“F”

Biological Study

Sheehy Speculative Light Industrial Building P17-00274-UP
Planning Commission Hearing Date December 5, 2018

ZENTNER
Planning & Ecology

Sheehy Property Project

Biotic Resources Assessment

Project
1082 RUD

Zentner Planning and Ecology

Prepared for:
Rudd Properties

Date Issued:
April 2018

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Sheehy Property Project

Biotic Resources Assessment

Zentner Planning and Ecology
April 2018

I. INTRODUCTION

A. Purpose

This report is intended to assess the environmental conditions of the site to determine: (1) the presence of wetlands or other waters subject to the jurisdiction of the Corps or RWQCB under Section 404 of the Clean Water Act; (2) the presence or likelihood of occurrence of any special status species or habitats that are listed by State, Federal or local governments; and (3) to identify appropriate mitigation for impacts to these resources.

B. Methodology

Biological resources in the project area and region were identified through a site assessment and a literature review, completed by Zentner and Zentner in March and April 2018.

1. Site Analyses

Zentner and Zentner conducted a site assessment on March 5, 2018 and April 11, 2018. The assessment included identification of the dominant vegetation and a survey for special status habitats, plants and animals. The survey was timed to occur at the height of the blooming season for the majority of the plant species in the region.

2. Literature Review

The literature review provided information on general biological resources, rare or otherwise special habitats, and on the distribution and habitat requirements of plant and animal species ("taxa") that have been reported from or are suspected to occur in the project vicinity.

Information was gathered from Zentner and Zentner files and the CNDDB that compiles records of species occurrences from CDFW [formerly California Department of Fish and Game or CDFG], the USFWS, and the California Native Plant Society (CNPS).

Photo 1: View of the site looking south towards existing development. April 2018

II. SETTING

A. Location

The Sheehy Project property is located in the southern Napa County north of the City of American Canyon. The project site lies just west of Highway 29 approximately 1,000 feet north of the intersection of Highway 12 (***Figure 1***). The property is located on the Cuttings Wharf 7.5-minute USGS quadrangle, T. 4 N., R. 4 W., within Section 12.

B. Site Description

The approximately 2.75-acre site is roughly rectangular in shape. It is bounded by commercial development to the south, Devlin Road and commercial development on the west, Sheehy Creek on the north, and a vacant parcel on the east. The region contains historic agricultural and ranch land that has lied vacant and is now being converted into warehouse and commercial development.

C. Project Description

1. Topography

The site is relatively level, sloping gently from east to west, with a fill pile in its center that rises approximately 8 to 10 feet above the surface elevation. The site also slopes down to Sheehy Creek along the properties northern boundary.

2. General Soil Types

The site soils are mapped as Haire clay loams on 2 to 9 percent slopes (SCS 1978).
The Haire series consists of moderately well drained soils on old terraces and alluvial fans (SCS 1978). Haire clay loams contain a component of clear lake clay and is on the list of hydric soils of California (NRCS 2014).

However, the description of the soils does not fit well with what was found on the project site. In the soil survey, the upper 15 inches of soil is described as massive, hard and slightly plastic. The soils that were observed on the project site are silty clay loams that were relatively light and loamy.

BY: **CJL** PROJECT: **1082** BASE MAP: **GOOGLE EARTH 2018** FILE: D:\Graphic Designer\My Documents\PROJECTS\1000-1100\ 1082 Sheehy\Adobe\1082 location 18-03-29 DATE: **04/17/2018, 11:52 am**	SHEEHY PROPERTY Napa County, California	**FIGURE 1** LOCATION MAP	ZENTNER Planning & Ecology 120A Linden Street, Oakland, CA 94607 Phone: 510.622.8110 Fax: 510.622.8116

3. Major Vegetation Types or Habitats On-Site

There are three habitats that dominate the property; ruderal grassland, planted riparian, and Developed areas. These habitats are shown in **Figure 2**. In addition, two small patches of coyote bush scrub lie just north of the file pile in the northern half of the property. A portion of Sheehy Creek curves into the northern boundary of the project site. Riparian vegetation surrounds the banks of Sheehy Creek. Developed areas include a strip of parking lot associated with the adjacent development to the south and a path along the top of bank on the south side of Sheehy Creek in the northern portion of the site.

1. Ruderal Grassland

The majority of the project site is dominated by ruderal grassland vegetation. This vegetation is characterized by upland, mainly annual, grasses and forbs. Bromes such as ripgut (Br*omus diandrus*) and soft chess (*B. hordeaceus*) along with wild oats (*Avena fatua*) are the dominant vegetation. However, Harding grass (*Phalarus aquatica*), a non-native and invasive grass, is invading the site, is dominant is some areas, and is common throughout the site. Other common vegetation in the ruderal grassland include cut-leaf geranium (Geranium dissectum), black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*) and meadow barley (*Hordeum brachyantherum*). Mustards and thistles dominate the vegetation on the fill mound near the center of the site.

2. Planted Riparian

Riparian vegetation, dominated by arroyo willow (*Salix lasiolepis*), is situated adjacent to Sheehy Creek. A review of aerial photos indicates that this vegetation was planted around 2003 to 2004. Away from the creek, the willows transition to coyote bush (*Baccharis pilularis*) mixed with California rose (*Rosa californica*), native blackberry (*Rubus ursinus*), elderberry (*Sambucus nigra*), buckey (*Aesculus californica*) and live oak (*Quercus agrifolia*). All of this vegetation was planted a restoration to provide a riparian buffer to the creek. Evidence of the planting including; Wire cages, irrigation and erosion control fabric are still prevalent throughout this zone.

3. Developed

The developed habitats include previously paved areas as part of earlier work within and adjacent to the site. This work includes an asphalt path that runs along and through the southern edge of the Planted Riparian zone parallel to the creek. As well, a portion of the asphalt parking lot that is part of the development to the south is within the property boundaries of the property.

LEGEND

PROJECT BOUNDARY	
DEV	DEVELOPED
RDG	RUDERAL GRASSLAND
RUD	RUDERAL
CBS	COYOTE BUSH SCRUB
RIP	PLANTED RIPARIAN
CHN	PERENNIAL CREEK

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FIGURE 2
VEGETATION MAP

SHEEHY PROPERTY
NAPA COUNTY, CALIFORNIA

N

0 25' 50'

AERIAL: GOOGLE EARTH 2017

PROJECT NO. 1082

FILE: D:\Graphic Designer\My Documents\PROJECTS\1000-1100\1082 Sheehy\AutoCAD\1082 BioAssess 13-04-18.dwg

BY: CJL

DATE: 5.1.2018

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C. Wildlife

The primary wildlife observed on the project site consisted of a number of bird species that use riparian corridor and the ruderal grassland on-site for foraging. **Appendix A** contains a list of all vertebrates observed on the project site during the survey. No active bird nests were observed, though there is potential for nests to occur onsite, especially within the riparian vegetation.

Other wildlife that may use or pass through the site consists of wildlife that are adaptable to urban conditions. These would include black tailed deer (*Odocoileus hemionus columbianus*), striped skunk (*Mephitis mephitis)*, raccoon (*Procyon lotor)*, opossum (*Didelphis virginiana*), and possibly coyote (*Canis latrans*).

Photo 2: View of the planted riparian woodland around Sheehy Creek on the northern end of the property. April 2018

III. SPECIAL STATUS HABITATS

A. Wetlands and Other Waters

As defined by the Army Corps of Engineers (Corps), "wetlands" are areas periodically or permanently saturated by surface or groundwater and typically support vegetation adapted to life in saturated (hydric) soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, promotion of groundwater recharge, and their water filtration and purification functions. "Other waters" include tributaries or drainage ditches which exhibit perennial or ephemeral flow to a navigable waterway, wetland, or other significant water feature. Other waters may not necessarily be wetlands.

B. Methods

Boundaries between jurisdictional areas and uplands were investigated using the routine on-site assessment procedure, Section D, Subsection 2, page 57 of the 1987 "Corps of Engineers Wetlands Delineation Manual" (Environmental Laboratory 1987; hereafter the "Delineation Manual") as modified by the new Interim Arid West Supplement to the Delineation Manual (Environmental Laboratory 2006; hereafter the AWS). Dominant plant species, soil characteristics, and hydrology indicators were noted within a 10-foot by 10-foot plot at each sample point. Data point(s) were mapped onto a 1-inch to 50-foot scale map (***Figure 3***). Wetlands were distinguished from uplands on this site by the presence of: 1) hydrophytic vegetation, 2) wetland hydrology, and 3) hydric soils (defined below. For more detailed information, please see the Wetland Delineation Report prepared by Zentner Planning and Ecology (Zentner 2018).

1. Hydrophytic Vegetation

Hydrophytic vegetation is dominated by plant species that can tolerate prolonged inundation or soil saturation during the growing season. More than 50% of the dominant species must be wetland indicators of FAC, FACW and OBL or outweigh them using a prevalence index for the vegetation to be considered hydrophytic. These wetland indicators, or hydrophytes, are listed in the Delineation Manual as OBL, FACW, and FAC. Other plants are listed as FACU or NI, and unlisted plants are considered as UPL. These abbreviations are defined as follows:

Project Name:	Sheehy
Project Number:	1082
Project File:	D:\Graphic Designer\My Documents\PROJECTS\1000-1100\1082 Sheehy\AutoCAD\Delineation\1082 delin 18-04-04.dwg
Aerial Source:	Google Earth 5/20/2017
Date:	4/17/18
Cartographer:	CJL

Scale: 1 inch = 50 Feet

0 50' 100'

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N

FIGURE 3

Section 404 Jurisdictional Delineation Map
Sheehy Property
Napa County, CA

Legend

Jurisdictional Perennial Creek — A

Sample Point — 1

Project Boundary

Section 404 Jurisdictional Areas

Habitat Type	Acreage
A. Perennial Creek "Other Waters"	0.01
TOTAL	0.01 Acres

Disclaimer: Section 404 Jurisdictional Map

This map exhibits conditions on the site at the time of completion of the delineation. For various reasons, conditions on a site may change, which may affect site wetland boundaries. Delineation maps generally expire five years after approval by the U.S. Army Corps of Engineers (Corps). Because regulations governing delineations are subject to change, this map should be reviewed by a qualified wetland consultant to ensure accuracy if not submitted to the Corps within six (6) months of preparation.

