GARTERSNAKE            | FE | CE CF SC | NATIVE |
| R062 | TERRESTRIAL GARTERSNAKE       |    |          | NATIVE |
| R071 | DESERT NIGHTSNAKE             |    |          | NATIVE |
| R076 | WESTERN RATTLESNAKE           |    |          | NATIVE |
| R078 | AQUATIC GARTERSNAKE           |    |          | NATIVE |

Total Number of Species: 285

## Query Parameters

### Included Locations

Napa Co

### Included Location Seasons

Migrant, Summer, Winter, Yearlong

### Included Habitats & (Stages)

Annual Grassland, Blue Oak-foothill Pine, Douglas-fir, Fresh Emergent Wetland, Montane Hardwood, Vineyard

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**Habitat Suitability Threshold**

Reproduction - Low, Cover - Low, Feeding - Low

**Included Habitat Seasons**

Migrant, Summer, Winter, Yearlong

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**Excluded Elements**

Algae, Bogs, Campground, Cave, Cliff, Dump, Fern, Grain, Jetty, Kelp, Lakes, Lithic, Mine, Mud Flats, Nest Island, Pack Stations,  
Rivers, Salt Ponds, Sand Dune, Shrub/agriculture, Soil - Saline, Soil - Sandy, Springs - Hot, Springs - Mineral, Talus, Tidepools,  
Vernal Pools, Water - Fast, Water - Slow, Wharf

**Included Species** All Species Included

**Included Special Statuses:** Native

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# *APPENDIX C*

## TREE SURVEY DATA

| TREE SURVEY DATA – GHOST PINE FOREST |                          |                                          |
|--------------------------------------|--------------------------|------------------------------------------|
| WAYPOINT                             | SPECIES                  | DIAMETER AT BREAST HEIGHT<br>(DBH) (in.) |
| 109                                  | GP                       | 7                                        |
| 110                                  | GP                       | 16                                       |
| 111                                  | GP                       | 7                                        |
| 112                                  | CLO                      | 7                                        |
| 113                                  | GP                       | 10                                       |
| 114                                  | GP                       | 46                                       |
| 115                                  | BAY                      | 5                                        |
| 116                                  | GP                       | 17                                       |
| 117                                  | GP                       | 12                                       |
| 118                                  | VO                       | 9                                        |
| 119                                  | GP                       | 14                                       |
| 120                                  | CLO                      | 12,8,12                                  |
| 121                                  | GP                       | 14                                       |
| 122                                  | GP                       | 22                                       |
| 123                                  | GP                       | 6                                        |
| 124                                  | GP                       | 13                                       |
| 125                                  | GP                       | 9                                        |
| 126                                  | GP                       | 21                                       |
| 127                                  | CLO                      | 14                                       |
| 128                                  | GP                       | 15                                       |
| 129                                  | GP                       | 20                                       |
| SPECIES                              | NUMBER IN<br>SURVEY AREA | AVERAGE DBH (INCHES)                     |
| GP                                   | 16                       | 15.56                                    |
| CLO                                  | 3                        | 13.33                                    |
| BAY                                  | 1                        | 5.00                                     |
| VO                                   | 1                        | 9.00                                     |
| TOTAL                                | 21                       | 14.43                                    |

