APPENDIX A-2
BIOLOGICAL RESOURCES ASSESSMENT

Biological Resources Assessment

Roseland Creek Community Park
SANTA ROSA, SONOMA COUNTY, CALIFORNIA

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LIST OF ACRONYMS AND ABBREVIATIONS

BMPs	Best Management Practices
BRA	Biological Resources Assessment
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
ESA	Federal Endangered Species Act
Inventory	CNPS Inventory of Rare and Endangered Plants
MSL	Mean Sea Level
MBTA	Migratory Bird Treaty Act
OWHM	Ordinary High Water Mark
Rank	California Rare Plant Rank
RWQCB	Regional Water Quality Control Board
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WRA	WRA, Inc.

1.0 INTRODUCTION

WRA, Inc. (WRA) prepared this biological resources assessment (BRA) report on behalf of David J. Powers & Associates for the proposed Roseland Creek Community Park Project (Project). The proposed Project involves the development of a community park at an approximately 19.49-acre located southeast of the intersection of Hughes Avenue and Burbank Avenue (APN #'s: 125-331-001, 125-252-002, -003, and -004 in the southwest quadrant of the City of Santa Rosa, Sonoma County, California (Project Area; Appendix A - Figure 1). The proposed Roseland Creek Community Park would include various improvements, including but not limited to: picnic areas, a multi-use turf area, multi-use trails, parking lots, and restrooms. Two pedestrian bridges across Roseland Creek are proposed where two old, and failing footbridges currently cross the creek.

The purpose of this assessment was to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA). This report describes the results of the site visits, which assessed the Project Area for the (1) potential to support special-status species, (2) the potential presence of sensitive biological communities such as wetlands or riparian habitats, and (3) the potential presence of other sensitive biological resources protected by local, state, and federal laws and regulations. Specific findings on the habitat suitability or the presence of special-status species or sensitive habitats may require that protocol-level surveys be conducted.

A BRA provides general information on the potential presence of sensitive species and habitats. The BRA is not an official protocol-level survey for listed species that may be required for project approval by local, state, or federal agencies. Subsequent protocol-level surveys for listed plant species were conducted following the biological resources assessment survey and are discussed in this report. This assessment is based on information available at the time of the study and on-site conditions that were observed on the date of the site visits.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the BRA, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

2.1 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, the California Fish and Game Code (CFGC), and the CEQA; or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all

other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" or "non-wetland waters" and are often characterized by an ordinary high water mark (OHWM). Other waters or non-wetland waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife (CDFW, formerly the California Department of Fish and Game [CDFG]). The CDFW ranks sensitive communities and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2018). In the CNDDB, vegetation alliances are ranked 1 through 5 based on NatureServe's (2018) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

2.2 Special-Status Species

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 species and those that are formal candidates for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current

population and habitat trends continue, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates, are all considered special-status species. Although these aforementioned species generally have no special legal status, they are given special consideration under CEQA. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special-status and are considered under CEQA. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1 through 4 are also considered special-status plant species and must be considered under the CEQA. A description of the CNPS Ranks is provided below in Table 1. In addition to regulations for special-status species, most birds in the United States, including non-special-status native species, are protected by the Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC. Under these laws, destroying active bird nests, eggs, and/or young is illegal.

Table 1. Description of CNPS Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Santa Rosa Plain Conservation Strategy

The Project Area is located within the Santa Rosa Plain, an ecoregion which supports habitat for many vernal pool-associated special-status species. The USFWS developed the Santa Rosa Plain Conservation Strategy (Conservation Strategy; USFWS et al. 2005) as a conservation plan for these species. The Santa Rosa Plain Conservation Strategy Area is an area established by the USFWS for the protection and continued existence of California tiger salamander (CTS, *Ambystoma californiense*) and three endangered plant species: Burke's goldfields (*Lasthenia burkei*), Sonoma sunshine (*Blennosperma bakeri*), and Sebastopol meadowfoam (*Limnanthes vinculans*). The Conservation Strategy (USFWS 2005) outlines the specific species of concern for this area along with guidance for specific conservation measures. In 2007 the Corps consulted with the USFWS on Section 404 permitting within the Conservation Strategy area which resulted in a Programmatic Biological Opinion (PBO). This 2007 PBO outlines the mitigation requirements resulting from impacts to wetlands and associated impacts to CTS and the three listed plants, and can be appended to permits authorized by the Corps. It is the PBO that dictates the mitigation requirements for CTS and the three listed plant species.

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

2.3 Local Policies, Ordinances, and Regulations

City of Santa Rosa Tree Ordinance

The City of Santa Rosa recognizes the aesthetic, environmental, and economic benefits mature trees provide to the citizens of the City. Chapter 17-24, "Trees" of the Santa Rosa City Code (Tree Ordinance) regulates the protection of certain trees on public and private properties within the City limits. The Tree Ordinance defines a "heritage tree" as: valley oak (*Quercus lobata*), blue oak (*Q. douglasii*), or buckeye (*Aesculus californica*) 19 inches circumference at breast height (measured at 4.5 feet above ground; or 6 inches diameter at breast height [DBH]) or greater; madrone (*Arbutus menziesii*) 38 inches circumference (12 inches DBH) or greater; coast live oak (*Q. agrifolia*), black oak (*Q. kelloggii*), Oregon oak (*Q. garryana*), canyon live oak (*Q. chrysolepis*), interior live oak (*Q. wislizenii*), red alder (*Alnus rubra* [*A. oregona*]), or white alder (*A. rhombifolia*) 57 inches circumference (18 inches DBH) or greater; or redwood (*Sequoia sempervirens*), bay (*Umbellularia californica*), Douglas fir (*Pseudotsuga menziesii*), or big-leaf maple (*Acer macrophyllum*) 75 inches circumference (24 inches DBH) or greater.

A Tree Permit is generally required for the removal, alteration or relocation of any "heritage tree", "protected tree" (i.e. any tree, including a heritage tree, designated to be preserved on an approved development plan or as a condition of approval of a tentative map, a tentative parcel map, or other development approval issued by the City), or "street tree" (i.e. any tree having a single trunk circumference greater than 6.25 inches or a diameter greater than 2 inches, a height of more than six feet, and one half or more of its trunk is within a public right of way or within 5 feet of the paved portion of a City street or a public sidewalk), except as exempted in Section 17-24.030 of the Tree Ordinance. Several non-native species including acacia, silver maple, ailanthus, hawthorn, fruitless mulberry, privet, pyracantha, Monterey pine, Monterey cypress, and fruit and nut trees (except walnut) are exempt from the provisions of the ordinance. Trees, other than heritage trees, situated within City owned parks and other City owned or controlled places when altered, removed, or relocated by City employees or by contractors retained by the City are also exempt.

Creekside Development Ordinance

Section 20-30.040 "Creekside Development", of the Santa Rosa City Code defines minimum setbacks from waterways for new structures to protect the public from the hazards of streambank failures and flooding. Under the ordinance, buildings of any type, driveways, streets, parking

areas, patios, platforms, decks, fences, earth fill or other structural debris fill, and retaining walls, shall be setback a minimum of 50 feet from: (a) the top of the highest bank for streams with defined channels and banks with slopes gentler than 2.5:1; (b) the intersection of 2.5:1 slope from toe of bank with top-of-bank where the natural bank is steeper than 2.5:1; or (c) the 100-year storm freeboard level for streams where there is no defined top-of-bank. Bridges for motor vehicles, pedestrians, and/or bicycles, and/or public utility infrastructure may cross through a waterway setback area and over or under its channel, provided that the installation has received all required approvals from the City.

