Biological Resources Assessment
Proposed Marriott Residence Inn
3555 Round Barn Circle
Santa Rosa, Sonoma County, California
(APN 173-020-005)

Prepared For:

Mr. Don Cape
4255 Dean Martin Drive, Suite J
Las Vegas, NV 89103

Prepared by:

Ms. Lucy Macmillan, M.S.
Environmental Scientist
108 Rising Road
Mill Valley, California 94941
415-389-9199

FEBRUARY 2018

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EXECUTIVE SUMMARY

This report presents the results of a biological resource assessment conducted for approximately 1 acre located west of 3555 Round Barn Circle Road in Santa Rosa, Sonoma County, California. The property is partially developed land in an existing business park that was constructed in the 1980's. The property is proposed for a Marriott Residence Inn in a developed part of Santa Rosa just east of Highway 101 in Santa Rosa. While currently there are no buildings on the site, a portion of the property was developed into a detention basin in association with development to the east. Land to the west is Highway 101, lands to the north are undeveloped non-native grassland, and lands to the east and south are existing medical facilities.

The purpose of the biological resource assessment is to identify special-status plant and wildlife species and sensitive habitats (including wetlands and creeks) that have the potential to occur on or in the vicinity of the study area and to determine if the proposed development would affect these resources.

Based on information and data collected for the analysis and field surveys conducted in January 2018, it was determined that the project site provides potential habitat for nesting birds and possibly roosting bats. Recommendations to avoid or minimize potential impacts to nesting birds and roosting bats are presented in the report accordingly.

1.0 INTRODUCTION

This report presents the results of a biological resource assessment conducted for approximately 1 acre located west of 3555 Round Barn Circle Road in Santa Rosa, Sonoma County, California. The property is partially developed land in an existing business park that was constructed in the 1980's. The property is proposed for a Marriott Residence Inn in a developed part of Santa Rosa just east of Highway 101 in Santa Rosa. While currently there are no buildings on the site, a portion of the property was developed into a detention basin in association with development to the east. Land to the west is Highway 101, lands to the north are undeveloped non-native grassland, and lands to the east and south are existing medical facilities.

The purpose of the biological constraints analysis is to identify special-status plant and wildlife species and sensitive habitats (including wetlands and creeks) that have the potential to occur on or in the vicinity of the study area and to determine if the proposed development a hotel would affect these resources. Based on information and data collected for the analysis, recommendations designed to minimize and/or avoid potential biological resource impacts resulting from the project are also provided.

2.0 SITE DESCRIPTION

The property is accessed from Fountain Grove Parkway to the south and is located directly west of 3555 Round Barn Circle. The site is sloped towards Highway 101 with elevations at Round Barn Circle at approximately 227 feet mean sea level and at the western edge of the property at 190 feet mean sea level. The site occurs on an unnamed section of the Santa Rosa U.S.G.S. 7.5 minute quadrangle.

Figure 1: Project Location
3555 Round Barn Circle, Santa Rosa, CA

Date: 02-12-2018
Data: Sol Ecology, Sonoma Co.
Base: ESRI

GIS: AJG

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3.0 WETLANDS ASSESSMENT

3.1 Corps of Engineers Jurisdictional Criteria Review

Unless exempt from regulation, all proposed discharges of dredged or fill material into waters of the United States require U.S. Army Corps of Engineers (Corps) authorization under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Clean Water Act Section 401 authorization from the Regional Water Quality Control Board (RWQCB). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including ephemeral and intermittent streams), and farmed wetlands.

The Corps identifies wetlands using a "multi-parameter approach" which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. The *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West*, which was released in early 2007 and revised in 2008 (version 2.0), is utilized when conducting jurisdictional wetland determinations in areas identified within the boundaries of the Arid West (U.S. Army Corps of Engineers, 2008). The project site falls within the Arid West region and so wetlands identified on the site were delineated using that guidance.

On May 27, 2015, the Office of the Assistant Secretary of the Army for Civil Works and the U.S. Environmental Protection Agency announced the release of the Clean Water Act Rule. This new rule defines the scope of "waters of the United States" regulated under the Clean Water Act ("CWA"). Applicable to the San Francisco Bay area, in part, tributaries to waters of the U.S. are now considered “jurisdictional by rule” and a detailed, comprehensive case-by case evaluation is no longer needed to establish a nexus to a downstream water.

3.1.1 Potential Wetlands

Section 328.3 of the Federal Code of Regulations defines wetlands as:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

EPA, 40 CFR 230.3 and CE, 33 CFR 328.3 (b)

The three parameters used to delineate wetlands are the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. According to the Corps Manual, for areas not considered “problem areas” or “atypical situations”:

"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland delineation."

Vegetation

Plant species identified are assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Reed 1988). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL	Always found in wetlands	>99% frequency
FACW	Usually found in wetlands	67-99%
FAC	Equal in wetland or non-wetlands	34-66%
FACU	Usually found in non-wetlands	1-33%
UPL/NL	Upland/Not listed (upland)	<1%

The Corps Manual and Supplements require that a three-step process be conducted to determine if hydrophytic vegetation is present. The first step is the Dominance Test (Indicator 1); the second is the Prevalence Index (Indicator 2); the third is Morphological Adaptations (Indicator 3). The Dominance Test requires the delineator to apply the "50/20 rule". The dominant species are chosen independently from each stratum of the community. In general, dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. Dominants are defined as the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total cover. If greater than 50 percent of the dominant species has an OBL, FACW, or FAC status, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails the 50/20 rule and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1, but hydric soils and wetland hydrology are both present, the delineator must apply the Indicator 2, Prevalence Index. The Indicator 3, Morphological Adaptations, is rarely used in this region.

Hydrology

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation or oxidized root channels, or secondary indicators such as the FAC-neutral test or the presence of a shallow aquitard. Only one primary indicator is required to meet the wetland hydrology criterion; however, if

secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." Federal Register July 13, 1994, U.S. Department of Agriculture, NRCS

Soils formed over long periods under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. The supplement provides a list of the hydric soil indicators that are known to occur in region. Soil samples were collected and described according to the methods provided in the supplements. Soil chroma and values were determined using a Munsell soil color chart (Kollmorgen 1975). If any of the soil samples met one or more of the hydric soil indicators described in the supplement hydric soils were determined to be present.