Field Work By: Zentner Planning and Ecology, 3/5/18, 4/11/18

OBL	Obligate Wetland Plants	Plants that occur over 99% of the time in wetlands
FACW	Facultative Wetland Plants	Plants that occur 67% to 99% of the time in wetlands
FAC	Facultative Plants	Plants likely to occur 33% to 67% of the time in wetlands
FACU	Facultative Upland Plants	Plants that occur 1% to 33% of the time in wetlands, but which occur more frequently in uplands
NI	Non-indicator plants	These must be checked against the National Indicator List and could be changed to a wetter or drier status
UPL	Upland Plants	Plants that occur less than 1% of the time in wetlands

Note: The 3 facultative categories are subdivided by (+) and (-) modifiers. FAC+ species are considered to be wetter (have a greater estimated probability of occurring in wetlands) than FAC species. FAC- species are considered to be drier (have a lesser estimated probability of occurring in wetlands) than FAC species.

2. Hydric Soils

Hydric soils develop under the low oxygen conditions typical of prolonged inundation or saturation, and generally show visible indications of chemical reduction. The hydric nature of a soil is most often indicated by low matrix chromas of 0 to 1, or 2 with mottles, and is determined by comparing the wetted soil with Munsell Soil Color Charts. The hydric nature of a soil may also be indicated by the presence of manganese or iron nodules, or other more subtle characteristics.

3. Wetland Hydrology

Common wetland hydrology indicators demonstrate inundation or saturation and include observations of standing water, saturated soils, algal mats, water-matted detritus, and water stains on rocks or other objects. In evaluating these hydrology indicators some attention must be given to the frequency and duration of inundation, and the effects of recent weather, unusual flooding and climatic fluctuations. According to the AWS, an area must have "14 or more days of flooding or ponding or a water table 12 inches (30 centimeters) or less below

the soil surface, during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability)" to satisfy the hydrology standard. The old standard (US Army Corps 1987 Manual) was that an area must have ponding for 5% of the growing season (18 days in California) or a water table at a depth equal to 80% of the root mass.

4. Other Waters

The Corps also regulates "other waters tributary to waters of the U.S." Boundaries between uplands and other waters are determined based on water elevations and geomorphic features. In freshwater conditions, the boundary between uplands and other waters is the ordinary high water mark (OHWM). In tidal conditions, the boundary is set by the high tide line, roughly equivalent to mean high water.

C. Results

The majority of the site is uplands, composed primarily of ruderal grasslands. The only Jurisdictional area found on the site is Sheehy Creek, a nearly perennial to perennial tributary to the Napa River. The jurisdictional area is shown in ***Figure 3***.

1. Jurisdictional Areas

b. Other Waters

Total Area: 0.01 acres
Areas: A
Data Points: 9

Sheehy Creek is tributary to the Napa River and is, therefore, jurisdictional as an "other water". The boundaries of Sheehy Creek within the project area are defined by the OHWM as this this section of creek does not contain wetland vegetation, except for a few sparse sedges (*Carex barbare;* FAC). The riparian woodland, which is dominated by arroyo willow (*Salix lasiolepis;* FACW) and was planted as a result of a restoration effort, is rooted outside of the OHWM. Sheehy Creek was incised with annual grassland vegetation along its banks, prior to these restoration efforts, which took place around 2003 to 2004.

i. Vegetation

As noted above, very little vegetation is found within OHW except for occasional sparse Santa Barbara sedge. Planted willows dominated the riparian zone along the banks outside of OHW. Other vegetation, which was planted, inside of the riparian zone include California rose (*Rosa californica; FAC*), California blackberry (*Rubus ursinus;* FAC) and coyote bush (*Baccharis pilularis;* UPL).

ii. Soils

The soils within the OHW of the creek zone are silt deposits on top of erosion control fabric, rather than soils. Below the fabric are the native Haire clay loams, which is on the list of hydric soils.

iii. Hydrology

Sheehy Creek, within the property, is perennial to nearly perennial. The creek bank width ranged from about 20 to 25 feet within the boundaries of the property. The creek zone was occasionally flooded due to the presence of small beaver dams.

Photo 3: View of the Sheehy Creek above a small beaver dam that is detaining water. April 2018

2. Non-jurisdictional Areas

a. Ruderal Grassland

Data Points: 1, 2, 3, 4, 5, 6, 7, and 8

Most of the site is ruderal annual grassland and is dominated by non-native, upland grasses and forbs. An area disturbed by recent past grading acts as a mesic swale. However, this area only ponds shallow water after heavy rain falls. The vegetation is predominantly UPL, FACU, and FACU. Only meadow barley (*Hordeum brachyantherum*) (FACW) is wetter than FAC and is found scattered throughout the regions grasslands. Outside of the project property, the seasonal wetlands in the region generally include Juncus (FACW to OBL), Eleocharis (OBL) and other FACW to OBL plants, none of which was found on this site.

i. Vegetation

The grasslands are dominated by UPL and FACU plants with some FAC vegetation. Upland vegetation generally exceeded hydrophytes by a 3:1 margin or more in the annual grasslands.

The common dominants of the grassland are provided in Table 2 below

Table 2
Grassland Vegetation

Common Name	***Scientific Name***	***Regional Indicator***
Common Dominants		
brome fescue	*Festuca bromoides*	UPL
soft chess	*Bromus hordeaceus*	FACU
Italian ryegrass	*Festuca perennis*	FAC
wild oats	*Avena fatua*	UPL
Occasional Dominants		
Mediterranean barley	*Hordeum maranum*	FAC
meadow barley	*Hordeum brachyantherum*	FACW
ripgut	*Bromus diandrus*	UPL
geranium	*Geranium mole*	UPL

ii. Soils

In general, the upland soils were found to by silty clay loams with a color of 10YR 3/2. One area (sample point 5) near the adjacent development, contained a layer of fill with more clay and lighter color (2.5 YR 4/2) in the upper 4" of soil. The site soils contained some very light root oxidation at a depth of 12 to 15 inches, but nothing in the upper 12 inches of soil. The soils on-site did not appear to be the heavier Haire clay loams as mapped by the Soil Survey, but lighter silty clay loams.

iii. Hydrology

The majority of the grassland samples failed the hydrology criteria. The site is sloped to the west and water has historically sheet-flowed off of the site. The exception were data points 1, 4 and 6. These were located in a relatively mesic swale that appeared to be the result of past construction work on the adjacent site to the south. Though one to three inches of water were ponded in the site, the data was taken shortly after unusually heavy, late season rainfall. The soil colors and textures in these areas were the same as those in other portions of the grassland and the vegetation was generally the same as well. Other seasonal wetlands in the region were visited as a comparison. These were all characterized by what appeared to be deeper and more prolonged ponding, heavier soils with notable redox, and dominance by hydrophytic vegetation including FACW and/or OBL vegetation.

4. Conclusion

A delineation of the Site was completed by Zentner and Zentner in April 2018. Only a portion of Sheehy Creek on the northern border of the project site was found to be jurisdictional as an "other water". No wetlands were observed on the property.

B. Other Special Status Habitats

The CNDDB notes four special status habitats within five miles of the project site. These habitats include Serpentine Bunchgrass, Northern Vernal Pool, Northern Coastal Salt Marsh, and Coastal Brackish Marsh. None of these habitats exist on the project site or on the property.

However, the willow riparian woodland vegetation associated with Sheehy Creek, is usually a locally defined special status habitat. This vegetation though is not naturally occurring, having been planted as part of a restoration program approximately 15 years ago. Prior to this restoration, the creek corridor was surrounded by non-native, annual grassland vegetation.

IV. SPECIAL STATUS SPECIES

A. Special Status Definitions and Jurisdictions

For the purposes of this assessment, "special-status" refers to those species that meet one or more of the following criteria: Plant and animal species listed by the USFWS or CDFW as Threatened or Endangered; species proposed for listing as Threatened or Endangered; or species that are candidates for listing as Threatened or Endangered.

Plant and animal species considered as "Endangered, Rare, or Threatened" are defined by Section 15380 of the CEQA Guidelines. Section 15380(b) states that a species of animal or plant is "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. A species is "rare" when either "(A) although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become Endangered if its environment worsens; or (B) the species is likely to become Endangered within the foreseeable future throughout all or a portion of its range and may be considered 'Threatened' as that term is used in the Federal Endangered Species Act" (ESA). Plants included on Ranks 1, 2, 3, or 4 of the California Native Plant Society (CNPS) or on lists maintained by local chapters of CNPS are also designated as special status species.

Animal species designated as "Fully Protected", "Species of Special Concern," or "Special Animals" by the CDFW have no legal status under the California Endangered Species Act (CESA), but CDFW recommends their protection as their populations are generally declining and they could be listed as Threatened or Endangered (under CESA) in the future or they are species considered by CDFW to the those of the "greatest conservation need" (CDFG 2009). "Special Animals" is a relatively recent and broad list developed by CDFW to encompass a number of other Federal, State, Local and Non-governmental Organization (NGO) lists of special status species. It includes, for example, species listed by the US Bureau of Land Management (BLM), species listed by the Western Bat Working Group (WBWG) or the International Union for the Conservation of Nature (IUCN).

Birds designated by the USFWS as "Birds of Conservation Concern" Also have no legal status under the ESA, but USFWS recommends their protection as their populations are generally declining, and they could be listed as Threatened or Endangered (under ESA) in the future. More information on special status species, including definitions and abbreviations, is provided in Appendix B.

The Migratory Bird Treaty Act (16 U.S.C. 703-711) makes it unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, kill, attempt to transport (import or export)

any migratory bird including any part, nest, or egg of any such bird. Essentially, the law includes all species of birds, not just those typically considered migratory. Rock doves, also known as "pigeons" (*Columba livia)* and European starlings (*Sturnus vulgaris)* are the only birds that are exceptions to this law.

B. Methods

This assessment includes a review of the USFWS and CDFW lists of special status animals and plants, the CNDDB occurrence records for the local quads and the CNPS's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018) and other sources reflecting the taxa noted above to define a list of special status species that could potentially occur on the project site or in the region. **Figure 4** shows the CNDDB results for special status wildlife and **Figure 5** for special status plant species respectively. See **Appendix B** for more information and species definitions. The list of CNDDB special status species is provided in **Appendix C**.

C. Results

The special status species that have the potential to occur on the project site are described in more detail below. The majority of the species are highly unlikely to occur onsite due to a variety of reasons including; the lack of suitable habitat onsite, the lack of local occurrences, they are out of the range of the species and have not been observed on-site during surveys that were conducted on the property. The following species have not been observed but have some potential to nest on-site at some time, move through the site, or otherwise depend on the site for some function given the presence of potentially suitable habitat and known occurrences in the surrounding area.