3.0 METHODS

WRA biologists conducted a biological resources assessment site visit on May 2, 2017. The Project Area was traversed on foot to determine (1) plant communities present within the Project Area, (2) whether existing conditions provide suitable habitat for any special-status plant or wildlife species, and (3) whether sensitive habitats are present. Project figures are provided in Appendix A. All plant and wildlife species encountered were recorded and are summarized in Appendix B. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2018), except where noted. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities. Special-status species with a potential for occurrence, determined based on field visits and habitat availability, are described in Appendix C. Representative photographs of the Project Area taken during field visits are included in Appendix D.

3.1 Biological Communities

Prior to the site visit, the *Soil Survey of Sonoma County*, California [U.S. Department of Agriculture (USDA) 1972] and SoilWeb (CSRL 2018) were examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Project Area. Biological communities present in the Project Area were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) or *A Manual of California Vegetation, Online Edition* (CNPS 2018a). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

3.1.1 Non-Sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species and are identified or described in Section 4.1.1 below.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Non-Wetland Waters

Wetlands and non-wetland waters potentially subject to jurisdiction by the Corps, RWQCB, and/or CDFW were mapped following standard methods from the Corps (Environmental Laboratory 1987, Corps 2008a, b). Identification of wetlands focused on the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) indicators of wetland hydrology. Identification of non-wetland waters focused on the presence of an OHWM.

Other Sensitive Biological Communities

The Project Area was evaluated for the presence of other sensitive biological communities, including riparian areas or other sensitive plant communities recognized by CDFW. Prior to the site visit, aerial photographs, local soil maps, and *A Manual of California Vegetation, Online Edition* (CNPS 2018a) were reviewed to assess the potential for sensitive biological communities to occur in the Project Area. All alliances within the Project Area with a ranking of 1 through 3 were considered sensitive biological communities and mapped. These communities are described in Section 4.1.2 below.

3.2 Special-Status Species

3.2.1 Literature Review

Potential occurrence of special-status species in the Project Area was evaluated by first determining which special-status species occur in the vicinity of the Project Area through a literature and database search. Database searches for known occurrences of special-status species focused on the Santa Rosa 7.5-minute U.S. Geological Survey (USGS) quadrangle and the eight surrounding quadrangles: Healdsburg, Sebastopol, Two Rock, Cotati, Glen Ellen, Kenwood, Calistoga, and Mark West Springs. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Project Area:

- CNDDB records (CDFW 2018)
- USFWS Information for Planning and Conservation Report (IPaC; USFWS 2018a)
- National Wetlands Inventory (USFWS 2018b)
- CNPS Rare and Endangered Plant Inventory (CNPS 2018b)
- CDFG publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- CDFG publication “California Bird Species of Special Concern” (Shuford and Gardali 2008)
- CDFW and University of California Press publication California Amphibian and Reptile Species of Special Concern (Thomson *et al.* 2016)
- California Herps: A Guide to the Amphibians and Reptiles of California (CalHerp 2018)
- *Sonoma County Breeding Bird Atlas* (Madrone Audubon Society 1995)
- *A Flora of Sonoma County* (Best et al. 1996)

3.2.2 Site Assessment

A site visit was made to the Project Area to search for suitable habitats for special-status species. Habitat conditions observed at the Project Site were used to evaluate the potential for presence of special-status species based on these searches and the professional expertise of the

investigating biologists. The potential for each special-status species to occur in the Project Area was then evaluated according to the following criteria:

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

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the Project Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, if a special-status species is observed during the site visit, its presence will be recorded and discussed.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats. If necessary, recognized experts in individual species biology were contacted to obtain the most up to date information regarding species biology and ecology.

If a special-status species was observed during the site visit, its presence is recorded and discussed below in Section 4.2. For some species, a site assessment at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described below in Section 5.0.

4.0 RESULTS

A general description of the Project Area and the results of the site assessment are provided in the following sections. Project figures are provided in Appendix A. A list of plant and wildlife species observed is included as Appendix B. The assessment of the potential for special-status plant and wildlife species to occur in the Project Area is provided as Appendix C. Photographs of the Project Area are provided as Appendix D.

Project Area Description

The site of the proposed Roseland Creek Community Park is approximately 19.49 acres, and is composed of four separate parcels across from Roseland Creek Elementary School, on Burbank Avenue in the southwest quadrant of the City of Santa Rosa. Three of the four parcels have been previously developed to some degree and contain occupied or abandoned structures, but the majority of the land remains undeveloped and is composed of open non-native annual grassland, and valley oak (*Quercus lobata*) woodland. During the time of the site visit, one of the parcels, 1370 Burbank Avenue (APN #125-252-003), had an occupied residence, while the rest of the parcels were vacant.

The Project Area is bisected by Roseland Creek, an intermittent United States Geological Survey (USGS) "blue-line" stream, which flows through the Project Area in a westerly direction. Historic aerial imagery (Sonoma County 2018, NETR 2018) indicates that nearly the entire Project Area, with the exception of the creek corridor, supported high density, intensive agricultural (orchard) production from at least 1942 to as recently as 1971. The existing conditions of the site generally reflect the previous disturbance regime, and existing oak woodlands on site, outside of the riparian corridor, consist of a naturalized even-aged stand of relatively young trees. Other old, dead and/or decadent Northern California black walnut (*Juglans hindsii*) trees on the northernmost parcel are further indicative of the site's agricultural past, as this species was typically used as rootstock for English walnut (*J. regia*) orchards. The two northernmost parcels are currently accessible and in use by the public, as evidenced by numerous social trails crossing the site, and evidence of All Terrain Vehicle (ATV) use (e.g. numerous tire tracks and ruts) were observed during the site visit. Recent aerial imagery (Google Earth 2018) also indicate that the open grassland portions of the Project Area are likely mowed annually for fire suppression.

The City has prepared a preliminary conceptual site plan for park improvements which include: a public gathering area, restrooms, shaded pavilion, nature center, sport courts, fitness courts, picnic areas, an open turf/multi-use field, dog park, parking lot and a network of universally accessible trails which would potentially include two footbridges across Roseland Creek where existing, old footbridges currently cross the creek.

4.1 Biological Communities

Table 2 summarizes the area of each biological community type observed in the Project Area. Seven biological communities were identified in the Project Area (Appendix A, Figure 2). Non-sensitive biological communities include: non-native grassland, developed/landscaped areas, and disturbed valley oak woodland. Potentially sensitive biological communities observed in the Project Area include intermittent stream (Roseland Creek), valley oak riparian woodland, riparian wetland, and purple needlegrass grassland, all of which are described in detail below.

Table 2. Summary of Biological Communities in the Project Area

Community Type	Area (acres)
Non-sensitive	
Developed, landscaped	3.09
Non-native grassland	6.47
Disturbed valley oak woodland	7.07
Sensitive	
Intermittent stream	0.35
Purple needlegrass grassland	0.45
Riparian wetland	0.10
Valley oak riparian woodland	1.96
Total	**19.49**

4.1.1 Non-Sensitive Biological Communities

Developed/landscaped. Developed/landscaped areas occupy approximately 3.09 acres within the Project Area. These areas have been previously developed and contained occupied or abandoned residences with associated hardscape, gravel driveways, and landscapes including ornamental trees and shrubs including Mexican fan palm (*Washingtonia robusta*), blue gum (*Eucalyptus globulus*), apple (*Malus* sp.), rose (*Rosa* sp.), and lilac (*Syringa* sp.). Developed/landscaped areas are not considered sensitive. However, they may contain protected trees per the City of Santa Rosa Tree Ordinance.