3.1.2 Waters of the U.S.

"Waters of the United States" (WUS) other than wetlands are also potentially subject to Corps jurisdiction. WUS subject to Corps jurisdiction include ponds, lakes, rivers, streams (including ephemeral and intermittent streams), and all areas below the High Tide Line (HTL) subject to tidal influence. Jurisdiction in non-tidal areas extends to the ordinary high water mark (OHWM) defined as:

"*...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*"

Federal Register Vol. 51, No. 219, Part 328.3 (e). November 13, 1986

3.2 North Coast Regional Water Quality Control Board

The Regional Water Quality Control Board regulates waters of the State pursuant to Sections 13260(a)(1) and 13050(e) of the State Water Code, and the Porter Cologne Act. In addition, anyone proposing to conduct a project that requires a federal permit or involves dredge or fill activities that may result in a discharge to U.S. surface waters and/or "Waters of the State" are required to obtain a Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) from the Regional Water Quality Control Board, verifying that the project activities will comply with state

water quality standards. The most common federal permit for dredge and fill activities is a CWA Section 404 permit issued by the Corps of Engineers (North Coast Regional Water Quality Control Board, 2007). In general, the RWQCB employs similar wetland delineation techniques for identifying wetland areas potentially subject to its regulation.

Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the Regional Water Quality Control Boards (Regional Board) are the agency mandated to ensure protection of the State's waters. So if a proposed project requires a U.S. Army Corps of Engineers CWA Section 404 permit, falls under other federal jurisdiction, and has the potential to impact Waters of the State, the Regional Water Quality Control Board will regulate the project and associated activities through a Water Quality Certification determination (Section 401) (North Coast Regional Water Quality Control Board, 2007).

However, if a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a fill discharge to "Waters of the State", the Regional Board has the option to regulate the project under it's state authority (Porter-Cologne) in the form of Waste Discharge Requirements or Waiver of Waste Discharge Requirements (North Coast Regional Water Quality Control Board, 2007).

3.3 California Department of Fish and Wildlife

Activities that result in the substantial modification of the bed, bank or channel of a stream or lake may require a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600-1607 of the California Fish and Game Code. On streams, creeks and rivers, the extent of CDFW jurisdiction extends from the top of bank to top of bank or the outer limits of the riparian canopy, whichever is wider.

3.4 Background review

Prior to conducting the on-site wetlands assessment within the study area, various background materials relating to the site were reviewed. These include aerials from Google earth and the Santa Rosa USGS 7.5-minute quadrangle. A remnant creek channel is located on the western edge of the site but this channel is outside the proposed development footprint. No other potential wetland signatures were identified in the background review.

Additionally, the Soil Survey of Sonoma County was reviewed to determine if any of the soils on the project site are mapped as hydric soils. The presence of a hydric soil-mapping unit on a project site suggests the presence of potential wetland habitats and therefore is another tool used in preliminary wetland identification. The soil units mapped on the project site are listed as:

- SkC – Spreckels loam, 2 to 9 percent slopes
- SkE – Spreckels loam, 15 to 30 percent slopes

Spreckels loam 2 to 9 percent slopes is listed on the County list as having unnamed hydric inclusions in the form of upland seeps.

3.5 Wetland Assessment and Results

On January 31, 2018, a jurisdictional wetlands delineation was conducted on the project site utilizing the methods and procedures prescribed in the Arid West supplement. The project site was walked to identify and map potential jurisdictional wetland features within the study area. No potential jurisdictional wetland features were identified within the proposed footprint[1]. A remnant creek channel was identified downslope of the proposed project but this channel will not be directly impacted as a result of construction. The channel supports a few native oaks however most of these were badly burned during the October 2017 fires that came through this area.

Previously graded detention basin – Round Barn Circle is in the background

[1] Please note only the Corps of Engineers can officially determine the extent of their jurisdiction.

Western portion of site looking at remnant drainage – note burned vegetation

Looking downslope from top of remnant channel. Highway 101 is in background.

Looking south towards detention basin

4.0 SPECIAL-STATUS SPECIES

4.1 Regulatory framework

Special-status plants and animals are legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community. Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special status invertebrates are all considered special status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species on California Native Plant Society (CRPR) Lists 1 and 2 are also considered special status plant species and must be considered under CEQA.

4.2 Background Review and Field Assessment

4.2.1 Plant Species

Prior to conducting the field assessment, a focused review of literature and data sources was conducted to identify special-status plant species with potential to occur in the survey area. Sources reviewed include California Natural Diversity Data Base (CNDDB) occurrence records for the Santa Rosa USGS 7.5' quadrangle, the quadrangle on which the survey area is located, and the eight quadrangles surrounding it.

Sources consulted for up-to-date information on conservation status included the U.S. Fish and Wildlife Service (USFWS) (2018 a, b, c) for federally listed species (including Proposed and Candidate species) and California Department of Fish and Wildlife (CDFW) (2018) for State of California listed species. Special-status species also include species with California Rare Plant Rank (CRPR) 1A (Plants Presumed Extinct in California), CRPR 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere), or CRPR 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere), as indicated by the CNPS *Inventory* (CNPS 2018). Impacts to these species must be reviewed under the provisions of the California Environmental Quality Act (CEQA) Guidelines.

Also considered as special-status species are those with CRPR 3 (Plants About Which We Need More Information—A Review List) and CRPR 4 (Plants of Limited Distribution—A Watch List) of the CNPS *Inventory*. These species are considered to be of lower sensitivity, and generally do not fall under specific state or federal regulatory authority. Specific mitigation considerations are generally not required for species in these categories.

Based on information from the above sources, a target list of special-status plant species with potential to occur in the vicinity of the survey area was prepared (Table 1) (CRPR 4 species are not included).