1. Special Status Wildlife

Amphibians

California red-legged frog (*Rana aurora draytonii;* CRLF); (FT, CSC, IUCN:VU)

The California Red-legged frog (CRLF) historically ranged from Redding and Marin County, south to northern Baja California (Jennings and Hayes 1994). Due to the loss and modification of habitat, predation by the non-native bullfrog, and impacted water quality, its range has been reduced to isolated drainages within coastal ranges and near-coastal foothills. The United States Fish and Wildlife Service (USFWS) notes that the CRLF once occupied 46 counties, but is now found in only 22 with the greatest concentrations in Monterey, San Luis Obispo and Santa Barbara Counties (USFWS 2002).

The CRLF is a relatively large, spade-shaped species at 1.7 to 5.1 inches in length. They vary in color, and may be brown, grey, olive, or reddish in color with black spots and irregular

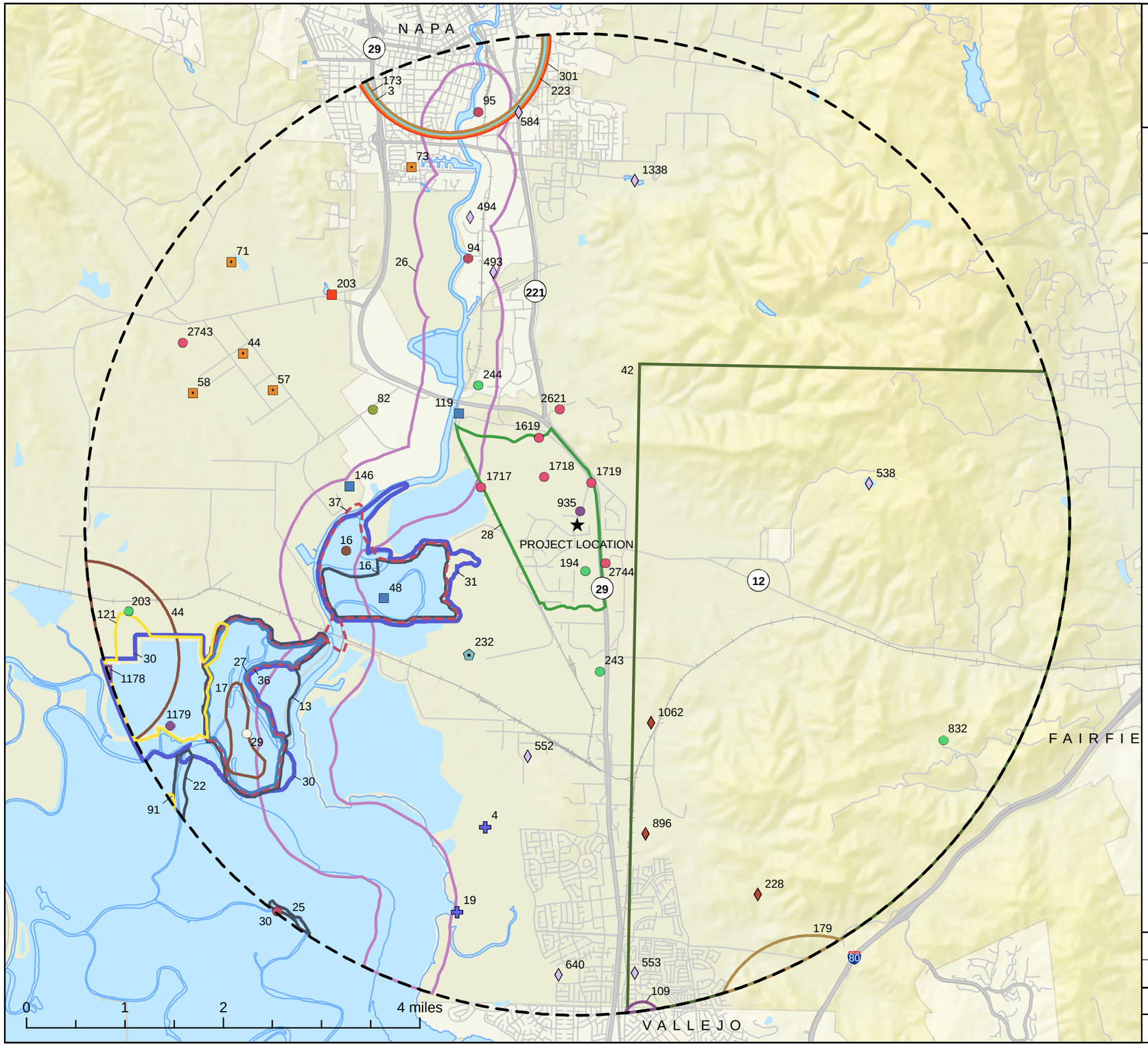

FIGURE 4
CNDDB Special Status Wildlife Occurrences

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SHEEHY PROPERTY
Napa County, California

LEGEND:

- ★ PROJECT LOCATION
- 5-MILE RADIUS
- California red-legged frog, *Rana draytonii,* 228, 896, 1062
- Western pond turtle, *Emys marmorata*, 493, 494, 538, 552, 553, 584, 640, 1338,
- Northern harrier, *Circus cyaneus*, 29
- Swainson's hawk, *Buteo swainsoni,* 1619, 1717, 1718, 1719, 2621, 2743, 2744
- Ferruginous hawk, *Buteo regalis,* 28
- Golden eagle, *Aquila chrysaetos*, 82
- American peregrin falcon, *Falco peregrinus anatum,* 42
- California black rail, *Laterallus jamaicensis coturniculus,* 30, 31
- California Ridgway's rail, *Rallus obsoletus obsoletus,* 13, 16, 22, 25
- Western snowy plover, *Charadrius alexandrinus nivosus,* 91, 121,
- Burrowing owl, *Athene cunicularia,* 109, 935, 1178, 1179
- Saltmarsh common yellowthroat, *Geothlypis trichas sinuosa,* 30, 36, 37, 94, 95
- San Pablo song sparrow, *Melospiza melodia samuelis*, 16, 17, 44
- Tricolored blackbird, *Agelaius tricolor,* 194, 203, 243, 244, 832
- Steelhead trout, *Oncorhynchus mykiss irideus,* 4, 19
- Longfin smelt, *Spirinchus thaleichthys,* 26
- Pallid bat, *Antrozous pallidus,* 44, 57, 58, 71, 73, 223
- Salt-marsh harvest mouse, *Reithrodontomys raviventris,* 27, 48, 119, 146
- American badger, *Taxidea taxus,* 203, 301
- Vernal pool fairy shrimp, *Branchinecta lynchi*, 232
- An isopd, *Calasellus californicus*, 3
- Western bumblebee, *Bombus occidentalis*, 173, 179

BY:	CJL	DATE:	04/17/2018, 11:54 am
PROJECT:	1082 Sheehy		
FILE:	D:\Graphic Designer\My Documents\PROJECTS\1000-1100\1082 Sheehy\Adobe\1082 CNDDB 18-03-30		
SOURCE:	CNDDB shapefiles March 2018		

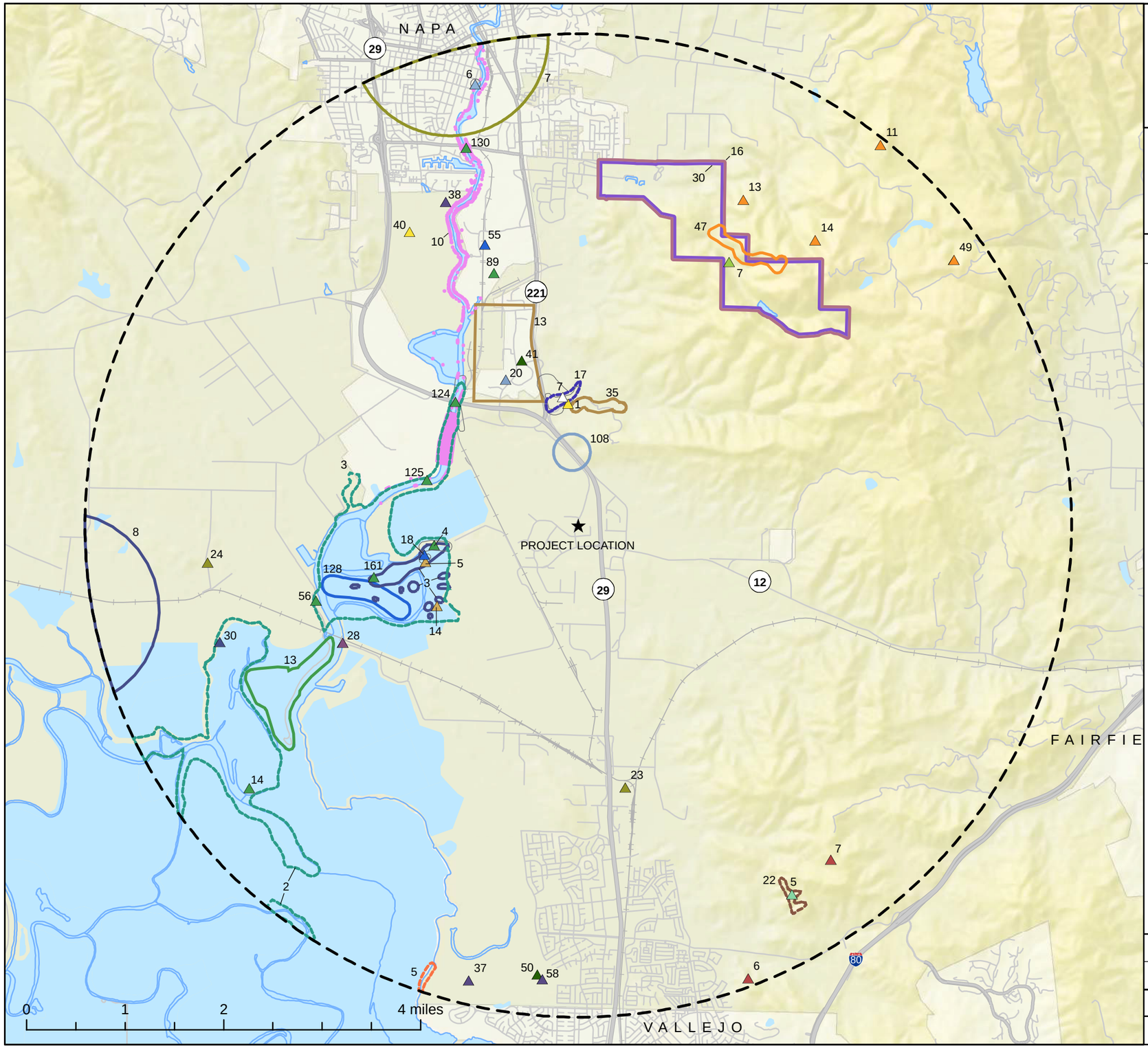

FIGURE 5
CNDDB Special Status Plant & Habitat Occurrences

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SHEEHY PROPERTY
Napa County, California