Non-native grassland. Non-native grassland occupies approximately 6.47 acres within the Project Area. Non-native grasslands within the Project Area are dominated non-native annual grasses including slim oat, and soft chess (*Bromus hordeaceus*), with associated grasses and forbs including Harding grass (*Phalaris aquatica*), bristly ox-tongue (*Helminthotheca echioides*), spring vetch, and carrot (*Daucus carota*). Occasional areas of semi-mesic grasslands which included Italian ryegrass, and Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), were investigated for potential jurisdictional wetland status, and although some features contained marginal wetland criteria (i.e., met one or more of three parameters: hydrology, hydrophytic vegetation, and hydric soils) during the 2017 site visit, which occurred during a substantially above-normal rainfall year, these features do not meet wetland criteria under normal precipitation conditions, as determined in 2018. This community contains scattered trees including several over-mature, declining Northern California black walnut trees, which are likely remnant rootstock from the historic orchard which occupied the area. Non-native grasslands appear to be mowed annually or semi-annually, and other human-caused disturbance, including ATV use, and social trails were observed. This community is not considered sensitive. However, they may contain protected trees per the City of Santa Rosa Tree Ordinance.

Disturbed valley oak woodland. Disturbed valley oak woodland occupies approximately 7.07 acres within the Project Area. This community was characterized as disturbed valley oak woodland, due to historic and contemporary disturbance within the community. Historic aerials indicate that all areas mapped as disturbed valley oak woodland were occupied by high-density

orchards as recently as 1971. This historic disturbance is evident, in particular in the northern portion of the stand, north of Roseland Creek, where the community is composed of an even-aged stand of young valley oak trees, which have the appearance of a planted or naturalized stand. Current disturbance observed within this community included numerous social trails, and ATV use, as evidenced by numerous tire tracks and ruts. Vegetation within this community is dominated by valley oak, with an understory dominated by non-native grasses including rattlesnake grass (*Briza maxima*), Italian ryegrass, and soft chess. Woody vines including poison oak, and Himalayan blackberry are also abundant within the understory. As described above within non-native grasslands, occasional areas of semi-mesic vegetation within this community were investigated for potential jurisdictional wetland status, and do not meet wetland criteria under normal precipitation conditions, as determined in 2018. Valley oak woodland (*Quercus lobata* Woodland Alliance) is reported by the CDFW with a sensitivity ranking of G3, S3 (CDFW 2018a), indicating that it is considered vulnerable globally and within California. However, valley oak woodland within the Project Area, outside of the riparian corridor is previously disturbed and composed of relatively young, possibly planted trees and does not meet qualitative criteria described by CDFW (2018c) to be considered a high-quality occurrence of the vegetation type, and thus would not be considered a sensitive vegetation community. However, the majority of trees within this community are considered protected per the City of Santa Rosa Tree Ordinance.

4.1.2 Sensitive Biological Communities

Intermittent stream. The Project Area contains approximately 0.35 acre of the intermittent stream which bisects the Project Area flowing in a southwesterly direction. Roseland Creek is an intermittent USGS blue-line stream. The upper reach of the creek within the Project Area is approximately 8 feet wide and has a concrete slab bed with water undermining and flowing underneath the concrete at the time of the site visit. The lower reach (western portion) of the stream has a more natural channel composed of rock and cobble mixed with sands and silts. Roseland Creek was delineated within the Project Area based on observable OHWM indicators including: presence of a bed and bank, scouring, wrack, sediment deposition, and water stains on the banks. The lower reach of the creek contains a backflow, scour channel which supports a riparian wetland, described in detail below. Dominant vegetation along the banks of the intermittent stream is composed of valley oak (*Quercus lobata*) riparian woodland described in detail below. The channel was flowing during the May 2017 site visit. Areas mapped as intermittent creek are considered jurisdictional under Section 404 of the CWA and Section 1602 of the CFGC. Roseland Creek is also likely subject to development setbacks for structures (including buildings of any type, driveways, streets, parking areas, patios, platforms, decks, fences, earth fill or other structural debris fill, or retaining walls) of 50 feet from the top of bank, as per Section 20-30.040 “Creekside Development”, of the Santa Rosa City Code. Bridges for motor vehicles, pedestrians, and/or bicycles, and/or public utility infrastructure may cross through a waterway setback area and over or under its channel, provided that the installation has received all required approvals from the City.

Valley oak riparian woodland. Valley oak riparian woodland occupies approximately 1.96 acres in the Project Area. Valley oak riparian woodland forms a contiguous canopy along the banks of Roseland Creek. This community was mapped in accordance with CNPS (2017b) as having valley oak greater than 30 percent relative cover in the tree canopy with other tree species present. The overstory is dominated by large, mature valley oak trees, with a middlestory composed of various native trees tolerant of winter flooding and/or a high water table, including valley oak, arroyo willow (*Salix lasiolepis*), and Oregon ash. The understory is dominated by woody vine/shrub species including non-native invasive Himalayan blackberry (*Rubus armeniacus*), with other native species present including poison oak (*Toxicodendron*

diversilobum), and snowberry (*Symphoricarpos albus*). Understory herbs are scarce, and mostly restricted to steep banks, and the stream edge. Valley oak woodland is reported by the CDFW with a rarity ranking of G3, S3 (CNPS 2017), indicating that it is considered vulnerable globally and in California. This community would therefore be considered sensitive and must be evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3). Valley oak riparian woodland is also considered a sensitive community under Section 1602 of the CFGC, and this community also contains many individual trees protected per the City of Santa Rosa Tree Ordinance. Any tree removal deemed necessary for construction of the proposed trail will likely require a tree removal permit from the City of Santa Rosa. Any development within this community, including but not limited to trail construction will require a CDFW permit.

Riparian wetland. The Project Area contains approximately 0.10 acre of riparian wetland within the Project Area, in-line and directly adjacent to Roseland Creek. The riparian wetland is located in the downstream portion of Roseland Creek, adjacent to Burbank Avenue where the stream flows off of the site through a box culvert underneath Burbank Avenue. The culvert appears to be functioning as a sediment trap which backs up stream flows enough to cause conditions below the OHWM, in-line with the stream. Standing water and wetland vegetation was also observed in an approximately 9-foot wide backflow, scour channel on the north side of the main creek channel. The riparian wetland within the Project Area contained standing water to a depth of 2 inches or greater during the time of the site visit, and was dominated by perennial emergent marsh vegetation including Northern water plantain (*Alisma triviale*), Santa Barbara sedge (*Carex barbarae*), and curly dock (*Rumex crispus*). Areas mapped as riparian wetland are considered jurisdictional under Section 404 of the CWA. Additionally, due to its position adjacent to or in-line with the intermittent stream, the riparian wetland is likely to be considered jurisdictional under Section 1602 of the CFGC, as riparian habitat.

Purple needlegrass grassland. Purple needlegrass grassland occupies approximately 0.45 acre in the southern portion of the Project Area. This community was mapped within the Project Area in accordance with CNPS (2017b) as containing purple needle grass (*Stipa* [*Nassella*] *pulchra*) greater than 10 percent relative cover of the herbaceous layer. Within the Project Area, this community is dominated by purple needlegrass at approximately 45 percent relative cover with other predominantly non-native grasses and forbs including slim oat (*Avena barbata*), spring vetch (*Vicia sativa*), hairy cats ear (*Hypochaeris radicata*), rose clover (*Trifolium hirtum*), and Spanish lotus (*Acmispon americanus* var. *americanus*). Purple needlegrass grassland is reported by the CDFW with a rarity ranking of G4, S3? (CDFW 2017), indicating that it is apparently secure globally, but vulnerably in California. Although, the purple needlegrass community is relatively disturbed, likely mowed annually or semi-annually, and contains a low diversity of associated native forbs, this community could potentially be considered sensitive under CEQA, due to its sensitivity ranking.