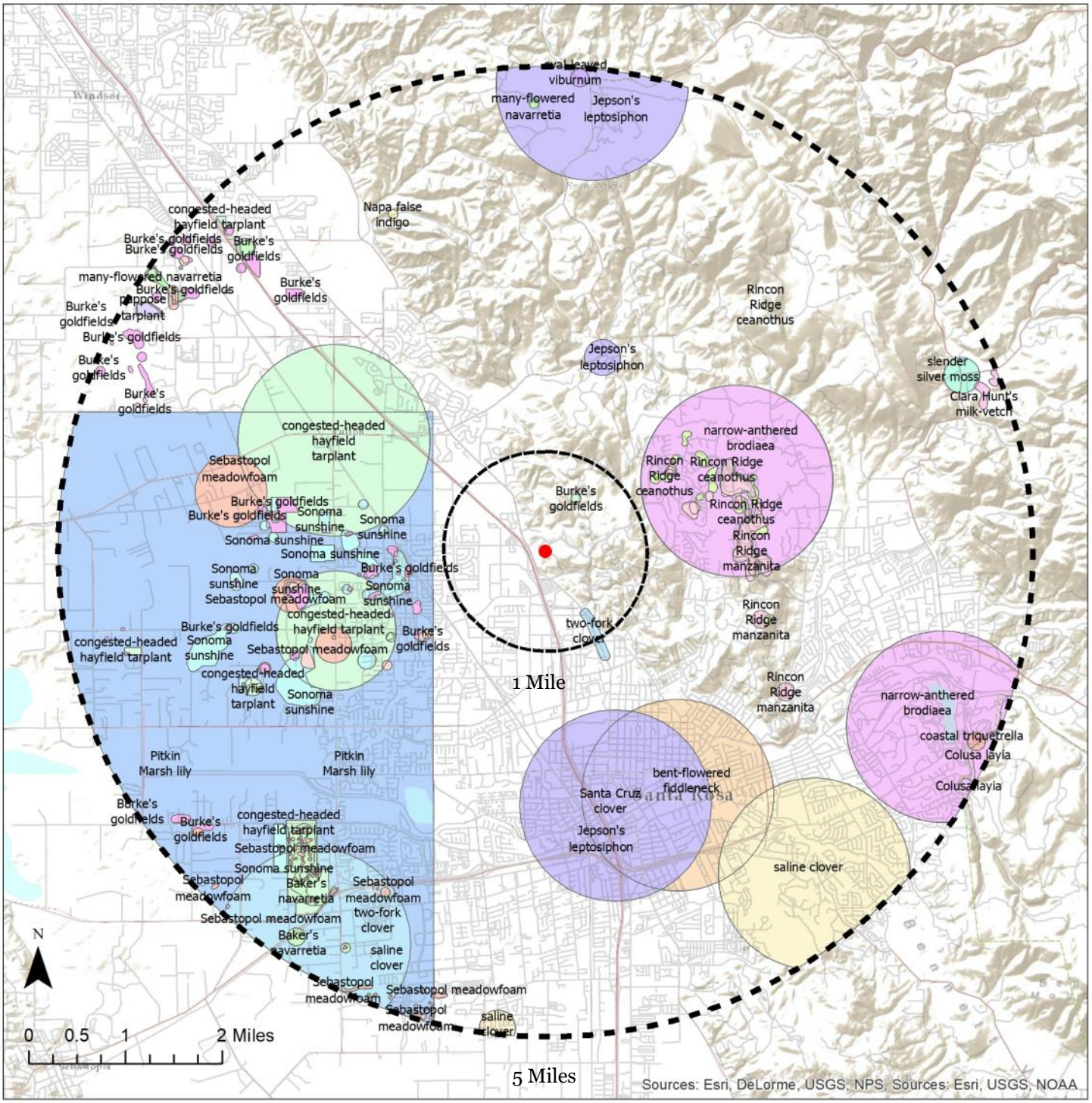
Sensitive habitats include: riparian corridors, wetlands, habitats for legally protected species and CDFW Species of Special Concern, areas of high biological diversity, areas providing important wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the CNDDB working list of "high priority" habitats for inventory (i.e., those habitats that are rare or endangered within the borders of California).

Results

Developed/ruderal. The habitat on the site is primarily ruderal habitat with the majority of the site formerly graded for construction of a detention basin apparently used during construction of the adjacent medical facilities to the east and south. Because the majority of the proposed footprint is already disturbed with construction of the detention basin, it is highly unlikely to provide habitat for special-status plant species listed in Table 1.

Non-native grassland. Portions of the site outside of the previously graded areas support non-native grasses and herbs. A few scattered native coyote bush (*Baccharis pilularis*) were observed on the site but most of these were burned in the October 2017 fires as well. Downslope of the existing detention basin on the southern portion of the site outside of the proposed footprint for development there is a remnant creek channel that supports native oaks and non-native plum trees. Most of these trees appear to have been severely burned during the fires and it is questionable if they will survive. The remnant channel drains into a storm drain inlet on the east side of Highway 101.

Figure 2: Special Status Plant Species within 1 Mile and 5 Miles of the Project Site
3555 Round Barn Circle, Santa Rosa, CA



- Project Location
- 1-Mile Buffer
- 5-Mile Buffer
- Baker's navarretia (7)
- Burke's goldfields (14)
- Clara Hunt's milk-vetch (1)
- Colusa layia (1)
- Jepson's leptosiphon (3)
- Napa false indigo (2)
- Pitkin Marsh lily (2)
- Rincon Ridge ceanothus (3)
- Rincon Ridge manzanita (4)
- Santa Cruz clover (1)
- Sebastopol meadowfoam (13)
- Sonoma sunshine (8)
- bent-flowered fiddleneck (1)
- coastal triquetrella (1)
- congested-headed hayfield tarplant (7)
- dwarf downingia (7)
- many-flowered navarretia (2)
- narrow-anthered brodiaea (2)
- oval-leaved viburnum (1)
- pappose tarplant (1)
- saline clover (3)
- slender silver moss (1)
- two-fork clover (2)

Date: 02-12-2018
Data: Sol Ecology, CA DFW Sonoma Co.
Base: ESRI
GIS: AJG

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Table 1. Special-status plant species with potential to occur in the vicinity of 3555 Round Barn Circle, Santa Rosa, Sonoma County, California