| TREE SURVEY DATA – MIXED OAK WOODLAND |                          |                                          |
|---------------------------------------|--------------------------|------------------------------------------|
| WAYPOINT                              | SPECIES                  | DIAMETER AT BREAST<br>HEIGHT (DBH) (in.) |
| 132                                   | OWO                      | 12                                       |
| 133                                   | OWO                      | 14                                       |
| 134                                   | CLO                      | 15                                       |
| 135                                   | CLO                      | 15                                       |
| 136                                   | CLO                      | 13                                       |
| 137                                   | DF                       | 12                                       |
| 138                                   | OWO                      | 12                                       |
| 139                                   | DF                       | 5                                        |
| 140                                   | CLO                      | 13,10,11                                 |
| 141                                   | MAD                      | 12                                       |
| 142                                   | DF                       | 5                                        |
| 143                                   | BAY                      | 5                                        |
| 144                                   | OWO                      | 17                                       |
| 145                                   | MAD                      | 7                                        |
| 146                                   | BAY                      | 12,10,11,11,9                            |
| 147                                   | CLO                      | 6                                        |
| 148                                   | OWO                      | 18                                       |
| 149                                   | CLO                      | 10                                       |
| 150                                   | CLO                      | 10                                       |
| 151                                   | MAD                      | 10                                       |
| 152                                   | MAD                      | 14                                       |
| 153                                   | DF                       | 5                                        |
| 154                                   | CLO                      | 13                                       |
| 155                                   | CLO                      | 9                                        |
| 156                                   | CLO                      | 11                                       |
| 157                                   | CLO                      | 32                                       |
| 158                                   | CLO                      | 6                                        |
| 159                                   | CLO                      | 4                                        |
| 160                                   | BAY                      | 6                                        |
| 161                                   | CLO                      | 14                                       |
| 162                                   | CLO                      | 13                                       |
| 163                                   | CLO                      | 12                                       |
| 164                                   | CLO                      | 7                                        |
| SPECIES                               | NUMBER IN<br>SURVEY AREA | AVERAGE DBH (INCHES)                     |
| OWO                                   | 5                        | 14.60                                    |
| CLO                                   | 17                       | 12.35                                    |
| DF                                    | 4                        | 6.75                                     |
| BAY                                   | 3                        | 11.67                                    |
| MAD                                   | 4                        | 10.75                                    |
| TOTAL                                 | 33                       | 11.76                                    |

| TREE SURVEY DATA – DOUGLAS FIR FOREST |                          |                                          |
|---------------------------------------|--------------------------|------------------------------------------|
| WAYPOINT                              | SPECIES                  | DIAMETER AT BREAST HEIGHT<br>(DBH) (in.) |
| 220                                   | MAD                      | 19                                       |
| 221                                   | DF                       | 36                                       |
| 222                                   | DF                       | 18                                       |
| 223                                   | DF                       | 18                                       |
| 224                                   | DF                       | 28                                       |
| 225                                   | DF                       | 34                                       |
| 226                                   | DF                       | 30                                       |
| 227                                   | DF                       | 32                                       |
| 228                                   | DF                       | 16                                       |
| 229                                   | DF                       | 37                                       |
| 230                                   | DF                       | 32                                       |
| 231                                   | DF                       | 24                                       |
| 232                                   | DF                       | 25                                       |
| 233                                   | DF                       | 26                                       |
| 235                                   | DF                       | 36                                       |
| 236                                   | DF                       | 21                                       |
| 237                                   | DF                       | 15                                       |
| 238                                   | DF                       | 40                                       |
| 239                                   | CLO                      | 14                                       |
| 240                                   | DF                       | 38                                       |
| 241                                   | DF                       | 18                                       |
| 242                                   | DF                       | 36                                       |
| 243                                   | DF                       | 40                                       |
| 244                                   | DF                       | 20                                       |
| 245                                   | DF                       | 38                                       |
| 246                                   | DF                       | 18                                       |
| 247                                   | DF                       | 21                                       |
| 248                                   | CLO                      | 19                                       |
| 249                                   | CLO                      | 28                                       |
| 250                                   | BAY                      | 7,7                                      |
| 251                                   | BLK                      | 17                                       |
| SPECIES                               | NUMBER IN<br>SURVEY AREA | AVERAGE DBH (INCHES)                     |
| MAD                                   | 1                        | 19.00                                    |
| DF                                    | 25                       | 27.88                                    |
| CLO                                   | 3                        | 20.33                                    |
| BAY                                   | 1                        | 10.00                                    |
| BLK                                   | 1                        | 17.00                                    |
| TOTAL                                 | 31                       | 25.94                                    |