4.2 Special-Status Species

4.2.1 Special-Status Plants

Based upon a review of the resources and databases listed in Section 3.2.1 for the Santa Rosa, Healdsburg, Sebastopol, Two Rock, Cotati, Glen Ellen, Kenwood, Calistoga, and Mark West Springs 7.5-minute USGS quadrangles, it was determined that 89 special-status plant species have been documented from the vicinity of the Project Area; special-status plant species documented from within 5 miles of the site are shown in Appendix A - Figure 3. Of the 89 special-status species documented, two were determined to have a moderate potential to occur in the

Project Area, and are described in Table 3, below. The remaining 87 special-status plant species are either unlikely or have no potential to occur within the Project Area for one or more of the following reasons:

- The Project Area has been repeatedly and intensively altered from a natural state, by development, agricultural conversion, discing, or mowing, thereby eliminating the seedbank or diminishing establishment of the special-status plant(s);
- The Project Area does not contain hydrologic conditions (e.g., perennial saline, freshwater marshes and swamps) necessary to support the special-status plant(s);
- The Project Area does not contain edaphic (soil) conditions (e.g., serpentine or volcanic substrate) necessary to support the special-status plant(s);
- The Project Area does not contain vegetation communities (e.g., chaparral, coastal scrub, vernal pools) associated with the special-status plant(s);
- Very unique pH characteristics, such as alkali wetlands are absent from the Project Area;
- Competition from vigorous non-native invasive species (e.g. non-native annual grasses), likely precludes the species' ability to persist on-site;
- This species was not observed during the site visit which was conducted during the bloom period of the species.

Table 3. Special-status Plant Species with Potential to occur in the Project Area.

SPECIES / STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Sonoma alopecurus *Alopecurus aequalis* var. *sonomensis* FE, Rank 1B	Marshes and swamps (freshwater), riparian scrub. Elevation ranges from 20 to 1200 feet. Blooms May-Jul.	**Not Observed (originally assessed: Moderate Potential).** The Project Area contains potentially suitable riparian habitat which could support this species. However, this species was not observed during a protocol-level survey conducted during the species' bloom period.
congested-headed hayfield tarplant *Hemizonia congesta* ssp. *congesta* Rank 1B	Chaparral, cismontane woodland/volcanic, rocky. Elevation ranges from 390 to 2100 feet (120 to 640 meters). Blooms Feb-Jun.	**Not Observed (originally assessed: Moderate Potential).** The Project Area contains potentially suitable grassland habitat that may support this species. This species is relatively disturbance-tolerant and may not be precluded by historic and current disturbance regime in the Project Area. However, this species was not observed during a protocol-level survey conducted during the species' bloom period.

<u>Federally Listed Species that Occur in the Region which are Unlikely to Occur in the Project Area</u>

All listed plant species covered by the Santa Rosa Plain PBO, Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam are unlikely to occur within the Project Area due to a lack of vernal pool habitat, lack of suitable hydrology (i.e. extended ponding), prior disturbance (i.e. agricultural conversion, annual mowing). Moreover, Burke's goldfields, and Sebastapol meadowfoam were not observed during the initial May 27, 2017 site visit which was conducted during their documented bloom period. Both species were observed in bloom at a documented reference site just five days after the site visit, confirming their phenology would have been

identifiable during the time of the site visit. However, as a conservative measure, due to the presence of semi-mesic grassland and valley oak woodland observed during the 2017 site visit, a second round of protocol-level surveys for these species were conducted in 2018. Surveys were conducted by WRA botanists, Rhiannon Korhummel, Scott Yarger, and Scott Batiuk in March, April, and May of 2018. The March and April surveys were conducted by Rhiannon Korhummel, and the May survey was conducted by Scott Yarger and Scott Batiuk. No special-status plants were encountered during the surveys, and special-status plant species are presumed absent.

4.2.2 Special-Status Wildlife

A total of 36 special-status wildlife species are known in the vicinity based upon review of the resources and databases; special-status wildlife species documented from within 5 miles of the site are shown in Appendix A – Figure 4. Of these wildlife species, 12 have moderate or high potential to occur within the Project Area. Special-status wildlife species with potential to occur include seven species of bat, four species of birds, and western pond turtle (WPT; *Actinemys marmorata*). These species may be affected both directly and indirectly by project activities if present.

The diversity of vegetation within the Project Area provides a variety of suitable conditions for nesting and foraging by both special-status and non-special-status birds. Vegetation communities including non-native grassland, purple needlegrass grassland, and valley oak woodland may provide suitable habitat to support nesting birds. Table 4 identifies special-status birds which have been documented in the area and have a moderate to high potential to nest within the Project Area.

Table 4. Special-Status Birds with Potential to Nest within the Project Area

Scientific Name	Common Name	Protection Status
Selasphorus sasin	Allen's hummingbird	USFWS Bird of Conservation Concern
Picoides nuttallii	Nuttall's woodpecker	USFWS Bird of Conservation Concern
Elanus leucurus	white-tailed kite	California Fully Protected Species
Icteria virens	yellow-breasted chat	CDFW Species of Special Concern

In addition to the special-status bird species noted above, non-status nesting birds are protected under the Migratory Bird Treaty Act (MBTA) and by California Fish and Game Codes (CFGC). Birds may nest in trees, brush, shrubs and grasslands within or adjacent to the Project Area. Nesting birds may be directly or indirectly affected by activities within the Project Area.

Seven special-status bat species also have a moderate potential to occur within the oak woodland, intermittent stream habitat, and abandoned structures within the Project Area. Table 5 outlines the species with potential to occur in the Project Area as well as their protection status.

Table 5. Special-Status Bat Species with Moderate Potential to Occur within the Project Area

Scientific Name	Common Name	Protection Status
Myotis thysanodes	fringed myotis	WBWG High Priority
Lasiurus cinereus	hoary bat	WBWG Medium Priority
Myotis volans	long-legged myotis	WBWG High Priority
Antrozous pallidus	pallid bat	CDFW Species of Special Concern, WBWG High Priority
Corynorhinus townsendii	Townsend's big-eared bat	CDFW Species of Special Concern, WBWG High Priority
Lasiurus blossevillii	western red bat	CDFW Species of Special Concern, WBWG High Priority
Myotis yumanensis	Yuma myotis	WBWG Low Priority

Additionally, one special-status herptile species has a moderate potential to occur within the Project Area's riparian habitat and is listed below in Table 6.

Table 6. Herptile Species with Moderate Potential to Occur within the Project Area

Scientific Name	Common Name	Protection Status
Actinemys marmorata	western pond turtle	CDFW Species of Special Concern

Federally Listed Species that Occur in the Region which are Unlikely to Occur in the Project Area

Although the Project Area is within designated critical habitat (the "Santa Rosa Plain Unit"; USFWS 2016) for California tiger salamander (CTS; *Ambystoma californiense*), this species is unlikely to occur in the Project Area, due to the lack of suitable wetland breeding habitat, lack of suitable upland dispersal and aestivation habitat and significant barriers to dispersal between the Project Area and the nearest documented extant breeding occurrence of the species.

While surrounded on three sides by "Heavily Urbanized Areas", the Project Area and neighboring properties to the south are mapped within the "Core Area" for CTS by the USFWS (2016), albeit at the periphery of this area. However, several factors indicate that the species is unlikely overall to occur there. At the time of the site visit, small mammal burrows, the typical subterranean refugia for CTS, were not observed. The nearest documented CTS occurrence in CNDDB is located approximately 0.6-mile to the south of the Project Area, south of Hearn Avenue; this occurrence involved an adult CTS that was found along the road in 2003 (CDFW 2018). The nearest documented breeding occurrence/habitat is located approximately 0.7-mile to the southwest (CDFW 2018), though this site has become isolated by urban development. The next-nearest breeding occurrence is at Southwest Community Park approximately 0.75-mile to the

south of the Project Area, south of Hearn Avenue (CDFW 2018). As per Trenham and Cook (2008), Hearn Avenue and directly associated infrastructure (e.g., storm drains) provides a barrier to CTS movement. The Project Area does not provide any wetlands or seasonal aquatic features suitable for CTS breeding, and as such the persistence of a population there and on adjacent properties north of Hearn Avenue is highly unlikely. As such, CTS is considered unlikely to occur within the Project Area.