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Franciscan onion (*Allium peninsulare* var. *franciscanum*)	CRPR 1B.2	Clay soil, volcanic or serpentine substrate; cismontane woodland, valley and foothill grassland.	(April) May-June	Suitable substrate and soil type not present in survey area. **Low Potential**
Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*)	FE, CRPR 1B.1	Wet places; freshwater marshes and swamps, riparian scrub, streamsides in valley and foothill grassland.	May-July	Suitable habitat not present. **Low Potential**
Napa false indigo (*Amorpha californica* var. *napensis*)	CRPR 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, North Coast coniferous forest.	April-July	Suitable habitat not present. **No Potential**
Bent-flowered fiddleneck (*Amsinckia lunaris*)	CRPR 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland, openings in broadleaved upland forest.	March-June	Do to disturbed nature of site, unlikely to be present. **Low Potential**
Vine Hill manzanita (*Arctostaphylos densiflora*)	SE, CRPR 1B.1	Acid marine sandy or sandy clay soil; maritime chaparral.	February-April	No suitable habitat occurs in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**
Rincon manzanita (*Arctostaphylos stanfordiana* ssp. *decumbens*)	CRPR 1B.1	Red rhyolitic substrate; chaparral, cismontane woodland.	February-April (May)	Suitable substrate does not occur in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Clara Hunt's milk-vetch (*Astragalus claranus*)	FE, ST, CRPR 1B.1	Rocky open, generally exposed places, clay soil, serpentine or volcanic substrate; cismontane woodland, valley and foothill grassland, openings in chaparral.	March-May	Suitable substrate and soil type not present in survey area. **Low Potential**
Big-scale balsamroot (*Balsamorhiza macrolepis*)	CRPR 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, sometimes serpentine substrate.	March-July	Suitable substrate and soil type not present in survey area. **Low Potential**
Sonoma sunshine (*Blennosperma bakeri*)	FE, SE, CRPR 1B.1	Vernally moist to inundated places; vernal pools, valley and foothill grassland.	February-April	No suitable habitat occurs in survey area. **Low Potential**
Narrow-anthered brodiaea (*Brodiaea leptandra* [*B. californica* var. *leptandra*])	CRPR 1B,2	Gravelly soil (?), volcanic substrate (?); broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland.	May-July	Suitable substrate and soil type not present in survey area. **Low Potential**
Thurber's reed grass (*Calamagrostis crassiglumis* (= *C. stricta* ssp. *inexpansa*, in part))	CRPR 2B.1	Moist to wet places; coastal scrub, freshwater marsh.	May-July	No suitable habitat in survey area. **No Potential**
Swamp harebell (*Campanula californica*)	CRPR 1B.2	Wet, boggy places; bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marshes, North Coast coniferous forest.	June-October	No suitable habitat occurs in survey area. **No Potential**
Pitkin Marsh paintbrush (*Castilleja uliginosa*)	SE, CRPR 1A	Freshwater marsh.	June-July	No suitable habitat occurs in survey area. **No Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Rincon Ridge ceanothus (*Ceanothus confusus*)	CRPR 1B.1	Dry sites, volcanic or serpentine substrate; closed-cone coniferous forest, chaparral, cismontane woodland.	February-June	No suitable habitat occurs in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**
Calistoga ceanothus (*Ceanothus divergens*)	CRPR 1B.2	Rocky places, serpentine or volcanic substrate; chaparral, cismontane woodland.	February-April	No suitable habitat occurs in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**
Vine Hill ceanothus (*Ceanothus foliosus* var. *vineatus*)	CRPR 1B.1	Sandy (and rocky?) acidic soil; chaparral, cismontane woodland (?), broadleafed evergreen forest (?).	March-June	No suitable habitat occurs in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**
Holly-leaved ceanothus (*Ceanothus purpureus*)	CRPR 1B.2	Rocky soil, volcanic substrate; chaparral, cismontane woodland.	February-June	No suitable habitat occurs in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**
Sonoma ceanothus (*Ceanothus sonomensis*)	CRPR 1B.2	Sandy soil, serpentine or volcanic substrate; chaparral.	February-April	No suitable habitat occurs in survey area. Conspicuous shrub observable but not observed at time of field survey. **No Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Pappose tarplant (*Centromadia* [*Hemizonia*] *parryi* ssp. *parryi*)	CRPR 1B.2	Vernally moist sites, often alkaline soil; chaparral, coastal prairie, meadows, coastal salt marshes, valley and foothill grassland.	May-November	Suitable habitat and soil type do not occur in survey area. **Low Potential**
Sonoma spineflower (*Chorizanthe valida*)	FE, SE, CRPR 1B.1	Sandy soil, coastal prairie.	June-August	Suitable habitat and soil type do not occur in survey area. **Low Potential**
Vine Hill clarkia (*Clarkia imbricata*)	FE, SE, CRPR 1B.1	Acidic sandy loam soil; chaparral, valley and foothill grassland.	June-August	Suitable habitat and soil type do not occur in survey area. **Low Potential**
Pennell's bird's-beak (*Cordylanthus tenuis* ssp. *capillaris*)	FE, SR, CRPR 1B.	Open or disturbed areas, serpentine substrate; chaparral, closed-cone coniferous forest.	June-September	Suitable serpentine substrate or habitat does not occur in survey area. **No Potential**
Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*)	CRPR 2B.2	Parasitic on herbs including *Alternanthera* spp., *Dalea* spp., loosestrife (*Lythrum* spp.), knotweed (*Polygonum* spp.), and cocklebur/clotbur (*Xanthium* spp.); freshwater marsh	July-October	No suitable habitat occurs in survey area. **No Potential**
Golden larkspur (*Delphinium luteum*)	FE, SR, CRPR 1B.1	± moist places, rocky soil, generally north-facing slopes; chaparral, coastal prairie, coastal scrub.	March-May	No suitable habitat occurs in survey area. **No Potential**
Dwarf downingia (*Downingia pusilla*)	CRPR 2B.2	Vernal pools, vernally moist places in valley and foothill grassland, sometimes ditches.	March-May	Suitable habitat not present in survey area. **Low Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Streamside daisy (*Erigeron biolettii*)	CRPR 3	Rocky soil, sometimes ledges along rivers; broadleafed upland forest, cismontane woodland, North Coast coniferous forest.	June-October	No suitable habitat occurs in survey area. **No Potential**
Serpentine daisy (*Erigeron serpentinus*)	CRPR 1B.3	Serpentine substrate, generally on seeps; chaparral.	May-August	No suitable habitat occurs in survey area. **No Potential**
Loch Lomond button-celery (*Eryngium constancei*)	FE, SE, CRPR 1B.1	Vernal pools (generally volcanic ash flow vernal pools).	April-June	No suitable habitat occurs in survey area. **No Potential**
Fragrant fritillary (*Fritillaria liliacea*)	CRPR 1B.2	Generally heavy clay soil, often serpentine substrate; cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland.	February-April	Suitable soil type not present in survey area. **Low Potential**
Woolly-headed gilia (*Gilia capitata* ssp. *tomentosa*)	CRPR 1B.1	Rocky places, rock outcrops, serpentine substrate; coastal bluff scrub, valley and foothill grassland.	May-July	Suitable serpentine substrate does not occur in survey area. **Low Potential**
Boggs Lake hedge-hyssop (*Gratiola heterosepala*)	SE, CRPR 1B.2	Vernally inundated or wet places, clay soil; usually vernal pools, occasionally lake margins.	April-August (September)	No suitable habitat occurs in survey area. **No Potential**
Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)	CRPR 1B.2	Grassy places, often disturbed areas, fallow fields, other ruderal areas; valley and foothill grassland, coastal scrub.	April-November	Suitable habitat occurs in survey area. **Low to Moderate Potential**
Thin-lobed horkelia (*Horkelia tenuiloba*)	CRPR 1B.2	Moist places, open areas, sandy soil; broadleafed upland forest, chaparral, coastal scrub, valley and foothill grassland.	May-July	Suitable soil type not present in survey area. **Low Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Burke's goldfields (*Lasthenia burkei*)	FE, SE, CRPR 1B.1	Wet or moist (at least vernally) places; generally vernal pools and swales, sometimes meadows.	April-June	No suitable habitat occurs in survey area. **Low Potential**
Baker's goldfields (*Lasthenia californica* ssp. *bakeri*)	CRPR 1B.2	Open places; closed-cone coniferous forest, coastal scrub, meadows, marshes and swamps.	April-October	No suitable habitat occurs in survey area. **No Potential**
Contra Costa goldfields (*Lasthenia conjugens*)	FE, CRPR 1B.1	Vernally moist, open, low-lying places, sometimes alkaline soil; vernal pools, wet meadows, valley and foothill grassland, cismontane woodland, alkaline playas.	March-June	Suitable soil type not present. **Low Potential**
Colusa layia (*Layia septentrionalis*)	CRPR 1B.2	Sandy or serpentine soil; chaparral, cismontane woodland, valley and foothill grassland.	April-June	Suitable soil type not present. **Low Potential**
Legenere (*Legenere limosa*)	CRPR 1B.1	Vernal pools and swales.	April-June	No suitable habitat occurs in survey area. **No Potential**
Jepson's leptosiphon (*Leptosiphon* [*Linanthus*] *jepsonii*)	CRPR 1B.2	Usually volcanic soil (sometimes periphery of serpentine), chaparral, cismontane woodland.	March-May	Suitable soil type not present. **Low Potential**
Woolly-headed lessingia (*Lessingia hololeuca*)	CRPR 3	Clay or serpentine soil, broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland.	June-October	Suitable substrate and soil type not present in survey area. **Low Potential**
Pitkin marsh lily (*Lilium pardalinum* ssp *pitkinense*)	FE, SE, CRPR 1B.1	Saturated places, sandy soil; cismontane woodland, meadows and seeps, freshwater marshes.	June-July	No suitable habitat or substrate occurs in survey area. **No Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Sebastopol meadowfoam (*Limnanthes vinculans*)	FE, SE, CRPR 1B.1	Seasonally wet places, poorly drained, clay or sandy soil; meadows, valley and foothill grassland, vernal pools.	April-May	No suitable habitat occurs in survey area. **Low Potential**
Cobb Mountain lupine (*Lupinus sericatus*)	CRPR 1B.2	Open wooded areas, gravelly soil; broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest.	March-June	No suitable habitat occurs on site. **No Potential**
Mt. Diablo cottonweed (*Micropus amphibolus*)	CRPR 3.2	Sparsely vegetated places, rocky soil; broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland, coastal prairie.	March-June	No suitable habitat occurs in survey area. **Low Potential**
Marsh microseris (*Microseris paludosa*)	CRPR 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland.	April-June (July)	Due to disturbed nature of site, unlikely to be present. **Low Potential**
Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)	CRPR 1B.1	Seasonally moist places, cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	April-July	No suitable habitat occurs in survey area. **Low Potential**
Many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*)	FE, SE, CRPR 1B.2	Volcanic ash flow vernal pools.	May-June	No suitable habitat occurs in survey area. **No Potential**
Sonoma beardtongue (*Penstemon newberryi* var. *sonomensis*)	CRPR 1B.3	Rocky places, generally rock outcrops or talus; chaparral.	April-August	No suitable habitat occurs in survey area. **No Potential**
Calistoga popcorn-flower (*Plagiobothrys strictus*)	FE, ST, CRPR 1B.1	Seasonally moist to wet sites near thermal springs, alkaline, heavy clay soil; meadows and seeps, valley and foothill grassland, vernal pool margins.	March-June	No suitable habitat occurs in survey area. Not known to occur in Sonoma County. **No Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
North Coast semaphore grass (*Pleuropogon hooverianus*)	ST, CRPR 1B.1	Moist to wet, open or partly shaded places; broadleafed upland forest, meadows and seeps, North Coast coniferous forest, freshwater marsh.	March-June	No suitable habitat occurs in survey area. **No Potential**
Napa blue grass (*Poa napensis*)	FE, SE, CRPR 1B.1	Moist sites near thermal springs, alkaline soil; meadows and seeps, valley and foothill grassland.	May-August	No suitable habitat occurs in survey area. Not known to occur in Sonoma County. **No Potential**
Cunningham Marsh cinquefoil (*Potentilla uliginosa*)	CRPR 1A	Permanent oligotrophic (low-nutrient) wetlands; freshwater marsh.	May-August	No suitable habitat occurs in survey area. **No Potential**
California alkali grass (*Puccinellia simplex*)	CRPR 1B.2	Vernally moist places, alkaline or saline soil, sinks, flats, lake margins, mineral springs; meadows and seeps, chenopod scrub, valley and foothill grassland, vernal pools.	March-May	Suitable soil type does not occur in survey area. **Low Potential**
White beaked-rush (*Rhynchospora alba*)	CRPR 2B.2	Wet places; bogs and fens (including sphagnum bogs), meadows and seeps, freshwater marshes and swamps.	July-August	No suitable habitat occurs in survey area. **No Potential**
California beaked-rush (*Rhynchospora californica*)	CRPR 1B.1	Wet, generally open places; bogs and fens, lower montane coniferous forest, freshwater seeps, freshwater marshes and swamps.	May-July	No suitable habitat occurs in survey area. **No Potential**
Brownish beaked-rush (*Rhynchospora capitellata*)	CRPR 2B.2	Moist to wet places; lower and upper montane coniferous forest, meadows and seeps, marshes and swamps.	July-August	No suitable habitat occurs in survey area. **No Potential**