| TREE SURVEY DATA – BLUE OAK WOODLAND |         |                                          |
|--------------------------------------|---------|------------------------------------------|
| WAYPOINT                             | SPECIES | DIAMETER AT BREAST HEIGHT<br>(DBH) (in.) |
| 168                                  | BLU     | 14                                       |
| 169                                  | GP      | 15                                       |
| 170                                  | BLU     | 20                                       |
| 171                                  | GP      | 6                                        |
| 172                                  | BAY     | 7                                        |
| 173                                  | BLU     | 8                                        |
| 174                                  | MAD     | 5                                        |
| 175                                  | MAD     | 6                                        |
| 176                                  | BLU     | 16                                       |
| 177                                  | BLU     | 36                                       |
| 178                                  | BLU     | 9                                        |
| 179                                  | BLU     | 15                                       |
| 180                                  | BLU     | 8                                        |
| 181                                  | BLU     | 9                                        |
| 182                                  | BLU     | 6                                        |
| 183                                  | BLU     | 6                                        |
| 184                                  | BLU     | 9                                        |
| 185                                  | BLU     | 8                                        |
| 186                                  | BLU     | 12,12,12                                 |
| 187                                  | BLU     | 12                                       |
| 188                                  | BLU     | 10                                       |
| 189                                  | BLU     | 11                                       |
| 190                                  | BLU     | 5                                        |
| 191                                  | BLU     | 16                                       |
| 192                                  | BLK     | 11,10                                    |
| 193                                  | BLU     | 10                                       |
| 194                                  | BLU     | 5                                        |
| 195                                  | BLU     | 7                                        |
| 196                                  | BLU     | 7                                        |
| 197                                  | BLU     | 9                                        |
| 198                                  | BLU     | 8                                        |
| 199                                  | BUC     | 5                                        |
| 200                                  | BLU     | 17                                       |
| 201                                  | BLU     | 6                                        |
| 202                                  | BLU     | 8                                        |
| 203                                  | BUC     | 7,7,10                                   |
| 204                                  | BLU     | 12                                       |
| 205                                  | BLU     | 12                                       |
| 206                                  | BLU     | 15,10                                    |
| 207                                  | BLU     | 14                                       |

| TREE SURVEY DATA – BLUE OAK WOODLAND |                       |                      |
|--------------------------------------|-----------------------|----------------------|
| SPECIES                              | NUMBER IN SURVEY AREA | AVERAGE DBH (INCHES) |
| BLU                                  | 32                    | 11.63                |
| GP                                   | 2                     | 10.5                 |
| BAY                                  | 1                     | 7.00                 |
| MAD                                  | 2                     | 5.50                 |
| BLK                                  | 1                     | 15.00                |
| BUC                                  | 2                     | 9.50                 |
| <b>TOTAL</b>                         | <b>40</b>             | <b>11.13</b>         |

**Key:**

*CLO = Coast Live Oak*

*BLK = Black Oak*

*MAD = Pacific Madrone*

*BLU = Blue Oak*

*DF = Douglas Fir*

*GP = Ghost Pine*

*BAY = California Bay*

*VO = Valley Oak*

*OWO = Oregon White Oak*

*BUC = California Buckeye*

GPS waypoint for each tree is indicated on the vegetation map provided in Figure 2.

## ***APPENDIX D***

**WETLAND DELINEATION DATA FORMS  
FOR  
SAMPLE POINTS 1 through 6**

# **WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Komes Ranch City/County: Napa Co. Sampling Date: 8/14/18  
 Applicant/Owner: Komes Ranch State: CA Sampling Point: WSP-01  
 Investigator(s): Steve Zalusky Section, Township, Range: Sec. 7 T7N R5W  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): LRRC Lat: 38 28.389'N Long: -122 27.686'W Datum: WGS 84  
 Soil Map Unit Name: Montara clay loam 5-30% slopes NWI classification: na

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

|                                                                                                     |                                                                                                                     |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>            |                                                                                                                     |
| Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>      |                                                                                                                     |
| Remarks:<br>Wpt. 130                                                                                |                                                                                                                     |

## **VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: _____)                                                                                                                                                                                                                                            | Absolute % Cover | Dominant Species? | Indicator Status | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. _____                                                                                                                                                                                                                                                                   | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| 2. _____                                                                                                                                                                                                                                                                   | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| 3. _____                                                                                                                                                                                                                                                                   | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| 4. _____                                                                                                                                                                                                                                                                   | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| _____ = Total Cover                                                                                                                                                                                                                                                        |                  |                   |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____ |
| <b>Sapling/Shrub Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>5. _____<br>_____ = Total Cover                                                                                                                                         |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| <b>Herb Stratum (Plot size: <u>100 sq ft</u>)</b><br>1. <u>Juncus balticus</u> <u>70</u> <u>X</u> <u>FACW</u><br>2. <u>Carex serratodens</u> <u>30</u> <u>X</u> <u>FACW</u><br>3. _____<br>4. _____<br>5. _____<br>6. _____<br>7. _____<br>8. _____<br>_____ = Total Cover |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| <b>Woody Vine Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>_____ = Total Cover                                                                                                                                                                                |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____                                                                                                                                                                                                          |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| Remarks:                                                                                                                                                                                                                                                                   |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |

Sampling Point: WSP-01

## HYDROLOGY

## Wetland Hydrology

US Army Corps of Engineers

# **WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Komes Ranch City/County: Napa Co. Sampling Date: 8/14/18  
 Applicant/Owner: Komes Ranch State: CA Sampling Point: WSP-02  
 Investigator(s): Steve Zalusky Section, Township, Range: Sec. 7 T7N R5W  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): LRRC Lat: 38 28.397°W Long: -122 27.687°W Datum: WGS 84  
 Soil Map Unit Name: Montara clay loam 5-30% slopes NWI classification: na

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

|                                                                                                     |                                                                                                           |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>                       |                                                                                                           |
| Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>                 |                                                                                                           |
| Remarks:<br>Wpt. 131                                                                                |                                                                                                           |

## **VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: _____)                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Absolute % Cover | Dominant Species? | Indicator Status | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| 2. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| 3. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| 4. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                 |
| _____ = Total Cover                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                   |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____ |
| <b>Sapling/Shrub Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>5. _____<br>_____ = Total Cover                                                                                                                                                                                                                                                                                                                                                       |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| <b>Herb Stratum (Plot size: <u>100 sq ft</u>)</b><br>1. <u>Hemizonia congesta</u> <u>40</u> <input checked="" type="checkbox"/> <u>NI</u><br>2. <u>Bromus hordeaceus</u> <u>20</u> <input checked="" type="checkbox"/> <u>FACU</u><br>3. <u>Elymus glaucus ssp. glaucus</u> <u>25</u> <input checked="" type="checkbox"/> <u>FACU</u><br>4. <u>Festuca perennis</u> <u>15</u> <input type="checkbox"/> <u>FAC</u><br>5. _____<br>6. _____<br>7. _____<br>8. _____<br>_____ = Total Cover |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| <b>Woody Vine Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>_____ = Total Cover                                                                                                                                                                                                                                                                                                                                                                                              |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| <b>Hydrophytic Vegetation Indicators:</b><br>___ Dominance Test is >50%<br>___ Prevalence Index is ≤3.0 <sup>1</sup><br>___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br>___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                                                                        |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| <b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                               |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |
| Remarks:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                 |

Sampling Point: WSP-02

## HYDROLOGY

US Army Corps of Engineers

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Komes Ranch City/County: Napa Co. Sampling Date: 8/14/18  
 Applicant/Owner: Komes Ranch State: CA Sampling Point: WSP-03  
 Investigator(s): Steve Zalusky Section, Township, Range: Sec. 7 T7N R5W  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): LRRC Lat: 38 28.412'N Long: -122 27.412'W Datum: WGS84  
 Soil Map Unit Name: Montara clay loam 5-30% slopes NWI classification: na

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

|                                                                                                                                                                                                                                                                                                   |                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks:<br>Wpt. 165                                                                                                                                                                                                                                                                              |                                                                                                                     |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: _____)             | Absolute % Cover | Dominant Species?             | Indicator Status |                          |
|---------------------------------------------|------------------|-------------------------------|------------------|--------------------------|
| 1. _____                                    | _____            | _____                         | _____            |                          |
| 2. _____                                    | _____            | _____                         | _____            |                          |
| 3. _____                                    | _____            | _____                         | _____            |                          |
| 4. _____                                    | _____            | _____                         | _____            |                          |
|                                             |                  |                               |                  | _____ = Total Cover      |
| Sapling/Shrub Stratum (Plot size: _____)    |                  |                               |                  |                          |
| 1. _____                                    | _____            | _____                         | _____            |                          |
| 2. _____                                    | _____            | _____                         | _____            |                          |
| 3. _____                                    | _____            | _____                         | _____            |                          |
| 4. _____                                    | _____            | _____                         | _____            |                          |
| 5. _____                                    | _____            | _____                         | _____            |                          |
|                                             |                  |                               |                  | _____ = Total Cover      |
| Herb Stratum (Plot size: <u>100 sq ft</u> ) |                  |                               |                  |                          |
| 1. <u>Juncus balticus</u>                   | <u>70</u>        | <u>X</u>                      | <u>FACW</u>      |                          |
| 2. <u>Carex serratodens</u>                 | <u>30</u>        | <u>X</u>                      | <u>FACW</u>      |                          |
| 3. _____                                    | _____            | _____                         | _____            |                          |
| 4. _____                                    | _____            | _____                         | _____            |                          |
| 5. _____                                    | _____            | _____                         | _____            |                          |
| 6. _____                                    | _____            | _____                         | _____            |                          |
| 7. _____                                    | _____            | _____                         | _____            |                          |
| 8. _____                                    | _____            | _____                         | _____            |                          |
|                                             |                  |                               |                  | <u>100</u> = Total Cover |
| Woody Vine Stratum (Plot size: _____)       |                  |                               |                  |                          |
| 1. _____                                    | _____            | _____                         | _____            |                          |
| 2. _____                                    | _____            | _____                         | _____            |                          |
|                                             |                  |                               |                  | _____ = Total Cover      |
| % Bare Ground in Herb Stratum _____         |                  | % Cover of Biotic Crust _____ |                  |                          |
| Remarks:                                    |                  |                               |                  |                          |