The Project Area is, however, within designated critical habitat which typically applies regardless of habitat conditions and on-site presence/absence of the species unless USFWS removes the designation for this area. In that regard, the USFWS published guidance for interpretation of critical habitat in and around the urbanized centers of Santa Rosa, Bennett Valley, Rohnert Park, and Cotati, and in this final rule (Federal Register, Vol. 76, No. 169, 2011), the USFWS removed designation of critical habitat for urban centers, and isolated, remnant habitat areas surrounded by heavily urbanized areas. The guidance states that "the remnant natural habitat within those areas is limited to small, isolated parcels within a matrix of urban development. These areas are not included in the final rule because developed areas (lands covered by buildings, pavement, and other structures) lack the physical or biological features essential to the conservation of the species, according to section 3(5)(A) of the Act. We also do not consider the remnant open space within these city centers as essential for the conservation of the Sonoma California tiger salamander." Under this final rule, it is our interpretation that the Project Area is most accurately classified as a partially developed remnant natural habitat area surrounded by a matrix of urban development (see Appendix A, Figure 7 - Santa Rosa Plain Conservation Strategy, "Enclosure 1"). Urban development directly adjacent to the Project Area has expanded since the publication of the aforementioned figure through the development of Roseland Creek Elementary school located across Burbank Avenue to the east.

In summary, the lack of breeding or aestivation habitat combined with several published materials referencing the improbability of CTS using the Project Area ultimately indicate that this species is unlikely to occur within the Project Area or be affected by its development. Moreover, the 2011 USFWS final rule on critical habitat indicate that the Project Area should not be considered critical habitat, and no formal permit from the USFWS or mitigation for impacts to critical habitat should be required.

4.3 Protected Trees

The Project Area contains several native trees that are large enough to be considered "heritage" trees per Chapter 17-24, "Trees" of the Santa Rosa City Code (Tree Ordinance). WRA's ISA-Certified Arborist conducted a heritage tree survey and identified 355 heritage trees within the immediate vicinity of Project improvements (Appendix A – Figure 5). A separate arborist report was prepared for the Project (WRA 2019). Potential impacts to heritage trees and recommendations to avoid or minimize impacts to heritage trees are provided below in the arborist report and summarized below.

5.0 SUMMARY AND RECOMMENDATIONS

Wetlands and Waters of the U.S., Riparian Habitat

Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife

The Project Area contains riparian wetland, and intermittent stream which are likely to be considered jurisdictional waters of the U.S. All areas mapped as riparian wetland appear that they can potentially be avoided by routing project improvements around those features. However, the conceptual plan includes two potential footbridge crossings across Roseland Creek. It appeared that the locations of the proposed crossings may contain existing footbridges, although completely overgrown with invasive, Himalayan blackberry brambles. The Project has been designed to avoid impacts wetlands or areas below the OHWM of the creek. However, if impacts are proposed to wetlands, or areas below the OHWM or TOB of the stream, the following permits will likely be required:

- Corps Section 404 Nationwide Permit (OHWM, riparian wetland),
- RWQCB Section 401 Water Quality Certification (OHWM, riparian wetland),
- RWQCB Waste Discharge Requirements (TOB), and
- CDFW Section 1602 Streambed Alteration Agreement (TOB, riparian woodland, or riparian wetland)

Stream setbacks for new structures may apply per Section 20-30.040, “Creekside Development” of the Santa Rosa City Code. The setback area on either side of Roseland Creek is typically measured as 50 feet from the top of the highest bank of the creek. When the bank is steeper than 2.5:1, the setback is measured by projection of the slope of 2.5:1 from the toe of the stream bank to ground level above top of bank, plus 50 feet.

Removal or significant trimming of vegetation to facilitate pedestrian bridge construction, particularly woody trees within the valley oak riparian woodland will likely require a CDFW permit and require replacement mitigation for removed trees. Based on a preliminary impact analysis, it appears that trees one valley oak tree (tree #106) may require significant pruning within the riparian corridor (Figure 5). If mature trees within the riparian corridor require removal, they would require replacement mitigation as part of the CDFW permit. Replacement trees will likely be required at a ratio of 3 to 1 (trees replaced to trees removed) although the ultimate replacement ratio will be determined by CDFW.

A habitat mitigation and monitoring plan (HMMP) should be developed to compensate for removal of riparian trees. Replacement plantings should be sited in non-native annual grassland habitat adjacent to valley oak riparian woodland with the intention of filling in gaps in existing riparian woodland habitat, and/or expanding the extent of riparian habitat within the Project Area. The Plan shall include: 1) a plant palette of species/quantity riparian species to be planted; 2) approximate area of temporary and permanent riparian impacts; 3) a map showing restoration locations, area dimensions, and riparian enhancement methods; and 5) performance standards, monitoring and reporting programs, and corrective actions to be taken when enhancement measures do not meet performance standards.

Purple Needlegrass Grasslands

The Project Area contains a robust stand of native purple needlegrass grassland which is potentially considered sensitive under the CEQA, and may require mitigation if significant impacts to these grasslands occur through Project implementation. Purple needlegrass grasslands are

mapped within the Project Area as containing purple needlegrass greater than approximately 45 percent relative cover of the herbaceous layer. A small impact to this resource, such as a trail through this community may be found to be non-significant with no or minimal mitigation required upon further CEQA review. However, the draft Concept Plan shows a multi-use turf within this area which could potentially result in conversion of the community. if impacts to purple needlegrass grasslands from the proposed Project are considered significant under the CEQA, we present the following options to avoid, minimize, and/or mitigate impacts to a less than significant level.

The first option is to protect stands of preserved native purple needlegrass grassland from construction and operational impacts. The second option would be to reestablish stands of native purple needlegrass grasslands lost to project development. All areas impacted by project development in which native grasslands comprise more than 10 percent of the ground cover should be restored. Native grassland stands impacted by the proposed Project should be restored at a minimum 1:1 ratio of lost to restored native grassland acreage, however, a lower mitigation ratio may be accepted due in part to the lack of a strong diverse native forb community associated with this resource. The mitigation ratio should take into account the percent cover of native grasses in impacted stands. For example, if the entire 0.45 acre stand of purple needlegrass grassland with approximately 45 percent relative purple needlegrass cover is being removed, the restored 0.45 acre of purple needlegrass grassland should be restored to a minimum of 45 percent cover.

Protected Trees

The Project has been designed to avoid impacts to heritage trees through a variety of measures including siting trails and project improvements away from significant heritage trees, and use of elevated boardwalk structures to avoid compaction within adjacent tree root zones. However, a total of four heritage trees have been identified as potentially needing to be removed to accommodate the proposed project plans, i.e. they are directly in-line with trail alignments and/or paved surfaces. Heritage trees which will potentially be removed are all valley oak ranging in size from 9 inches to 18.1 inches DBH. In addition, a total of 18 heritage trees may require pruning as they are located directly adjacent to planned improvements including trail alignments or paved surfaces. Potential impacts to the canopy or root system could include damage to branches or trunk during construction, ripping or tearing roots during subgrade excavation, or smothering roots due to soil compaction or grade fills. These types of injuries can lead to reduced tree vigor, increased susceptibility to pathogens or pests, or in severe cases eventual tree decline or death.

A tree removal permit may be required for any alteration, removal or relocation of heritage, protected or street trees. The City of Santa Rosa may require replacement plantings as a condition of approval in order to mitigate for the loss of functions provided by trees to be removed including shade, erosion control, groundwater replenishment, visual screening, and wildlife habitat. Replacement trees shall be planted in accordance with the following criteria from the Ordinance:

- For each 6 inches or fraction thereof of the diameter of a tree which was approved for removal, two trees of the same genus and species as the removed tree (or another species, if approved by the City), each of a minimum 15-gallon container size, shall be planted on the project site, provided however, that an increased number of smaller size trees of the same genus and species may be planted if approved by the City, or a fewer number of such trees of a larger size if approved by the City.