Plant Species	Status	Habitat	Flowering Period	Potential for Occurrence on Project Site
Round-headed beaked-rush (*Rhynchospora globularis*)	CRPR 2B.1	Freshwater marsh.	July-August	No suitable habitat occurs in survey area. **No Potential**
Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*)	CRPR 1B.1	Rocky places, rhyolitic substrate; chaparral.	April-June	No suitable habitat occurs in survey area. **No Potential**
Kenwood Marsh checkerbloom (*Sidalcea oregana* ssp. *valida*)	FE, SE, CRPR 1B.1	Freshwater marsh, especially edges.	June-September	No suitable habitat occurs in survey area. **No Potential**
Two-fork clover (*Trifolium amoenum*)	FE, CRPR 1B.1	Moist open sites, heavy soil, sometimes serpentine substrate, sometimes roadsides or eroded areas; coastal bluff scrub, valley and foothill grassland.	April-June	Suitable soil type not present. **Low Potential**
Santa Cruz clover (*Trifolium buckwestiorum*)	CRPR 1B.1	Seasonally moist places, sometimes disturbed areas; coastal prairie, margins of cismontane woodland and broadleafed upland forest.	April-October	Suitable habitat probably not present. **Low Potential**
Saline clover (*Trifolium hydrophilum*)	CRPR 1B.2	Moist or seasonally moist sites, alkaline or saline soil; marshes and swamps (including coastal salt marshes?), valley and foothill grassland, vernal pools.	April-June	Suitable soil type does not occur in survey area. **No Potential**
Oval-leaved viburnum (*Viburnum ellipticum*)	CRPR 2B.2	Often north-facing slopes; chaparral, cismontane woodland, lower montane coniferous forest.	May-June (August)	No suitable habitat occurs in survey area. **No Potential**