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
☒ Dominance Test is >50%  
 \_\_\_\_\_ Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Sampling Point: WSP-03

## HYDROLOGY

US Army Corps of Engineers

# **WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Komes Ranch City/County: Napa Co. Sampling Date: 8/14/18  
 Applicant/Owner: Komes Ranch State: CA Sampling Point: WSP-04  
 Investigator(s): Steve Zalusky Section, Township, Range: Sec. 7 T7N R5W  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): LRRC Lat: 38 28.407'W Long: -122 27.412'W Datum: WGS 84  
 Soil Map Unit Name: Montara clay loam 5-30% slopes NWI classification: na

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

|                                                                                                     |                                                                                                                     |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>                       |                                                                                                                     |
| Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>                 |                                                                                                                     |
| Remarks:<br>Wpt. 166                                                                                |                                                                                                                     |

## **VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: _____)                                                                                                                                                                                                                                                                                                                                                                                   | Absolute % Cover | Dominant Species? | Indicator Status | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. _____                                                                                                                                                                                                                                                                                                                                                                                                          | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                           |
| 2. _____                                                                                                                                                                                                                                                                                                                                                                                                          | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                           |
| 3. _____                                                                                                                                                                                                                                                                                                                                                                                                          | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                           |
| 4. _____                                                                                                                                                                                                                                                                                                                                                                                                          | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                           |
| _____ = Total Cover                                                                                                                                                                                                                                                                                                                                                                                               |                  |                   |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by:<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____ |
| <b>Sapling/Shrub Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>5. _____<br>_____ = Total Cover                                                                                                                                                                                                                                                                                |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |
| <b>Herb Stratum (Plot size: <u>100 sq ft</u>)</b><br>1. <u>Hemizonia congesta</u> <u>90</u> <input checked="" type="checkbox"/> <u>NI</u><br>2. <u>Achillea millefolium</u> <u>10</u> <input type="checkbox"/> <u>FACU</u><br>3. _____<br>4. _____<br>5. _____<br>6. _____<br>7. _____<br>8. _____<br>_____ = Total Cover                                                                                         |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |
| <b>Woody Vine Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>_____ = Total Cover                                                                                                                                                                                                                                                                                                                       |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |
| % Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____                                                                                                                                                                                                                                                                                                                                                 |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |
| <b>Hydrophytic Vegetation Indicators:</b><br>___ Dominance Test is >50%<br>___ Prevalence Index is ≤3.0 <sup>1</sup><br>___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br>___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |
| <b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                        |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |
| Remarks:                                                                                                                                                                                                                                                                                                                                                                                                          |                  |                   |                  |                                                                                                                                                                                                                                                                                                                           |