- If the development site is inadequate in size to accommodate the replacement trees, the trees shall be planted on public property with the approval of the Director of the City's Recreation and Parks Department. Upon the request of the developer and the approval of the Director, the City may accept an in-lieu payment of $100.00 per 15-gallon replacement tree on condition that all such payments shall be used for tree-related educational projects and/or planting programs of the City.

Wildlife that will need to be protected if any trees are removed include birds and bats. The nesting season of birds is generally considered to be between February 1 through August 15. If construction, woody or herbaceous vegetation removal, or initial ground disturbance commences during the nesting season, then a pre-construction nesting bird survey should be completed by a qualified biologist no more than 14 days prior to the start of work. If active nests are observed during the pre-construction surveys, project activities will avoid the area as determined by a qualified biologist and resume only after the young have fledged the nest or the nest otherwise becomes inactive.

It is recommended, if possible, that any trees or standing snags (i.e. dead standing trees) needing to be removed should be taken down outside of the bat maternity roosting season which is from April 1 through August 15. The optimum work window for tree removal which avoids maternity season and hibernation period for bats, and nesting season for birds is between August 31 and Oct 15. If tree removal is necessary during the maternity season (between April 1 and August 15), preconstruction surveys for bat maternity roosts should be conducted by a qualified biologist no less than 14 days prior to removal of trees, or snags within the Project Area. If special-status bat species are detected during surveys, appropriate species avoidance and minimization measures should be developed, such as following the removal of any tree, at any time of year, that tree should be allowed to lay undisturbed for one night to allow any roosting bats to leave the tree or snag before chipping, grinding or off-hauling, and/or other measures.

In addition to the heritage trees anticipated to be removed, the Project will include trail construction within the root zones (defined by the Tree Ordinance as the outer extent of the tree dripline, plus 10 feet) of heritage trees to be preserved, and may require pruning of one heritage valley oak tree (tree #106) within the riparian corridor. In order to avoid and minimize any further damage to existing trees the following measures are recommended during the Project construction where construction activities overlap with heritage tree root zones:

- A Tree Protection Zone (TPZ) equal to the dripline radius plus 10 feet shall be the standard TPZ for heritage trees selected for preservation in which ground disturbance shall be limited to the maximum extent feasible.
- Where possible, temporary protective fencing shall be installed around the TPZ of each tree designated for preservation prior to commencement of any construction activity conducted within 25' of the TPZ, of a tree designated for preservation.
- Many existing trees in the Project Area selected for preservation are situated too close to project improvements (e.g. trail alignments), where fencing around the TPZ is infeasible. In those cases, high visibility temporary fencing shall be wrapped around the tree trunk to signify the tree is to be saved and to alert machine operators to avoid damaging the tree. Extreme caution shall be taken to avoid mechanical injury to tree trunks, scaffold branches and root flares. As soon as required work is complete within the TPZ, temporary protective fencing shall be installed around the TPZ and shall remain in place as long as ground disturbance activities are taking place.
- The fence shall consist of highly visible material (e.g. orange safety fencing) to prevent inadvertent encroachment by heavy machinery. Heavy equipment use, excavation, fill,

grading, trenching, drainage changes or other soil disturbance shall be limited within the TPZ. Material storage, vehicle parking, and trash disposal shall not occur within the TPZ.

- Grading and soil compacting shall be restricted within the TPZ to the maximum extent feasible. If any significant roots (2 inch diameter or greater) are uncovered within the TPZ they shall be kept moist at all times with use of damp burlap fabric, and buried as soon as feasible.
- Grading and/or trail construction within the TPZ of heritage trees shall be monitored periodically by a Certified Arborist. All necessary tree work should be performed by an ISA-Certified Arborist or comparable tree specialist. Improper pruning can be harmful to health and structure of trees. No tree pruning will be permitted unless approved by a Certified Arborist. Any pruning of existing trees shall be performed by a licensed tree care professional and shall comply with the ANSI A300 standards and International Society of Arboriculture (ISA) Best Management Practices for Tree Pruning. All tree pruning tools must be cleaned prior to and after use. All branches being removed shall be cut to, but not beyond, the branch collar. All pruning shall be done in a way that maintains the balance and structure of the tree.
- Site drainage should be designed to create positive drainage away from the trunk of preserved trees, and to prevent ponding within the TPZ. Supplemental irrigation of 1 to 2 inches monthly, may be necessary within the TPZ of preserved trees during construction within the dry season.

Rare Plant Surveys

Eighty-nine special-status plant species have been documented within the vicinity of the Project Area. Two special-status plant species, Sonoma alopecurus, and congested-headed hayfield tarplant, were initially determined to have a moderate potential to occur within the Project Area, due to the presence of suitable habitat, proximity to documented occurrences, and relative tolerance of the disturbance regime (in the case of congested-headed hayfield tarplant).

The Project Area does not contain suitable habitat for listed plant species covered by the Santa Rosa Plain PBO, Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam due to a lack of vernal pool and seasonal wetland habitat, lack of suitable hydrology (i.e. extended ponding), prior disturbance (i.e. agricultural conversion, development, repeated mowing or discing). Although the Project Area does contain riparian wetland habitat, riparian wetlands within the Project Area are characterized by perennial emergent marsh conditions which does not represent suitable habitat for these species. Moreover, Burke's goldfields, and Sebastapol meadowfoam were not observed during the site visit which was conducted during their documented bloom period. No further surveys are recommended for Santa Rosa Plain covered species.

Despite the lack of suitable habitat within the Project Area, protocol-level surveys for listed species were conducted as a conservative measure in March, April, and May 2018. The surveys did not encounter any special-status plants, and these species are considered not present within the Project Area.

Non-native Grassland

Non-native grassland areas have relatively few constraints. These are not sensitive habitat areas and preliminary assessment has determined that only one special-status plant, congested-headed hayfield tarplant has potential to occur within this community. Protocol-level surveys for

this species were conducted in 2017 during the species' bloom period and this species was not found. Special-status wildlife species are also unlikely to be present. There is the possibility that ground-nesting birds may nest in open, grassland, or ruderal areas. However pre-construction surveys conducted during any work planned in the nesting season (February 1 through August 15) would avoid impacts to any potential nests. Special-status herptile species discussed in sections below could utilize margins of open areas along Roseland creek, but species-specific surveys and avoidance measures (also discussed below) could be conducted to avoid impacts. Therefore, non-native grassland areas provide the second best option for development, following previously developed/landscaped areas as described below.

Nesting Birds

Due to the diverse nature of vegetation within the Project Area and subsequent potential for nesting habitat, it is recommended that vegetation removal and initial site grading occur outside of the nesting season. The nesting season is generally defined as February 1 through August 15. If construction, woody or herbaceous vegetation removal, or initial ground disturbance commences during the nesting season (February 1 through August 15), a pre-construction nesting bird survey should be completed by a qualified biologist no more than 14 days prior to the start of work. If active nests are observed during the pre-construction surveys, project activities will avoid the area as determined by a qualified biologist and resume only after the young have fledged the nest or the nest otherwise becomes inactive.

Special-status Bats

The Project Area contains uninhabited buildings that may provide roost structures to special-status bat species documented in the vicinity: fringed myotis, hoary bat, long-legged myotis, pallid bat, Townsend's big-eared bat, western red bat, and Yuma myotis. At the time of the site visit, one uninhabited residence was boarded at typical points of entry. However, vents were not blocked and bats are known to use buildings' relatively small entry and egress points. Any planned demolition of these buildings could potentially impact bat species that may use them as a roost. These activities could result in the direct removal or destruction of the maternity roost. These activities may also create audible, vibratory and/or visual disturbances which cause maternity roosting bats to abandon their roost site.