[1]Plant listing status:

Federal (USFWS 2014a): FE – endangered; FT – threatened

State of California (CDFG 2012): SE– endangered; ST – threatened; SR – rare

California Rare Plant Rank (CRPR) (CNPS 2014): CRPR 1A: Presumed extinct in California. CRPR 1B: Rare, Threatened, or Endangered in California and elsewhere. CRPR 2A: Presumed extinct in California, more common elsewhere CRPR 2B: Rare, Threatened, or Endangered in California, more common elsewhere. CRPR 3: Plants about which more information is needed.
CRPR Threat Code extensions: .1: Seriously endangered in California. .2: Fairly endangered in California. .3 Not very endangered in California.

[2]In habitat description, ? indicates a discrepancy in habitat information between standard references (CNDDB; Baldwin et al. 2012; CNPS 2017).

4.2.2 Animal Species

The California Department of Fish and Wildlife's Natural Diversity Database (CNDDB, 2018) was reviewed (Santa Rosa and surrounding quadrangles) to identify special-status species potentially occurring on or in the vicinity of the project site. Prior to the fieldwork, a list of special-status animal species with the potential to occur in the study area on the site was prepared (Table 2).

On January 31, 2018 Lucy Macmillan conducted a reconnaissance-level habitat assessment on the project site. The purpose of the assessment was to characterize the nature and extent of habitat types within and adjacent to the study area and to determine if these habitats have the potential to support special-status species. The project site was walked and field observations noted.