Sampling Point: WSP-04

HYDROLOGY

| Wetland Hydrology Indicators:                                                                                              |                                                                                |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Primary Indicators (minimum of one required; check all that apply)                                                         |                                                                                | Secondary Indicators (2 or more required)                                                  |
| <input type="checkbox"/> Surface Water (A1)                                                                                | <input type="checkbox"/> Salt Crust (B11)                                      | <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )                              |
| <input type="checkbox"/> High Water Table (A2)                                                                             | <input type="checkbox"/> Biotic Crust (B12)                                    | <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )                        |
| <input type="checkbox"/> Saturation (A3)                                                                                   | <input type="checkbox"/> Aquatic Invertebrates (B13)                           | <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )                           |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )                                                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                            | <input type="checkbox"/> Drainage Patterns (B10)                                           |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )                                                     | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)         | <input type="checkbox"/> Dry-Season Water Table (C2)                                       |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )                                                        | <input type="checkbox"/> Presence of Reduced Iron (C4)                         | <input type="checkbox"/> Crayfish Burrows (C8)                                             |
| <input type="checkbox"/> Surface Soil Cracks (B6)                                                                          | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)            | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                         |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                                         | <input type="checkbox"/> Thin Muck Surface (C7)                                | <input type="checkbox"/> Shallow Aquitard (D3)                                             |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                                         | <input type="checkbox"/> Other (Explain in Remarks)                            | <input type="checkbox"/> FAC-Neutral Test (D5)                                             |
| <b>Field Observations:</b>                                                                                                 |                                                                                |                                                                                            |
| Surface Water Present?                                                                                                     | Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ | <b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Water Table Present?                                                                                                       | Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ |                                                                                            |
| Saturation Present?                                                                                                        | Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ |                                                                                            |
| (includes capillary fringe)                                                                                                |                                                                                |                                                                                            |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:<br>Google Earth |                                                                                |                                                                                            |
| Remarks:                                                                                                                   |                                                                                |                                                                                            |

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Komes Ranch City/County: Napa Co. Sampling Date: 8/14/18  
 Applicant/Owner: Komes Ranch State: CA Sampling Point: WSP-05  
 Investigator(s): Steve Zalusky Section, Township, Range: Sec. 7 T7N R5W  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): LRRC Lat: 38 28.430'N Long: -122 27.377'W Datum: WGS84  
 Soil Map Unit Name: Montara clay loam 5-30% slopes NWI classification: na

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

|                                                                                                                                                                                                                                                                                                   |                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks:<br>Wpt. 208                                                                                                                                                                                                                                                                              |                                                                                                                     |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: _____)                   | Absolute % Cover              | Dominant Species? | Indicator Status |                          |
|---------------------------------------------------|-------------------------------|-------------------|------------------|--------------------------|
| 1. _____                                          | _____                         | _____             | _____            |                          |
| 2. _____                                          | _____                         | _____             | _____            |                          |
| 3. _____                                          | _____                         | _____             | _____            |                          |
| 4. _____                                          | _____                         | _____             | _____            |                          |
|                                                   |                               |                   |                  | _____ = Total Cover      |
| <b>Sapling/Shrub Stratum (Plot size: _____)</b>   |                               |                   |                  |                          |
| 1. _____                                          | _____                         | _____             | _____            |                          |
| 2. _____                                          | _____                         | _____             | _____            |                          |
| 3. _____                                          | _____                         | _____             | _____            |                          |
| 4. _____                                          | _____                         | _____             | _____            |                          |
| 5. _____                                          | _____                         | _____             | _____            |                          |
|                                                   |                               |                   |                  | _____ = Total Cover      |
| <b>Herb Stratum (Plot size: <u>100 sq ft</u>)</b> |                               |                   |                  |                          |
| 1. <u>Juncus balticus</u>                         | <u>50</u>                     | <u>X</u>          | <u>FACW</u>      |                          |
| 2. <u>Stachys albens</u>                          | <u>50</u>                     | <u>X</u>          | <u>OBL</u>       |                          |
| 3. _____                                          | _____                         | _____             | _____            |                          |
| 4. _____                                          | _____                         | _____             | _____            |                          |
| 5. _____                                          | _____                         | _____             | _____            |                          |
| 6. _____                                          | _____                         | _____             | _____            |                          |
| 7. _____                                          | _____                         | _____             | _____            |                          |
| 8. _____                                          | _____                         | _____             | _____            |                          |
|                                                   |                               |                   |                  | <u>100</u> = Total Cover |
| <b>Woody Vine Stratum (Plot size: _____)</b>      |                               |                   |                  |                          |
| 1. _____                                          | _____                         | _____             | _____            |                          |
| 2. _____                                          | _____                         | _____             | _____            |                          |
|                                                   |                               |                   |                  | _____ = Total Cover      |
| % Bare Ground in Herb Stratum _____               | % Cover of Biotic Crust _____ |                   |                  |                          |
| Remarks:                                          |                               |                   |                  |                          |

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
☒ Dominance Test is >50%  
 \_\_\_\_\_ Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Sampling Point: WSP-05