LEGEND:

- ★ PROJECT LOCATION
- 5-MILE RADIUS
- Serpentine Bunchgrass, 22
- Northern Vernal Pool, 17
- Northern Coastal Salt Marsh, 5
- Coastal Brackish Marsh, 2, 3
- Mason's lilaeopsis, *Lilaeopsis masonii*, 10
- Big-scale balsamroot, *Balsamorhiza macrolepis*, 7, 6
- Greene's narrow-leaved daisy, *Erigeron greenei*, 16
- Contra Costa goldfields, *Lasthenia conjugens*, 1, 40
- Suisun Marsh aster, *Symphyotrichum lentum*, 18, 55, 128
- Dwarf downigia, *Downingia pusilla*, 20, 108
- Legenere, *Legenere limosa*, 7
- San Joaquin spearscale, *Extriplex joaquinana*, 37, 38, 58
- Oval-leafed viburnum, *Viburnum ellipticum*, 7
- Alkali milk-vetch, *Astragalus tener var. tener*, 41, 50
- Delta tule pea, *Lathyrus jepsonii var. jepsonii*, 4, 13, 14, 56, 89, 124, 125, 130, 161
- Two-fork clover, *Trifolium amoenum*, 7, 23, 24
- Saline clover, *Trifolium hydrophilum*, 13, 35
- Northern California black walnut, *Juglan hindsii*, 6
- Marin knotweed, *Polygonum marinese*, 5, 14
- Holly-leaved ceanothus, *Ceanothus purpureus*, 11, 13, 14, 47, 49
- Tiburon paintbrush, *Castilleja affinis var. neglecta*, 5
- Soft salty bird's beak, *Chloropyron molle ssp. molle*, 3, 8, 30
- Lyngbye's sedge, *Carex lyngbyei*, 28
- Narrow-anthered brodiaea, *Brodiaea leptandra*,30

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SOURCE:	CNDDB shapefiles March 2018		

blotches. The lower abdomen and undersides of the legs are often, but not always, red. They have a dark mask above the upper jaw. The species is characterized by its prominent dorsolateral fold which extends on the body from eye to hip. The tadpoles are brown and marked with small, dark spots. The lower body is creamy white and also flecked with small spots.

From late-November to late-April, adult CRLF are typically found in or near breeding habitat, which consists of perennial or near-perennial, deep (greater than 2 foot) ponds, pools or similar habitats associated with dense riparian or marsh vegetation (Hayes and Jennings 1989, 1994, Jennings 1988). Breeding takes place in streams, deep pools, backwaters within streams and creeks, ponds, marshes, and stock ponds. CRLF can occur in ephemeral ponds or permanent streams and ponds; however, populations probably cannot persist in ephemeral streams (Jennings and Hayes 1985). Habitats with the highest densities of CRLF are deep-water ponds with dense stands of overhanging willows and a fringe of cattails (Jennings 1988; Rathbun et al. 1993).

During rainy nights, however, they may also be found 200 to 300 feet away from the aquatic habitat (Zeiner et al 1988). From late-spring through fall, CRLF will stay near aquatic habitat, but during the end of this period they may move away from the breeding locale into nearby moist locations.

CRLF breeds during the winter and early spring, from as early as late November through April and May. Larvae (tadpoles) remain in breeding ponds until metamorphosis in the summer months. Mortality rates are high, with less than 1 percent of eggs laid reaching metamorphosis (Jennings et al. 1992). Males reach sexual maturity about 2 years after metamorphosis, while females require 3 years to attain sexual maturity (Jennings and Hayes 1985). Individuals of this species may live up to 10 years (Jennings et al. 1992). Young CRLF (eggs, larvae, and tadpoles) are found almost exclusively in ponds (such as stockponds) or slow-moving water in creeks, ditches, or similar habitat. Typically, these ponds or creeks are well-vegetated (Zeiner et al 1988) but habitat may also consist of well-grazed stockponds with little marsh vegetation (USFWS 2002). Young CRLF generally do not occur in aquatic habitats which also contain bullfrogs (Jennings and Hayes 1989).

Determining the location of CRLF habitat is complicated by CRLF movement away from relatively easily identified riparian and wetland habitats. Much of the movement ecology of CRLF is still poorly understood (Jennings and Hayes 1994), but they appear to move significant distances at two times during a year. First, adults move between winter oviposition sites and spring and summer foraging habitat (Jennings and Hayes 1989). Frogs observed in upland habitat at night during winter rains may represent such movement, but new aquatic habitat may also be found and colonized during such periods of reduced water stress. Movement into upland riparian habitat at such time may also protect frogs from catastrophic injury and transport by floodwaters (Jennings and Hayes 1994). Second, CRLF move into the shelter of riparian thickets during fall, when stream habitat is often much reduced (Rathbun et al. 1993). Such behavior appears to resemble estivation of amphibians like California tiger

salamanders and spadefoots (Jameson 1981), however, the CRLF, especially the coastal populations, does not experience seasonal dormancy.

According to the CNDDB, there have been three observations of CRLF within five miles of the project site. All three occurrences are located south of the project site between approximately 2 to just over 4 miles from the site in sites with either perennial water and/or emergent vegetation. One occurrence is located in an ephemeral drainage within a 317-acres of preserved CRLF habitat owned by the Napa Valley Unified School District. The second occurrence was noted within a large quarry pond in 2006 and the third within North Slough Creek. Critical Habitat for this species has been identified; the closest is Unit SOL-2, whose closest border is approximately 2 miles east of the project site.

CRLF are not likely to occur on the site as there is no breeding habitat on or near the site. The only aquatic habitat on or near the site is Sheehy Creek, which CRLF are not known from. Sheehy Creek generally does not support deep water pools that are perennial or nearly perennial, which is essential for CRLF breeding. While CRLF could use the creek as a movement corridor, they are now known to be as likely to use any uplands between breeding habitat. However, all the known habitat is to the south. As well, there are no known observations upstream of the channel and CRLF are not likely to move through or towards the site seeking summer habitat as there is no nearby breeding habitat. Therefore, CRLF are unlikely to occur on the project site. However, a preconstruction survey should be conducted to ensure that no CRLF are in the vicinity when work commences in the unlikely event that a stray CRLF moves along the creek corridor.

Reptiles

Western Pond Turtle (*Emys marmorata*) (USFS:S, BLM:S, CDFW:SSC, IUCN:VU)

The western pond turtle is a small to medium species growing from 3.5 to 8.5 inches in length. Hatchlings are 1 inch in shell length. They are dark brown, olive brown, or blackish in color with a low, unkeeled carapace. A pattern of darker lines or spots radiate from the centers of the scutes. The head and legs of the turtle are dark with creamy white or yellow speckling. Males have a light throat with no markings and a low domed carapace, while females have a throat with dark markings and a high-domed carapace.

Once inhabiting an extensive portion of the west, it is now listed as vulnerable do to a decline in its range. It is found along the west coast from the Coast Ranges to the central valley in California, north into Washington and British Columbia. Isolated populations may also occur in Susanville, Ca, the Mojave Desert, and in Nevada in the Truckee, Carson, and East Walker Rivers. They have been found at elevations from sea level to over 5,900 ft.

The species is aquatic and is found in ponds, lakes, rivers, marshes, and irrigation ditches with abundant vegetation within woodlands, grasslands, or forests. They require logs, rocks, or exposed vegetation one which they bask in the sun. In summer droughts or during colder

winter months, the turtles bury themselves in soft soil or hibernate in the muddy bottoms of pools. They may also move along creek channels until they find an isolated pool.

Mating occurs in April and May when the turtles reach 8 to 10 years in age. Eggs are laid between April and August along stream or pond margins.

A total of eight occurrences of western pond turtle are noted by CNDDB within 5 miles of the project site. However, none of these are associated with creeks such as Sheehy and most are noted in ponds within developed areas north in Napa or south in Vallejo. A few are noted from deeper, perennial ponds in the hills north and east of the project. Sheehy Creek, does however, contain some areas of slow moving pools that could potentially provide habitat for this species. As well, suitable potential nesting areas lie adjacent to the creek, though no turtles or nests were noted during surveys. Given the availability of potential habitat and the observations in the region, a preconstruction survey for this species should be conducted to ensure that this species is absent prior to the commencement of work.

Birds *(nesting birds unless noted otherwise)*

Swainson's hawk (*Buteo swainsoni*) (ST, BLM:S, IUCN:LC, USFWS:BCC) Nesting and Foraging Habitat

The Swainson's hawk is a large, long-winged species that ranges from 18 to 22 inches in height. It is an even, brown color on its upper parts and white below with a light brown breast. Its tail is banded and brown. Its wings are longer and more pointed than most hawks and soars with wings in a shallow V-shape (Woodbridge 1998).

The hawk nests in western North America from March to July and migrates to southern South America for the winter starting in August. This hawk is similar in size compared to the red tailed hawk (*Buteo jamaicencis*) and utilizes open habitats. Potential habitats include mixed and short grass grasslands with scattered trees, dry grasslands and meadows, agricultural fields, riparian areas, oak savannas, and juniper-sage flats (Woodbridge 1998).

The hawk forages for insects, small mammals including California voles (*Microtus californicus*), deer mice (*Peromyscus maniculatus*), and valley pocket gopher (*Thomomys bottae*), and birds by flying 100 to 300 feet above the ground. The hawk is highly adapted to human disturbance, unlike most other raptors, and they actively seek fields where activities including discing, mowing, flooding, and harvesting which force small mammals from their burrows. The raptor may forage up to 18 miles from a nest but usually tries to minimize flight distance to prey. Fledglings normally forage within 0.5 miles of the nest. Fledgling mortality is an important factor in the decline in population levels. Mortality may reach 80% among fledglings and is often at least 60% (Woodbridge 1998).