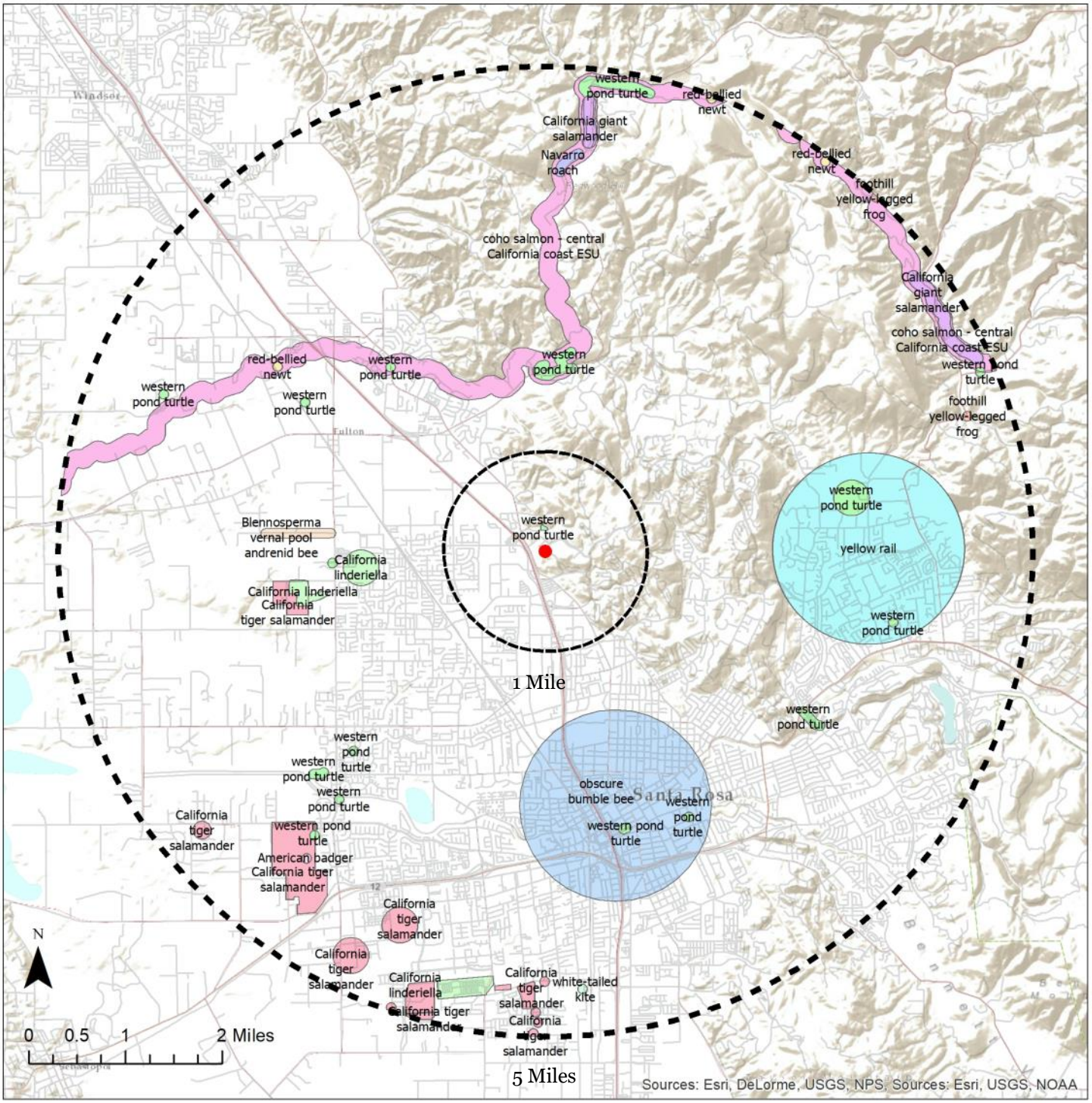
Nesting Birds

The site contains oak trees associated with the remnant drainage channel located downslope (west) of the proposed footprint and therefore provides potential habitat for a variety of nesting birds. Birds and raptors are protected under the federal Migratory Bird Treaty Act (50 CFR 10.13). Their nest, eggs, and young are also protected under California Fish and Wildlife Code (§3503, §3503.5, and §3800). In addition, raptors such as the white-tailed kite (*Elanus leucurus*) are "fully protected" under Fish and Wildlife Code (§3511). Fully protected raptors cannot be taken or possessed (that is, kept in captivity) at any time. Nesting season for birds in California generally occurs between February 1st and August 15th.

Special-status Bats

The oak trees within the remnant drainage on the project site provide potential roosting habitat for various special-status bat species known to occur in the project region including but not limited to western red bat (*Lasiurius blossevillii*), Pacific western big-eared bat (*Corynorhinus townsendii townsendii*), and long-eared myotis (*Myotis evotis*). These bat species are California Species of Special Concern and may roost in mature trees, snags, crevices, cavities, and foliage within this habitat. Maternity roosting for bats is April through November. Because the majority of the trees were burned in the fire of October 2017 which was extremely hot, the foliage on the trees may not regrow in which case it's possible bats may not use the trees for roosting.

Figure 3: Special Status Animal Species within 1 Mile and 5 Miles of the Project Site
3555 Round Barn Circle, Santa Rosa, CA



- Project Location
- 1-Mile Buffer
- 5-Mile Buffer
- American badger (1)
- Blennosperma vernal pool andrenid bee (1)
- California giant salamander (2)
- California linderiella (4)
- California tiger salamander (14)
- Navarro roach (1)
- coho salmon - central California coast ESU (1)
- foothill yellow-legged frog (2)
- obscure bumble bee (1)
- red-bellied newt (3)
- western pond turtle (17)
- white-tailed kite (1)
- yellow rail (1)

Date: 02-12-2018
Data: Sol Ecology, CA DFW
Sonoma Co.

Base: ESRI
GIS: AJG

SOL ECOLOGY
solecology.com

5.0 Conclusions and Recommendations

5.1 Special-status Plants

Because the majority of the proposed footprint is within land that was previously graded for an earthen detention basin, it is very unlikely to provide habitat for special-status plants. In addition, the site generally either does not support suitable soil type or suitable habitat for most of the special-status species listed in Table 1.

5.2 Nesting Birds

The trees on and immediately adjacent to the site provide potential habitat for nesting birds. The grasslands also provide potential nesting habitat for ground nesters. Therefore, if work will occur between February 1st and August 15st a qualified biologist should conduct pre-construction surveys of all potential nesting habitats within approximately 100 feet of project activities.

- If initial ground disturbance or vegetation removal occurs during the breeding season (February 1 through August 15), a qualified biologist will conduct a breeding bird survey no more than 14 days prior to ground disturbance to determine if any birds are nesting in trees adjacent to the Study area.
- If active nests are found close enough to the Study area to affect breeding success, the biologist will establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending upon the species, nest location, and existing visual buffers. Once all young have become independent of the nest, vegetation removal and grading may take place in the former exclusion zone.
- If initial ground disturbance is delayed or there is a break in Project activities of greater than 14 days within the bird-nesting season, then a follow-up nesting bird survey should be performed to ensure no nests have been established in the interim.

5.3 Special-status Bats

- If initial ground disturbance occurs during the bat maternity roosting season (May 1 through August 31), a qualified biologist will conduct a bat roost assessment of trees within 100 feet of the Study area. Because the majority of the trees were burned in the fire of October 2017 which was extremely hot, the foliage on the trees may not regrow in which case it's possible bats may not use the trees for roosting. The viability of the trees to support bats can be conducted at the time of the pre-construction nesting bird survey.

- If the biologist determines there is potential for maternity roosting bats to be present within 100 feet of the Study area, nighttime emergence surveys should be performed to determine if maternity roosting bats are present.
- If bat maternity roosts are present, the biologist will establish an appropriate exclusion zone around the maternity roost.

Table 2. Special-Status Animal Species Potentially Occurring on or In the Vicinity of 3555 Round Barn Circle, Santa Rosa, CA

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Amphibians and Reptiles			
California tiger salamander (*Ambystoma californiense*)	FE[2], FT	Needs underground refuges especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	Unlikely due to lack of suitable habitat. No burrows observed. Outside of critical habitat range. Closest recorded occurrence approximately 2 miles southwest.
Western pond turtle (*Actinemys marmorata*)	FC, CSC	Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites, nest sites may be found up to 0.5 km from water.	No suitable habitat on or adjacent to site.
California red-legged frog (*Rana aurora draytonii*)	FT, CSC	Lowlands and foothills in or near permanent sources of deepwater with dense, shrubby or emergent riparian vegetation.	No recorded occurrences within 5 miles of project site. No suitable habitat on site.
Foothill yellow-legged frog (*Rana boylii*)	CSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	No suitable habitat on project site.