HYDROLOGYUS Army Corps of Engineers

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Komes Ranch City/County: Napa Co. Sampling Date: 8/14/18  
 Applicant/Owner: Komes Ranch State: CA Sampling Point: WSP-06  
 Investigator(s): Steve Zalusky Section, Township, Range: Sec. 7 T7N R5W  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): LRRC Lat: 38 28.425'W Long: -122 27.370'W Datum: WGS84  
 Soil Map Unit Name: Montara clay loam 5-30% slopes NWI classification: na

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

|                                                                                                                                                                                                                                                                             |                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/><br>Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/><br>Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks:<br>Wpt. 209                                                                                                                                                                                                                                                        |                                                                                                                     |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: _____)             | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:                                                                                                                                                                                                                                                                                                                                                                                             |  |
|---------------------------------------------|------------------|-------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. _____                                    | _____            | _____                               | _____            | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)                                                                                                                                                                                                                                                                                                                                                   |  |
| 2. _____                                    | _____            | _____                               | _____            | Total Number of Dominant Species Across All Strata: <u>2</u> (B)                                                                                                                                                                                                                                                                                                                                                      |  |
| 3. _____                                    | _____            | _____                               | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)                                                                                                                                                                                                                                                                                                                                                |  |
| 4. _____                                    | _____            | _____                               | _____            | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____                                                                                       |  |
| _____ = Total Cover                         |                  |                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Sapling/Shrub Stratum (Plot size: _____)    |                  |                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 1. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 2. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 3. _____                                    | _____            | _____                               | _____            | <b>Hydrophytic Vegetation Indicators:</b><br>___ Dominance Test is >50%<br>___ Prevalence Index is ≤3.0 <sup>1</sup><br>___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br>___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |  |
| 4. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 5. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| _____ = Total Cover                         |                  |                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Herb Stratum (Plot size: <u>100 sq ft</u> ) |                  |                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 1. <u>Hemizonia congesta</u>                | <u>80</u>        | <input checked="" type="checkbox"/> | <u>NI</u>        |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 2. <u>Elymus glaucus ssp. glaucus</u>       | <u>20</u>        | <input checked="" type="checkbox"/> | <u>FACU</u>      |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 3. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 4. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 5. _____                                    | _____            | _____                               | _____            | <b>Hydrophytic Vegetation Present?</b><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                         |  |
| 6. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 7. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 8. _____                                    | _____            | _____                               | _____            | % Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____                                                                                                                                                                                                                                                                                                                                                     |  |
| _____ = Total Cover                         |                  |                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Woody Vine Stratum (Plot size: _____)       |                  |                                     |                  | Remarks:                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| 1. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 2. _____                                    | _____            | _____                               | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| _____ = Total Cover                         |                  |                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |  |

Sampling Point: WSP-06

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                                              |                                                                                |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Primary Indicators (minimum of one required; check all that apply)                                                         |                                                                                | Secondary Indicators (2 or more required)                                                  |
| <input type="checkbox"/> Surface Water (A1)                                                                                | <input type="checkbox"/> Salt Crust (B11)                                      | <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )                              |
| <input type="checkbox"/> High Water Table (A2)                                                                             | <input type="checkbox"/> Biotic Crust (B12)                                    | <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )                        |
| <input type="checkbox"/> Saturation (A3)                                                                                   | <input type="checkbox"/> Aquatic Invertebrates (B13)                           | <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )                           |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )                                                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                            | <input type="checkbox"/> Drainage Patterns (B10)                                           |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )                                                     | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)         | <input type="checkbox"/> Dry-Season Water Table (C2)                                       |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )                                                        | <input type="checkbox"/> Presence of Reduced Iron (C4)                         | <input type="checkbox"/> Crayfish Burrows (C8)                                             |
| <input type="checkbox"/> Surface Soil Cracks (B6)                                                                          | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)            | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                         |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                                         | <input type="checkbox"/> Thin Muck Surface (C7)                                | <input type="checkbox"/> Shallow Aquitard (D3)                                             |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                                         | <input type="checkbox"/> Other (Explain in Remarks)                            | <input type="checkbox"/> FAC-Neutral Test (D5)                                             |
| <b>Field Observations:</b>                                                                                                 |                                                                                |                                                                                            |
| Surface Water Present?                                                                                                     | Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ | <b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Water Table Present?                                                                                                       | Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ |                                                                                            |
| Saturation Present?                                                                                                        | Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ |                                                                                            |
| (includes capillary fringe)                                                                                                |                                                                                |                                                                                            |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:<br>Google Earth |                                                                                |                                                                                            |
| Remarks:                                                                                                                   |                                                                                |                                                                                            |