The Central Valley and the Great Basin support the majority of the California's Swainson's hawk populations. Historically, the species was found throughout the state, in bioregions

such as the Southern Transverse Ranges, Central Coast Ranges, Central Valley, Great Basin, and Mojave-Colorado Desert. Typically, the raptors nest in large native riparian trees in close proximity to agricultural land, which supports accessible prey. Swainson's hawk typically occurs in valley oak (*Quercus lobota*), Fremont cottonwood (*Populus fremontii*), black walnut (*Juglans hindsii*), and willows (*Salix ssp*.). Although the hawk will fly some distance from the nest tree to forage, most will seek foraging habitat near the nest. Consequently, the Central Valley population is clustered in areas where suitable nesting and foraging habitat occur together. The Swainson's hawk population has declined by 90% since the 1940's due primarily to loss of nesting habitat (Woodbridge 1998).

According to CNDDB, there have been seven observations of Swainson's hawks within five miles of the project site, with six of these occurring within about 1 mile of the property. The site contains suitable nesting habitat within the trees adjacent to Sheehy Creek and suitable foraging habitat in the grasslands. Due to the proximity of known nesting sites and suitable habitat onsite, there is a high potential for this species to occur within or adjacent to the project site. Therefore, preconstruction nesting season surveys should be conducted to determine the presence/absence of this species and the closest known, active nesting site to the property.

Northern harrier (*Circus cyaneus*) (CDFW:SSC, IUCN:LC)

The northern harrier (*Circus cyaneus*), formerly known as the marsh hawk, is a medium-sized raptor with long, narrow wings and tail. The species has a rectangular, white rump and owl-like facial disk. Adult males are pale gray above, with mostly white below and black wing tips. Females are generally larger and are brown above with brown-streaked breast. The species utilizes a wide variety of open habitats, with North American populations breeding from Alaska to eastern Canada, and south to southern California, Arizona, Kansas, and Virginia, and wintering from South America to southern Canada (Cripe 2000).

Breeding habitat includes fresh and brackish wetlands, open wet meadows and grasslands, shrub-steppe, desert sinks, areas along rivers and lakes, and crop fields (Grinnel and Miller 1944, MacWhirter and Bildstein 1996, Martin 1987). The species commonly nests on the ground in shrubby vegetation at marsh edges but may also nest several miles from water (CNDDB).

CNDDB has one observation of a northern harrier within five miles of the project site. The CNDDB record describes a nesting pair observed nesting on Coon Island, 6 miles south of Napa, from March 1, 2004 to June 15, 2004. This occurrence is approximately 4 miles southwest of the project.

Although the project site contains moderately suitable foraging habitat and potential nesting habitat, primarily along the Sheehy Creek riparian woodland, no northern harriers have been observed within the immediate vicinity of the project site. Additionally, no northern harriers

have been observed on the project site during recent site visits. However, a pre-construction survey should be completed to determine the presence/absence of the species within the project vicinity.

Ferruginous hawk (*Buteo regalis*) (CDFW:WL, IUCN:LC, USFWS:BCC) Wintering Habitat

The ferruginous hawk is a large, narrow-winged hawk at approximately 23 to 25 inches in height. It winters in open habitats including deserts and grasslands between September and April in the Modoc Plateau, Central Valley, and Coast Ranges (Zeiner et al 1990) but it does not nest in California.
This hawk prefers low elevations and avoids canyons and forests (Bechard and Schmutz 1995). It forages over open areas for birds, reptiles, amphibians, mice and ground squirrels. It is an uncommon winter resident and migrant in northern California and a more common winter resident in southwestern California (Garrett and Dunn 1981). They commonly nest on rock outcrops and cliffs, in isolated trees or groves of trees, and in sparse riparian woodlands in grassland and shrub-steppe habitats (Smith and Murphy 1973; Bechard and Schmutz 1995). Declines in population are attributed to habitat degradation and loss on the breeding and wintering grounds due to cultivation, grazing, fire, and control of small mammal prey species and development and land use changes (Bernard and Schmutz 1995; Olendorff 1993).

There is one CNDDB observation of this species within five miles of the project site. The description of this occurrence includes 2 to 3 individuals in several valley oak (Quercus lobata) trees adjacent to cultivated grassland. While this does not describe the existing property or project site, ferruginous hawks are active in the area. Therefore, a pre-construction survey should be completed to determine the presence/absence of the species within the project vicinity.

Coopers hawk (*Accipiter cooperii*) (CDFW:WL, IUCN:LC)

Cooper's hawk is a medium-sized accipiter with an extensive North American range (Sibley 2001). They have slender bodies from 35 to 50 centimeters in length and a wingspan of 75 to 94 centimeters wide. They have a dark blackish crown and a blue-gray back and a tail crossed by several dark stripes and a distinctive white band at its tip. Cooper's hawks are similar in appearance to sharp-shinned hawks.

The species is found throughout southern Canada and the United States, wintering as far south as Costa Rica and summering as far north as the northern US and southern Ontario. In much of the US, they are year-round residents. Copper's hawks are found in a variety types of deciduous forests and open woodlands and are currently more common in urban areas. They breed throughout most of the wooded portion of California at elevations between sea level and 2700 meters (9000 feet) (Zeiner et al 1990). They construct nests of sticks and twigs in the

crotch of coniferous trees or near the trunk in deciduous trees (Ehrlich et al 1988). Breeding occurs between March and August, although peak activity occurs May through July. The young are altricial and the males provide the food, while the females incubate. These hawks hunt small birds and mammals and occasionally reptiles and amphibians in woodland and along the habitat edges.

Coopers hawk is not on the species lists from the area. However, given the woodland vegetation and the relative abundance of prey in the area, this species has a moderate potential to nest on the site. Therefore, a pre-construction survey should be completed to determine the presence/absence nesting birds within and adjacent to the project site.

White-tailed kite (*Elanus leucurus*) (CDFW: FP, BLM: S, IUCN:LC)

The white-tailed kite is a medium sized raptor found in open savannas and grasslands. The species has long, narrow grey wings with a black spot on the inner portions. The face and lower body is white. They have red eyes. White-tailed kites are most notable for their distinctive foraging habit in which they hover about 80 feet above the ground, flapping their wings or hovering, until they drop straight down onto their prey.

This species is found year-round in the western and southern United States and through Mexico, Central and South America. They forage for rodents and other prey in cultivated fields, open woodland, marshes, and grasslands and nests in trees near marshes. White-tailed kites nest in the upper third of trees within open space or in forested areas. They may utilize existent, old nests of other species.

Though the white-tailed kite is not on species lists for the area, the site does provide potential nesting habitat in the riparian woodland and foraging habitat in the ruderal grasslands. Accordingly, a pre-construction survey should be completed to determine the presence/absence of the species within the project and immediate vicinity.

Other Nesting raptors (various species), generally protected under the CDFW Code and the Migratory Bird Treaty Act (MBTA). The site does support moderately suitable foraging habitat for raptor species and suitable nesting habitat for nesting raptors within the riparian woodland. Therefore, a preconstruction survey should be completed to determine the presence/absence of nesting raptors prior to the start of construction.

Other Migratory Nesting Birds; protected by the MBTA

The site provides suitable habitat for nesting birds protected by the MBTA, primarily along the Sheehy Creek corridor, but also within the shrubs on site. Accordingly, there is some limited potential for migratory nesting birds to nest on or adjacent to the site and a preconstruction

nesting bird survey should be completed

Mammals

Pallid Bat (*Antrozous pallidus*) (BLM:S, CDFW:SSC, IUCN:LC, USFS:S, WBWG:H)
Hoary Bat (Lasiurus cinereus) (IUCN:LC, WBWG:M, SA)
Yuma myotis (Myotis yumanensis) (BLM:S, IUCN:LC, USFS:S, WBWG:LM, SA)

A variety of special status bats are known from the region. These species utilize caves, buildings, mine shafts, snags, and crevices in rock faces and mature trees for night roosting, winter roosting (hibernacula), or nursery colony sites. Bats disperse to hibernacula during the winter and typically form nursery colonies in this region in early spring (February to March). They usually return to the same sites for nursery colonies unless significantly disturbed. Accordingly, there are two significant seasons for bats: the maternity season (spring/summer) when female bats raise young inside the roost, and the winter (from mid-October to mid-February) when bats are inactive (Tatarian, pers. comm.).

The pallid bat is a large, long-eared vespertilionid bat. There are six subspecies of the pallid bat. Three are found in California, including *A. p. pacificus*, *A. p. pallidus*, and *A. p. minor*. This species is easily distinguished from other bat species with its large size, eyes, and ears, light tan coloration, pig-like snout, and distinctive skunk odor. Its color varies dependent on location, blond in desert locations and tan along the coast and farther north. Pallid bat scat commonly contains the remains of insects like scorpions, Jerusalem crickets, sphinx moths, and/or long-horned beetles.

In California, the species occurs throughout the state in a variety of habitats including low desert, oak woodland and coastal redwood forests, extending up to 3,000 m elevation in the Sierra Nevada. Of the three present subspecies, *A. p. pacificus*, the largest subspecies, occurs along the coast and in the Coast Ranges west of the Central Valley. *A. p. minor*, the smallest subspecies, occurs in the Colorado River basin and adjacent mountain ranges. *A. p. pallidus* occurs throughout the rest of the state (including western San Diego County, the Central Valley, all of the Sierra Nevada and areas east of the crest, and, farther north, all areas east of the coast ranges) (Martin and Schmidly 1982).

The pallid bat is colonial with colonies forming in March to May and remaining until October (Barbour and Davis 1969). They are primarily a crevice roosting species and seek out rock crevices, old buildings, bridges, caves, mines and hollow trees (Barbour and Davis 1969). Breeding occurs in the spring and one to two young are born in the early summer. They remain dependent on their mothers for a minimum of 6 weeks.

Yuma Myotis bats are common and widespread in a variety of habitats throughout California. Their optimal habitat is open forests and woodlands with sources of water that they feed

above. Yuma Myotis roosts in maternity colonies in mines, caves, buildings and crevices. They also roost in separate more open spaces like abandoned swallows nests or under bridges (Grenfell et. al. 1982). They may be found feeding and roosting with other bat species such as *Tadarida brasiliensis* and *Antrozous pallidus* (Grenfell et. al. 1982). Yuma Myotis has routine foraging sites for food and water, and they make short seasonal migrations to hibernation spots in the winter. Yuma Myotis mates in the fall and gives birth to a single pup in the summer (Dalquest 1947).