Animal*	Status	Habitat	Potential for Occurrence on or in Vicinity of Site
Fish			
Steelhead-Central California Coast ESU (*Oncorhynchus mykiss irideus*)	FT	Anadromous. Adults and fry recorded in upstream portions of creeks north of San Pablo Bay. Juveniles may rear in lower reaches of larger river systems and Bay before moving out to sea.	No suitable habitat on project site.
Birds**			
Tricolored blackbird (*Agelaius tricolor*)	CSC	Colonial nester. Most numerous in the Central Valley & Vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	No suitable habitat on project site.
Burrowing owl (*Athene cunicularia*)	CSC	Open, dry annual or perennial grasslands; deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent on burrowing animals, most notably the California ground squirrel.	Potential for occurrence low. Very few occurrences in Sonoma County. No burrows observed during January 2018 reconnaissance-level survey.

Animal*	Status	Habitat	Potential for Occurrence on or in Vicinity of Site
Western yellow billed cuckoo (*Coccyzus americanus occidentalis*)	FC, SE	(Nesting) Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with low story of blackberry, nettles or wild grape.	No suitable habitat on project site.
White-tailed kite (*Elanus leucurus*)	SFP	(Nesting) rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Grasslands provide potential foraging habitat.
Bald eagle *(Haliaeetus leucocephalus)*	SE	Ocean shore, lake margins, and rivers both for nesting and wintering within one mile of water. Nests in large, old growth or dominant live tree with open branches, especially Ponderosa pine.	No suitable habitat on project site.
Bank swallow (*Riparia riparia*)	ST	(Nesting) Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks or cliffs with fine-textured/sandy soils near streams, river, lakes, and ocean to dig nest hole.	No suitable habitat on project site.
Mammals			
Long-eared myotis (*Myotis evotis*)	WBWG_M	Found in all brush, woodland, and forest habitats from sea level to about 9,000 feet. Prefers coniferous woodlands and forests. Maternity roosts in buildings and tree cavities.	Trees provide potential habitat.
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC, State candidate T, WBWG-H	Throughout California in a variety of habitats. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Trees provide potential habitat.
Western red bat (*Lasiurius boslevillii*)	SSC, WBWG_H	Roosts in trees, 2 to 40 feet from the ground. Likes to be adjacent to open grasslands for foraging.	Trees provide potential habitat.
Big-eared myotis (*Myotis evotis*)	WBWG-LM	Found in all brush, woodland and forest habitats from sea level to about 9,000 feet. Prefers coniferous woodlands and forests. Maternity roosts in buildings, crevices, spaces under bark and snags.	Potential for occurrence low due to lack of mature oaks on the project site or other suitable roosting sites.

Animal*	Status	Habitat	Potential for Occurrence on or in Vicinity of Site
Townsend's big-eared bat (*Corynorhinus townsendii*)	SCT, CSC	Throughout California in a variety of habitats. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	No suitable habitat on project site.
American badger (*Taxidea taxus*)	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	No burrows observed during January 2018 reconnaissance. Potential for occurrence very low due to developed/ruderal nature of site.
Invertebrates			
California freshwater shrimp (*Syncaris pacifica*)	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low gradient streams where riparian cover is moderate to heavy. Recorded occurrences in Sonoma Creek.	No suitable habitat on project site.

*Note: FSC = U.S. Fish and Wildlife Service Species of Concern; FE = federally listed as endangered; FT = federally listed as threatened; SE = state listed as endangered; ST = state listed as threatened; SCT = State candidate threatened. SFP = State fully protected (may not be taken or possessed without a permit from the Fish and Wildlife Commission and/or CDFW). CSC = California species of special concern; CDFS = considered sensitive by the California Department of Forestry.

**All migratory birds are protected by the Migratory Bird Treaty Act (50 CFR 10), which makes it unlawful to take, possess, buy, sell, purchase or barter any migratory bird, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21). In addition, Section 2080 of the California Fish and Wildlife Code prohibits the killing of a listed species, and Sections 3503, 3503.5, and 3800 of the Fish and Wildlife Code prohibit the take, possession, or destruction of birds, their nests, or eggs.

Based on review of the CNDDB February 2018.

References

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.). 2012. The Jepson manual: higher plants of California. Second edition. University of California Press, Berkeley, CA. 1566 pp.

California Department of Fish and Wildlife (CDFW). 2018. Natural Diversity Database, Wildlife and Habitat Data Analysis Branch. Sacramento.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual.

http://www.modrall.com/Final-Clean-Water-Act-Rulemaking-What-is-a-Water-of-the-United-States#_ftn1

http://www.sonoma-county.org/PRMD/docs/riparian_corridor/official-zoning-database.pdf

http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx

(http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/news/tech_spt_doc_for_CWR.pdf)

Kollmorgen Instruments Corporation. 1975. Munsell Soil Book of Color. Kollmorgen Instruments Corporation, Baltimore, Maryland.

Munz, P.A. and D.D. Keck. 1973. A California flora and supplement. University of California Press, Berkeley, CA.

Natural Resources Conservation Service. 2018. Web Soil survey, Version 2.3. United States Department of Agriculture, Natural Resources Conservation Service. http://websoilsurvey.nrcs.usda.gov. Accessed February 7.

North Coast Regional Water Quality Control Board, 2007. http://www.waterboards.ca.gov/northcoast/programs/wqwetcert.html

Rathbun, G.B., N.J. Scott, Jr., and T.G. Murphy. 2002. Terrestrial habitat use by Pacific pond turtles in a Mediterranean climate. The Southwestern Naturalist 47: 225-235.

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California vegetation. Second edition. California Native Plant Society Press, Sacramento, CA. 1,300 pp.

U.S. Army Corps of Engineers, 2008. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0.

www.historicaerials.com.

Zeiner, David C., William F. Laudenslayer, Jr., Kenneth E. Mayer, and Marshall White. 1990. California's Wildlife, Volume I, Amphibians and Reptiles, Volume II, Birds, and Volume III, Mammals. California Statewide Habitat Relationships System.