WRA recommends the following measures be implemented to avoid impacts to special-status bat species:

- *Pre-construction roost assessment survey:* A qualified biologist should conduct a roost assessment survey of uninhabited residences located within the Project Area. The survey will assess use of the structure for roosting as well as potential presence of bats. If the biologist finds no evidence of, or potential to support bat roosting, no further measures are recommended. If evidence of bat roosting is present, additional measures described below should be implemented:
    - *Work activities outside the maternity roosting season*: If evidence of bat roosting is discovered during the pre-construction roost assessment and demolition is planned August 1 through February 28 (outside the bat maternity roosting season), a qualified biologist should implement passive exclusion measures to prevent bats from re-entering the structures. After sufficient time to allow bats to escape and a follow-up survey to determine if bats have vacated the roost, demolition may continue and impacts to special-status bat species will be avoided.

- *Work activities during the maternity roosting season:* If a pre-construction roost assessment discovers evidence of bat roosting in the uninhabited residences during the maternity roosting season (March 1 through July 31), and determines maternity roosting bats are present, demolition of maternity roost structures will be avoided during the maternity roosting season or until a qualified biologist determines the roost has been vacated.
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Special-status Herptiles

WPT has a moderate potential to occur within the Project Area but only associated with Roseland Creek and the riparian wetland habitat. If present, WPT would only occur within Roseland Creek or the adjacent riparian wetland habitat. At the time of this report, no in-water work is proposed within the Project Area's aquatic habitats. However, the following are typical measures intended to prevent and/or avoid impacts to WPT during work in or adjacent to the aquatic features they inhabit.

Western pond turtle

WPT has a moderate potential of occurring in the intermittent stream and riparian wetland habitat within the Project Area. To avoid impacting this species of special concern, a pre-construction survey is recommended to determine if the species is present within work impact areas. If no in-water work is proposed, no pre-construction survey is required. However, if there is in-water work, a pre-construction survey should be completed within 24 hours prior to commencement of work to locate any WPT nests. If no WPT nests are located, the work may proceed without further actions. If active WPT nests are found within the work area, CDFW should be consulted to determine if individuals may be relocated to outside the work area.

California tiger salamander – Avoidance and Minimization

As described above, CTS is unlikely to occur in the Project Area, due to the lack of suitable wetland breeding habitat, lack of suitable upland dispersal and aestivation habitat (i.e., small mammal burrows) and significant barriers to dispersal between the Project Area and the nearest documented extant breeding occurrence of the species. The City of Santa Rosa, as applicant, has chosen to avoid federal nexus (i.e., no impacts to Wetlands and Waters of the U.S.) that would invoke Section 7 consultation for the Project.

The Project Area does not contain aquatic habitat inundated to depths or for time periods long enough for CTS breeding, nor did it contain small mammal burrows typical of CTS upland habitat at the time of the May 2 site visit; however, the Project Area is within 0.5 mile of documented breeding occurrences of CTS and is designated in the Conservation Strategy as potential for CTS, However, as a conservative measure, due to the proximity to documented occurrences of the species, and the location of the Project Area within critical habitat, avoidance and minimization measures are recommended, as described below. The Conservation Strategy recommends the following avoidance and habitat mitigation measures, however consultation with the USFWS and CDFW will be necessary to determine final minimization measures and habitat compensation amounts for impacts to CTS and its habitat.

- No ground disturbing activities shall be conducted during the wet season (October 15 through April 14) when CTS are likely to move through the Project Area.
- In addition to the seasonal work restriction described above, no ground disturbing activities shall occur within 48 hours of a rain event (defined as 0.25 inch or greater

within a 24-hour period), and no night work shall be allowed, as CTS are more likely to leave refugia and move during such rain events, and/or during nighttime.

California tiger salamander – Mitigation for Upland Dispersal Habitat

While CTS is considered unlikely to be present within the Project Area based on evidence presented in this assessment report, the Project Area is within designated critical habitat for CTS. Therefore, all non-hardscaped upland areas within the Project Area including non-native grassland, disturbed valley oak woodland, riparian wetland, intermittent stream, purple needlegrass grassland, valley oak riparian woodland, and the non-hardscaped portion of the developed/landscaped community are considered potential non-breeding habitat for CTS, and impacts to these habitats may require mitigation for loss of CTS dispersal habitat. Impacts to potential CTS upland dispersal habitat areas are shown in Appendix A – Figure 6.

Based upon the Conservation Strategy and PBO, the appropriate mitigation ratio for upland habitat mitigation in this area is one (1.0) acres of mitigation for every one (1.0) acre of impact, (see Appendix A - Figure 7). As shown in Appendix A – Figure 6, the Project will potentially impact approximately 1.37 acre of CTS upland dispersal habitat, potentially requiring 1.37 acre of mitigation credits for impacts to CTS upland habitat. Mitigation is generally recommended to occur within the same area where impacts are taking place or mitigation bank credits may be purchased from an approved mitigation bank. In this case, the Project Area lies within the Southwest Santa Rosa Preserve System conservation area, southeast from Wright, northeast from Llano, and directly north from Stony Point conservation areas. As stated in the Conservation Strategy, considering the developed nature of the Southwest Santa Rosa Preserve System, other conservation areas are recommended for mitigation. Therefore, the areas recommended to mitigate for habitat lost within the Project Area would be the Wright, Llano, or Stony Point Conservation Areas. Although the Conservation Strategy and PBO provide guidelines for habitat mitigation within the Santa Rosa Plain, final habitat mitigation ratios and location of mitigation lands will be determined during Section 7 Endangered Species Act and CESA consultation with the USFWS and CDFW. It could be determined during that process that no impacts will occur to CTS and that no mitigation will be necessary.

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APPENDIX A

PROJECT FIGURES

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Figure 1. Regional Location Map

Roseland Creek Community Park
Sonoma County, California

0 0.25 0.5
Miles

wra
ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/23/2017
Map Prepared By: czumwalt
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA

Path: L:\Acad 2000 Files\26000\26067\GIS\ArcMap\Fig 1 Location.mxd

Figure 2. Biological Communities within the Project Area

N
W E
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0 40 80 160
Feet

wra
ENVIRONMENTAL CONSULTANTS

Roseland Creek Community Park
Sonoma County, California

Map Prepared Date: 11/14/2018
Map Prepared By: pkobylarz
Base Source: Esri Streaming - Santa Rosa 2013
Data Source(s): WRA