The hoary bat (*Lasiurus cinereus*) is a large-sized bat species with short rounded ears, a light yellowish-brown head that blends to dark brown over the eyes and around the mouth. It has a yellow chin patch and black and brown wing membranes (Verts 1998). The hoary bat is the most widespread bat in North America occurring in all 50 states, although it is most common in the southwest (Brown 1980). The hoary bat can be found throughout California although its distribution is patchy in southeastern deserts (Zeiner 1990). The species migrates over a thousand miles in spring and fall (Brown 1980). It winters along the coast and in southern California and breeds inland and north of the winter range. During migration, the hoary bat may be found at locations far from its normal range.
The hoary bat generally roosts in dense foliage of medium to large trees (3-5m above ground). It prefers to be hidden from above with few branches below. They have been observed in a variety of other roosts including squirrel nests, tree cavities excavated by birds, and on the sides of buildings. Several deceased specimens have been found within caves. They are not believed to live within the cave but to die after entering (Verts 1998). The hoary bat feeds primarily on moths and occasional other flying insects. It forages over water and roads and in forests. The foraging flight is fast and straight and they forage with many other bat species. The hoary bat copulates in autumn during the migration or on the wintering grounds. Fertilization is delayed and the young are born between mid-May and early July (Verts 1998).

CNDDB lists six records of the pallid bat within 5 miles of the project site. These records are all north and west of the project site. The records describe the presence of maternity and bachelor roosts, breeding habitats, and foraging areas within those areas. No bats or maternity colonies were observed on the project site and these bat species are not likely to occur on the project site as CNDDB has no records of the species on the site nor have any been observed during recent site visits. However, the project site contains potential foraging habitat and roosting habitat, though no observations or indications of use have been made of this species on-site. Therefore, a pre-construction survey should be conducted to ensure that pallid, hoary bat, Yuma myotis or other bat species are not present prior to construction.

2. Special Status Plants

As noted earlier, the site is dominated by ruderal grassland with very few native species found on the site. The majority of the native vegetative species observed on the site are as a result of the restoration effort and are centered around Sheehy Creek. Only a few relatively

common native species were observed in the sites grasslands and most of these were associated with scraped ground around the existing fill pile.

Most of the special status plants known from the region are associated with salt marshes or vernal pools, which are habitats that do not exist on the property. In addition, no special status plants were observed on the site, despite survey work being conducted during the height of the blooming period for the majority of the plants.

Therefore, no special status plants likely to occur on-site

D. Summary

The site does not provide habitat for the great majority of special status species that occur in the region. However, the site's trees and shrubs provide potential nesting habitat for nesting raptors including Swanson's hawk, northern harrier, ferruginous hawk, Coopers hawk, white-tailed kite and other migratory nesting birds. The riparian woodland also provides potential foraging and roosting habitat for pallid bats, hoary bats, and Yuma myotis. The Sheehy Creek corridor and riparian zone provides potential habitat for western pond turtle. Therefore, preconstruction surveys for these species should be conducted. Finally, although Sheehy Creek does not provide breeding habitat for CRLF and CRLF are unlikely to occur on the site, a preconstruction survey for this species should be conducted in the unlikely event that a stray CRLF moves along the creek corridor.

V. REGULATORY SETTING AND PERMITTING

A. Federal Agencies

1. US Army Corps of Engineers

The Corps is a federal agency within the Department of Defense. The Corps has jurisdiction over all navigable waters of the United States and has permit requirements to prevent unauthorized obstruction or alteration of these waters, including construction, excavation, or deposition of materials in, over, or under such waters or any work that would affect the course location, condition, or capacity of these waters. Section 404 of the Clean Water Act (CWA) authorizes the Corps to regulate any activity that fills wetlands or waters of the United States. Section 10 of the Rivers and Harbors Act authorizes the Corps to regulate any activity in navigable waters of the United States.

Generally, Corps permits are divisible among individual permits, nationwide permits (for relatively minor impacts, *e.g*. fills under 0.5 acres) and regional permits (for actions with minimal impacts but with regional elements, *e.g*. flood control maintenance throughout a specific County).

No wetlands were observed on-site and the only Waters of the U.S are Sheehy Creek, which will not be impacted by the proposed development. Therefore, a Corps permit will not be necessary prior to develop the site.

2. U.S. Fish and Wildlife Service

The USFWS has jurisdiction over federally listed Threatened and Endangered species under the federal Endangered Species Act (ESA). This act protects listed species from harm or "take," which is broadly defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." An activity can be defined as a "take" even if it is accidental or unintentional.

An Endangered species is one which is considered in danger of becoming extinct throughout all or significant portions of its range. A Threatened species is one that is likely to become Endangered within the foreseeable future. In addition to Endangered and Threatened species, which are legally protected under the federal ESA, the USFWS maintains lists of candidate species and Birds of Conservation Concern. Species on these lists are not afforded the legal protection of ESA but are considered to be of special-status under CEQA.

Where projects that require federal approvals, such as Corps permits, may affect federally-listed species protected by the USFWS, the federal agency is required to consult with USFWS. Most commonly, where a development project is required to get a Corps permit, the Corps determines whether the project will affect federally-listed species. If the Corps determines

that a project may affect federally-listed species, it initiates consultation with USFWS under Section 7 of the ESA.

No federally-listed species are likely to be impacted by the development and therefore the development of the site should not require consultation with USFWS.

3. U.S. National Marine Fisheries Service

The National Marine Fisheries Service (NMFS) has jurisdiction over anadromous fish that are federally listed Threatened and Endangered species under the ESA. NOAA Fisheries also regulates Essential Fish Habitat (EFH) pursuant to the Fish and Wildlife Coordination Act of 1934.

Similar to the procedures described above for the USFWS, where projects that require federal approvals, such as Corps permits, may affect federally-listed species protected by NMFS, the federal agency is required to consult with NMFS. Most commonly, where a development project is required to get a Corps permit, the Corps determines whether the project will affect federally-listed species. If the Corps determines that a project may affect federally-listed species, it initiates consultation with NMFS under Section 7 of the ESA.

The development of the site will not require consultation with NMFS because there is no habitat for anadromous fish species on the site. Further, no impacts to Sheehy Creek are expected to occur.

B. State Agencies

1. California Department of Fish and Wildlife

The CDFW has jurisdiction over state-listed Threatened and Endangered species under the California Endangered Species Act (CESA). The state also maintains a list of wildlife identified as Species of Special Concern, Fully Protected Species and "Special Animals". Species on this list are not afforded the legal protection of the state ESA but are considered to be of special-status under CEQA. Should the species result in the "take" of a state-listed Threatened or Endangered species, a permit would be required under Section 2081 of the California Endangered Species Act.

The CDFW also asserts jurisdiction over the bed and banks of watercourses according to the provisions of Section 1600 *et seq* of the Fish and Game Code. A Streambed Alteration Agreement is typically required for the fill or removal of any material from a natural drainage. The jurisdiction of the CDFW generally extends to the top of a bank and also includes the outer edge of riparian canopy cover.

The development of the site should not require a permit from the CDFW as no special status species are likely to be found on the project site and no watercourses will be affected by the project. In addition, the observed edge of CDFW jurisdiction is the planted riparian zone from the creek up to the northern edge of the pathway. No impacts from the development are expected within this zone.

2. Regional Water Quality Control Board

Pursuant to section 401 of the CWA, projects that require a permit from the Corps under Section 404 must also obtain water quality certification from the RWQCB. This certification ensures that the project will uphold state water quality standards. Activities in wetlands or other waters that are outside of the jurisdiction of the Corps (*e.g.*, isolated wetlands, vernal pools, streams above the ordinary high water mark) may also be regulated by the RWQCB. Activities that lie outside of Corps jurisdiction but within the jurisdiction of the RWQCB may require the issuance of either individual or general Waste Discharge Requirement (WDRs) from the RWQCB.

No wetlands were observed on the site and the project is not expected to impact Sheehy Creek. Therefore, no permits from the RWQCB are expected to be required.

VI. POTENTIAL IMPACTS AND MITIGATION

A. CEQA Significance Criteria

The California Environmental Quality Act (CEQA) and the CEQA Guidelines provide guidance in evaluating project impacts and determining which impacts can be termed "significant". CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which existed in the area affected by the proposed project". Under the CEQA Guidelines, a project's effects on biotic resources may be significant when the project would result in one or more of the following.

- "substantially reduce the habitat of a fish or wildlife species," including causing a fish or wildlife population to drop below self-sustaining levels or threatening to eliminate an animal community.
- "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS"
- "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites."
- "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan."

B. Impacts

1. Less Than Significant Impact

Development of the existing paved areas and ruderal grassland habitat will result in a less than significant impact. These areas have low biotic value and there are numerous similar lots in the region with similar degraded habitat.

The proposed development will also result in impacts to approximately 0.02 acres of planted riparian vegetation. The only impacts to this vegetation will be on the southern side of the path, outside of CDFW jurisdiction. In addition, this vegetation is that result of a revegetation effort, which was completed around 2004 and replaced the non-native grassland that existed around Sheehy Creek. This planted riparian vegetation is less diverse than naturally occurring riparian habitats and the portion south of the path is being invaded by non-native Harding grass. In addition, the majority of the impacts will be to coyote bush rather than riparian vegetation. Due to the small impacts primarily to coyote bush, which is ubiquitous throughout the region, the proposed project is expected to result in a less than significant impact to the planted riparian vegetation.

2. Potentially Significant Impacts

Impact 1: The project may result in direct or indirect impacts to nesting birds.

The site's trees and shrubs provide potential nesting habitat for nesting raptors including Swanson's hawk, northern harrier, ferruginous hawk, Coopers hawk, white-tailed kite and other migratory nesting birds. In addition, nesting birds protected by the Migratory Bird Treated Act also have the potential to nest on-site. Should these be present, construction-related activities could result in their loss, which would result in a substantial adverse effect to a special status species.

***Mitigation Measure 1**: If construction would commence anytime during the nesting/breeding season of the Swanson's hawk, northern harrier, ferruginous hawk, Coopers hawk, white-tailed kite or other bird species listed in the Migratory Bird Treaty Act (typically February through August), a pre-construction survey of the project vicinity for nesting birds should be conducted. This survey should be conducted by a qualified biologist (experienced with the nesting behavior of bird species of the region) within 14 days prior to the commencement of construction activities that would occur during the nesting/breeding season. The intent of the survey should be to determine if active nests are present within or adjacent to the construction zone within approximately 250 feet. The surveys should be timed such that the last survey is concluded no more than two weeks prior to initiation of construction. If ground disturbance activities are delayed following a survey, then an additional pre-construction survey should be conducted such that no more than two weeks will have elapsed between the last survey and the commencement of ground disturbance activities.*

If active nests are found in areas that could be directly or indirectly affected by the project, a no-disturbance buffer zone should be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them should be determined through consultation with the CDFW depending on the species, taking into account factors such as the following:

- *Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;*

- *Distance and amount of vegetation or other screening between the construction site and the nest; and*

- *Sensitivity of individual nesting species and behaviors of the nesting birds.*

The buffer zone around an active nest should be established in the field with flagging, fencing, or another appropriate barrier and construction personnel should be instructed on the sensitivity of nest areas. The biologist should serve as a construction monitor during those periods when construction activities would occur near active nest areas of special status bird species to ensure that no impacts on these nests occur.

Significance After Mitigation: Less than significant. With the completion of these mitigation measures, the applicant will have ensured that construction activities do not significantly harm special status animals.

Impact 2: Development of the project could have a potentially significant impact on special status bat species

The trees within the riparian corridor on the site provide potentially suitable roosting habitat for bats, including pallid bat, hoary bat and Yuma myotis. Because the main riparian area will not be impacted by the project and only a small fringe of coyote bush will be removed, impacts to bats within the riparian area are unlikely. Though no signs of bat use have been observed within the riparian area, there is a possibility that bat species could use the riparian zone for roosting and any project-related impacts to bat species would be considered a significant adverse impact.

Mitigation Measure 2: *Prior to the commencement of construction activities during the breeding season of native bat species in California (generally occurring from April 1 through August 15), a qualified biologist shall conduct a focused survey to determine the presence/absence of any special status bat species. If bats are found the following measures will be implemented:*

A plan for removal or exclusion of any tree between October 16 and August 14 will be developed by a qualified biologist in conjunction with the CDFW.

Trees that are to be removed between August 15 and October 15 will be trimmed and removed in a two-phased system conducted over two consecutive days under the supervision of a qualified biologist. The first day (afternoon), limbs, branches and trunks without cavities, crevices and deep bark fissures are removed by chainsaw only. Limbs and trunks with cavities, crevices and bark fissures would be avoided. On the second day, the remainder of the tree may be removed.

Level of Significance After Mitigation: Less Than Significant

Impact 3: Development of the project could have a potentially significant impact on California red-legged frog

As noted previously, the project site does not contain good habitat for CRLF, however, they are known from the region south of the site. Sheehy Creek is not known to contain CRLF and the creek does not provide breeding habitat for CRLF. In addition, while the creek and riparian habitats are a likely potential movement corridor for wildlife, it is an unlikely movement corridor for CRLF. Therefore, although CRLF are unlikely, a preconstruction survey should be conducted to ensure that no CRLF are in the vicinity when work commences.

Mitigation Measure 3: *Within 48 hours prior to the commencement of construction activities, a qualified biologist shall conduct a preconstruction CRLF survey to ensure that no CRLF are located on or in proximity to the site. If CRLF are found, the CDFW and USFW will be contacted to determine appropriate mitigation measures and the work will be halted until the consultations are completed.*

Level of Significance After Mitigation: Less Than Significant

Impact 4: Development of the project could have a potentially significant impact on Western pond turtle

As noted previously, no pond turtles or pond turtle nests were observed on the project site or on or near the riparian zone. However, Sheehy Creek contains potential habitat for this species. As well, the surrounding riparian areas and grassland fringe contain potential nesting habitat for this species. Therefore, although pond turtles are unlikely, a preconstruction survey should be conducted to ensure that no pond turtles are in the vicinity when work commences.

Mitigation Measure 4: *Within 48 hours prior to the commencement of construction activities, a qualified biologist shall conduct a preconstruction survey for western pond turtles to ensure that no pond turtles are located on or in proximity to the site. If pond turtles are found, the CDFW will be contacted to determine appropriate mitigation measures and the work shall be placed on hold until the consultation is completed.*

Level of Significance After Mitigation: Less Than Significant

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APPENDIX A

VERTEBRATES RECORDED

FISH – none

AMPHIBIANS – Sierran treefrog (*Pseudacris sierra*) *adjacent to Sheehy Creek*

REPTILES – western fence lizard (*Sceloporus occidentalis*)

BIRDS

red winged blackbird (*Agelaius phoeniceus*)

gull (*Larus sp*.) *flying over site*

house finch (*Haemorhous mexicanus*)

pheasant – (*Phasianus colchicus*)

turkey vulture – (*Cathartes aura)* *flying high over site*

American crow – Corvus brachyrhynchos)

scrub jay – (*Aphelocoma californica)*

MAMMALS – N. American beaver (*Castor canadensis*) *signs of beaver use and beaver dam in Sheehy Creek*

APPENDIX B

DEFINITIONS FOR SPECIAL STATUS SPECIES DESIGNATIONS

Federal Endangered Species Act

The following are the standard definitions for the status designations under the federal Endangered Species Act (ESA), implementing regulations and relevant notices (as published in the Federal Register). The ESA is administered by the U.S. Fish and Wildlife Service (USFWS).

Endangered – A species that is in danger of extinction throughout all or a significant portion of its range.

Threatened – A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Proposed for Listing – Taxa formally noticed as being under review to determine whether listing as threatened or endangered is warranted.

Candidate – Taxa for which USFWS has on file sufficient information on biological vulnerability and threat to support a proposed rule to list the species as endangered or threatened. Proposals to list have not yet been issued because this action is precluded by other listing activity. Species in this category are assigned a listing priority in order to assist the FWS in determining those species most in need of protection.

[Note: As of February 1996, the USFWS eliminated the differing categories of candidate species and now has only one category of candidate species as defined above.]

California Endangered Species Act

The following are the standard definitions for the status classifications under the California Endangered Species Act (CESA), administered by the California Department of Fish and Game (CDFG), now renamed the California Department of Fish and Wildlife (CDFW).

Endangered species – A native California bird, mammal, fish, amphibian, reptile or plant (species or subspecies) is endangered when it is in serious danger of becoming extinct throughout all, or a significant portion of, its range due to one or more causes, including loss

of habitat, change of habitat, over-exploitation, predation, competition or disease (CDFW Code, Section 2062).

Threatened species – A native bird, mammal, fish, amphibian, reptile or plant (subspecies or species) is threatened when, although not presently threatened with extinction, it is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts. Any animal listed as "rare" by the Commission on or before January 1, 1985, is a threatened species (CDFW Code, Section 2067).

Candidate species – A native California species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant is a candidate when the Fish and Wildlife Commission (Commission) has formally noticed it as being under review by the CDFW to determine whether listing as threatened or endangered is warranted, or when it is the subject of a proposed rulemaking by the Commission to list as threatened or endangered (CDFW Code, Section 2068).

California Department of Fish and Game

Fully Protected – Fully Protected species may not be taken or possessed without a permit from the Fish and Wildlife Commission. Information of Fully Protected species can be found in the CDFW Code, (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515). Additional information on Fully Protected fish can be found in the California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 2, Article 4, §5.93. The category of Protected Amphibians and reptiles in Title 14 has been repealed.

Species of Special Concern – A California species of special concern is a plant or animal species or subspecies that is possibly declining or is vulnerable to extirpation and may be considered for listing or for special management and protection measures. These species, although not legally protected under the CESA, are monitored by the CDFW.

It is the goal and responsibility of the CDFW to maintain viable populations of all native species. To this end, the CDFW has designated certain species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability. Not all "Species of Special Concern" have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a "Threatened" or "Endangered" species under the State and/ or Federal Endangered Species Acts.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA), administered by the CDFW, protects "rare" plant species.

Rare – A native California plant (species, subspecies or variety) is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (CDFW Code, Section 1901).

California Native Plant Society (CNPS) List of Rare, Threatened and Endangered Vascular Plants of California

The CNPS maintains a list of rare, threatened and endangered vascular plants of California which summarizes the distribution, rarity, endangerment, and ecology of these plants. CNPS updates this list approximately every four years. The most recent edition (8th ed.) was published in December 2010. The CNPS listing designations are as follows:

California Rare Plant Rank (CRPR) 1A – The plants Ranked as 1A are presumed extinct because they have not been seen or collected in the wild in California for many years. All of the List 1A plants meet the definitions of "rare", "endangered", or "threatened" contained in Fish and Game Code Section 1901 (Native Plant Protection Act), and Sections 2062 and 2067 (CESA).

CRPR 1B – The plants Ranked as 1B are rare throughout their range, and all but a few are endemic to California. List 1B plants are considered vulnerable under present circumstances or have a high potential for becoming so because of their limited or vulnerable habitat, low numbers of individuals per population, or their limited number of populations. As with List 1A plants, all of the 1B plants meet the definitions of "rare", "endangered", or "threatened" contained in Sections 1901, 2062 and 2067 of the Fish and Game Code.

CRPR 2 – Except for being common outside California, Rank 2 plants are defined similarly to List 1B plants.

CRPR 3 – Rank 3 contains plants about which more information is needed to assign them to one of the other lists or reject them. Some List 3 plants meet the definitions of "rare", "endangered", or "threatened" contained in Sections 1901, 2062 and 2067 of the Fish and Game Code.

CRPR 4 – The plants in Rank 4 are of limited distribution or infrequent throughout a broader area in California, and their susceptibility to threat appears low at this time. These plants are uncommon enough that their status should be monitored regularly. Very few List 4 plants meet the definitions of "rare", "endangered", or "threatened" contained in Sections 1901, 2062

and 2067 of the Fish and Game Code, and few, if any, are eligible for state listing.

CNPS Threat Code extensions and their meanings:

.1 – Seriously endangered in California

.2 – Fairly endangered in California

.3 – Not very endangered in California

CNPS Local Listings (Alameda and Contra Costa Counties)

***A1** or ***A2** – Species in Alameda and Contra Costa Counties listed as rare, threatened or endangered statewide by federal or state agencies or by the state level of CNPS.

A1x – Species previously known from Alameda or Contra Costa Counties, but now presumed extirpated here.

A1 – Species currently known from two or less regions in Alameda and Contra Costa Counties.

A2 – Species currently known from three to five regions in the two counties, or, if more, meeting other important criteria such as small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc.

A1? – Species with taxonomic or distribution problems that make it unclear if they actually occur here.

Special Animals

California Department of Fish and Wildlife (CDFW)

Special Animals – Special animals is a general term that refers to all of the taxa that the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species". The CDFW considers the taxa on this list to be those of greatest conservation need and were used in the development of California's Wildlife Action Plan (CDFG 2009). Special animals includes a broad list of agency designations.

For more information see: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf

Watch List – The Watch List consists of taxa that were previously Species of Special Concern (SSC's) but no longer merit SSC status or which do not meet SSC criteria but for which there is concern and a need for additional information to clarify status.

Other "Special Animal" Status Codes:

The status of species on the Special Animals List according to other conservation organizations is provided. Taxa on these lists are reviewed for inclusion in the CNDDB Special Animals List, but are not automatically included. For example, taxa that are regionally rare within a portion of California may not be included, because they may be of lesser conservation concern across their full range in California.

These species, which are also tracked regardless of their legal or protection status, are provided below.

U.S Fish and Wildlife Service (USFWS)

Birds of Conservation Concern – The goal of the Birds of Conservation Concern report is to accurately identify the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the US Fish and Wildlife Service's highest conservation priorities and draw attention to species in need of conservation action.

National Marine Fisheries Service (NMFS) also known as NOAA Fisheries

Species of Concern **–** NOAA Fisheries is responsible for the management, conservation, and protection of living marine resources within the United States Exclusive Economic Zone. **Species of Concern** are those species about which we have some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). Though NMFS wishes to draw proactive attention and conservation action to these species, "Species of concern" status does not carry any procedural or substantive protections under the ESA.

Bureau of Land Management

Sensitive **–** According to BLM Manual 6840, a Bureau Sensitive Species must meet the following criteria to be considered for sensitive species listing:

- They must be native species found on BLM-administrated lands for which BLM has the capability to significantly affect the conservation status of the species through management.
- Information is available that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range.

- The species depends on ecological refugia or specialized or unique habitats on BLM-administrated lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk.

All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as Bureau Sensitive Species.

Once a species is declared sensitive by the BLM, it is their obligation to determine its distribution and manage the species' habitat.

California Dept. of Forestry & Fire Protection

CDF Sensitive **–** California Department of Forestry and Fire Protection classifies "sensitive species" as those species that warrant special protection during timber operations. The list of "sensitive species" is given in §895.1 (Definitions) of the California Forest Practice Rules.

International Union for Conservation of Nature (IUCN)

IUCN List **–** The IUCN assesses, on a global scale, the conservation status of species, subspecies, varieties and even selected subpopulations in order to highlight taxa threatened with extinction, and therefore promote their conservation. Detailed information on the IUCN and the Red List is available at: http://www.iucnredlist.org

Marine Mammal Commission

Species of Special Concern **–** Section 202 of the Marine Mammal Protection Act directs the Marine Mammal Commission, in consultation with its Committee of Scientific Advisors, to make recommendations to the Department of Commerce, the Department of the Interior, and other federal agencies on research and management actions needed to conserve species of marine mammals. To meet this charge, the Commission devotes special attention to particular species and populations that are vulnerable to various types of human-related activities, impacts, and contaminants. Such species may include marine mammals listed as Endangered or Threatened under the Endangered Species Act or as depleted under the Marine Mammal Protection Act. In addition, the Commission often directs special attention to other species or populations of marine mammals not so listed whenever special conservation challenges arise that may affect them.

More information on the Marine Mammal Protection Act and the Marine Mammal Species of Special Concern list is available at: http://www.mmc.gov/species/welcome.shtml

U.S Forest Service

Sensitive **–** USDA Forest Service defines sensitive species as plant and animal species identified by a regional forester that are not listed or proposed for listing under the Federal Endangered Species Act for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. Regional Foresters identify sensitive species occurring within each region. California is the Pacific Southwest Region (Region 5).

More information is available at: http://www.fs.usda.gov/main/r5/plants-animals and at:

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5435266.xlsx

American Bird Conservancy

WatchList of Birds of Conservation Concern **–** The United States WatchList is a joint project between the American Bird Conservancy and the National Audubon Society. It reflects a comprehensive analysis of all the bird species in the United States. It reveals those in greatest need of immediate conservation attention to survive a convergence of environmental challenges, including habitat loss, invasive species, and global warming. The list builds on the species assessments conducted for many years by Partners in Flight (PIF) for land birds. It uses those same PIF standards but it is expanded to cover all bird species, not just land birds. The list is based on the latest available research and assessments from the bird conservation community, along with data from the Christmas Bird Count and Breeding Bird Survey. More information is available at:

http://www.abcbirds.org/abcprograms/science/watchlist/index.html

American Fisheries Society (AFS)

AFS List **–** Designations for freshwater and diadromous species were taken from the paper: Jelks,.L., S.J. Walsh, N.M. Burkhead, S.Contreras-Balderas, E. Díaz-Pardo, D.A. Hendrickson, J. Lyons, N.E. Mandrak, F. McCormick, J.S. Nelson, S.P. Platania, B.A. Porter, C.B. Renaud, J. J. Schmitter-Soto, E.B. Taylor, and M.L. Warren, Jr. 2008. Conservation status of imperiled North American freshwater and diadromous fishes. Fisheries 33(8):372-407. Available at:

http://www.fisheries.org/afs/docs/fisheries/fisheries_3308.pdf

Designations for marineand estuarine species were taken from the paper: Musick, J.T. et al. 2000. "Marine, Estuarine, and Diadromous Fish Stocks at Risk of Extinction in North America (Exclusive of Pacific Salmonids). Fisheries 25(11):6-30. Available at:

http://www.flmnh.ufl.edu/fish/sharks/sawfish/Reprint1390.pdf

Western Bat Working Group (WBWG)

WBWG List – The WBWG is comprised of agencies, organizations and individuals interested in bat research, management and conservation from the 13 western states and provinces. The goals are (1) to facilitate communication among interested parties and reduce risks of species decline or extinction; (2) to provide a mechanism by which current information on bat ecology, distribution and research techniques can be readily accessed; and (3) to develop a forum to discuss conservation strategies, provide technical assistance and encourage education programs. Species are ranked as High, Medium, or Low Priority in each of 10 regions in western North America. Because California includes multiple regions where a species may have different WBWG Priority ranks, the CNNDB includes categories for Medium-High, and Low-Medium Priority. The CNDDB tracks bat species that are at least Low-Medium Priority in California. More information is available at: http://www.wbwg.org

The Xerces Society

Red List – The Xerces Society is an international non-profit organization dedicated to protecting biological diversity through invertebrate conservation. The Society advocates for invertebrates and their habitatsby working with scientists, land managers, educators, and citizens on conservation and education projects. Their core programs focus on endangered species, native pollinators, and watershed health. More information on the Red List is available at: http://www.xerces.org

Special Status Species Abbreviations

Federal Endangered Species Act

FE	Federally-listed as endangered
FT	Federally-listed as threatened
FPE	Federally proposed for listing as endangered or threatened
FC	Federal candidate for listing as endangered or threatened

State Endangered Species Act

SE	State-listed as endangered
ST	State-listed as threatened
SC	State candidate for listing as endangered or threatened

California Department of Fish and Wildlife

CFP	Fully protected
CSC	California species of special concern

California Native Plant Protection Act

CNPPA: Rare Rare plant

California Native Plant Society

CRPR California Rare Plant Rank

SPECIAL ANIMALS

California Department of Fish and Wildlife

CDFW: WL Watch list

CDFW: SA Special Animal

US Fish and Wildlife Service

USFWS:BCC Birds of Conservation Concern

NMFS (NOAA Fisheries)

NMFS: SC Species of Concern

Bureau of Land Management

BLM:S Sensitive

California Dept. of Forestry & Fire Protection

CDFS:S Sensitive

International Union for Conservation of Nature

IUNC:CD Conservation Dependent

IUNC:CR Critically Endangered

IUNC:DD Data Deficient

IUNC:EN Endangered

IUNC:LC Least Concern

IUNC:NT Near Threatened

Marine Mammal Commission

MMC:SSC Species of Special Concern

National Marine Fisheries Service

NMFS:SC Species of Special Concern

U.S Forest Service

USFS:S Sensitive

Western Bat Working Group

WBWG: H	High priority
WBWG: LM	low-medium priority
WBWG: M	medium priority
WBWG: MH	medium-high priority

Xerces Society Red List

X: CI	Critically imperiled
X: DD	Data deficient
X: IM	Imperiled
X: VU	Vulnerable

American Bird Conservancy

ABC: WLBBC	US Watchlist of Birds of Conservation Concern

American Fisheries Society

AMS: E	Endangered
AMS: T	Threatened
AMS: V	Vulnerable

APPENDIX C

CNDDB Species List

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: BIOS selection

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T2	S2	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Brodiaea leptandra narrow-anthered brodiaea	PMLIL0C022	None	None	G3?	S3?	1B.2
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calasellus californicus An isopod	ICMAL34010	None	None	G2	S2	
Carex lyngbyei Lyngbye's sedge	PMCYP037Y0	None	None	G5	S3	2B.2
Castilleja affinis var. neglecta Tiburon paintbrush	PDSCR0D013	Endangered	Threatened	G4G5T1T2	S1S2	1B.2
Ceanothus purpureus holly-leaved ceanothus	PDRHA04160	None	None	G2	S2	1B.2
Charadrius alexandrinus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
Chloropyron molle ssp. molle soft salty bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1	1B.2
Circus cyaneus northern harrier	ABNKC11010	None	None	G5	S3	SSC
Coastal Brackish Marsh Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erigeron greenei Greene's narrow-leaved daisy	PDAST3M5G0	None	None	G3	S3	1B.2
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Juglans hindsii Northern California black walnut	PDJUG02040	None	None	G1	S1	1B.1
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030	None	Rare	G2	S2	1B.1
Melospiza melodia samuelis San Pablo song sparrow	ABPBXA301W	None	None	G5T2	S2	SSC
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Northern Vernal Pool Northern Vernal Pool	CTT44100CA	None	None	G2	S2.1	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Polygonum marinense Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05016	Endangered	Endangered	G5T1	S1	FP
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Trifolium amoenum two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

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