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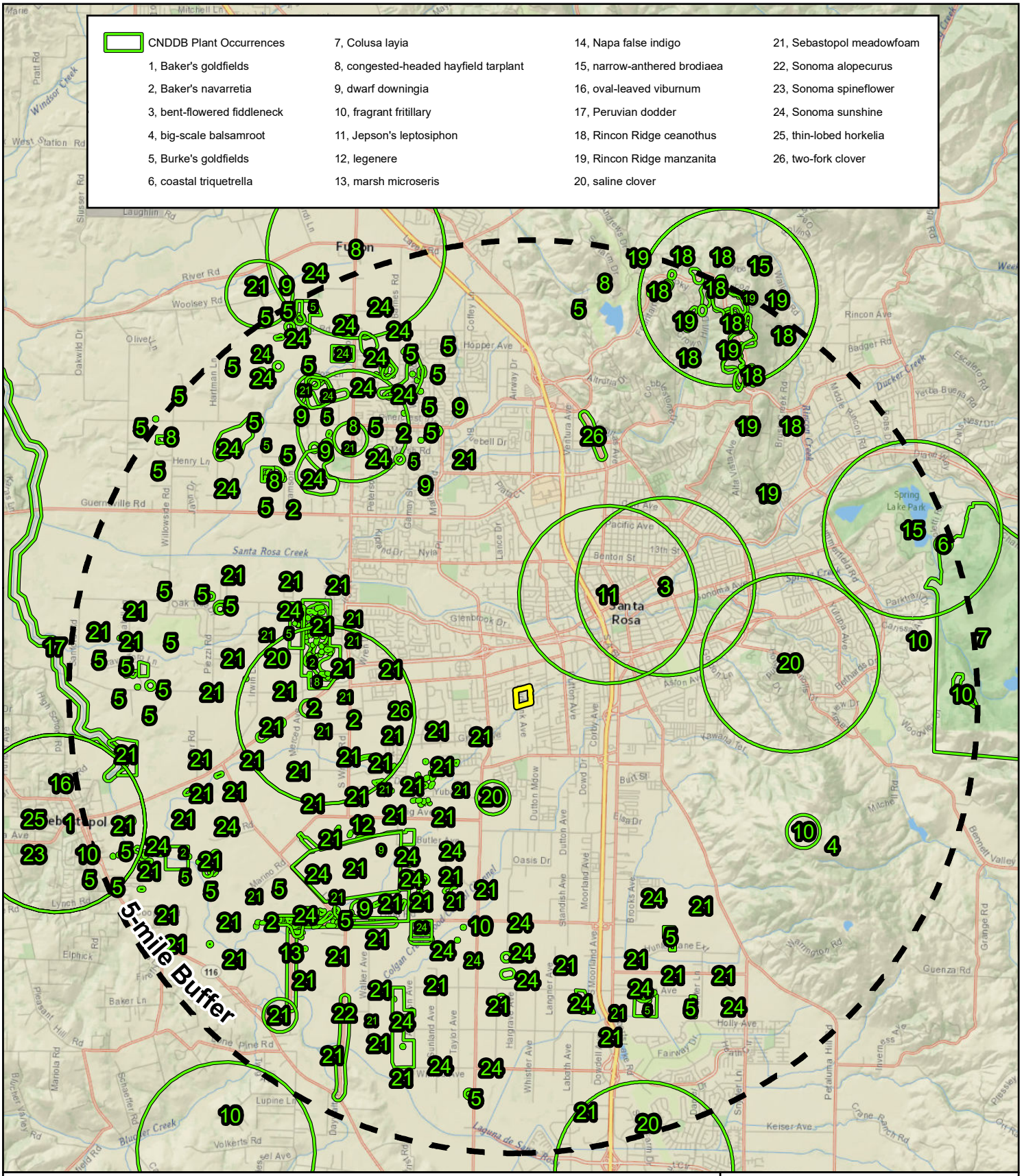

Figure 3. Special-status Plants Documented within 5 Miles of the Project Area

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S

0 0.5 1 2
Miles

wra
ENVIRONMENTAL CONSULTANTS

Roseland Creek Community Park
Sonoma County, California

Map Prepared Date: 5/23/2017
Map Prepared By: czumwalt
Base Source: National Geographic
Data Source(s): CNDDB May 2017

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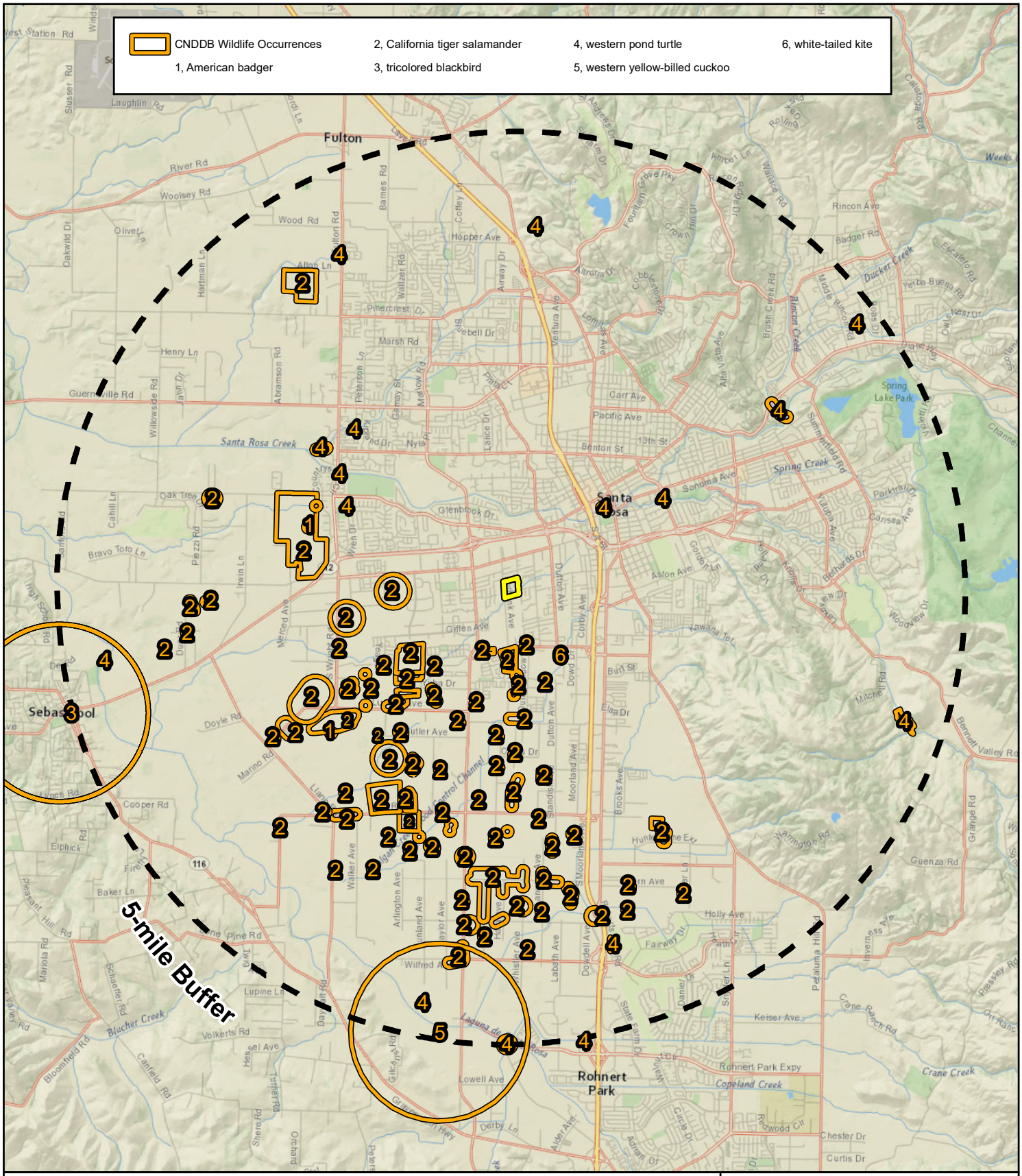

Figure 4. Special-status Wildlife Documented within 5 Miles of the Project Area

Roseland Creek Community Park
Sonoma County, California

0 0.5 1 2
Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/26/2017
Map Prepared By: czumwalt
Base Source: National Geographic
Data Source(s): CNDDB May 2017

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Study Area (19.49 ac.)

Proposed Park Improvements

Tree Survey

- Tree to be removed (4/355)
- Potential rootzone impact (18/355)
- No Impact (333/355)

Detail Area

ENVIRONMENTAL CONSULTANTS

Roseland Creek Community Park

Sonoma County, California

Figure 5.
Heritage Tree Survey

N
W E
S

0 100 200

Feet

Map Prepared Date: 2/21/2019
Map Prepared By: smortensen
Base Source: Esri - Santa Rosa 2015
Data Source(s): WRA

Path: L:\Acad 2000 Files\26000\26067\GIS\ArcMap\Tree Survey 20181025.mxd

Figure 6. Impacts to CTS Upland Dispersal Habitat

N
W E
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wra
ENVIRONMENTAL CONSULTANTS

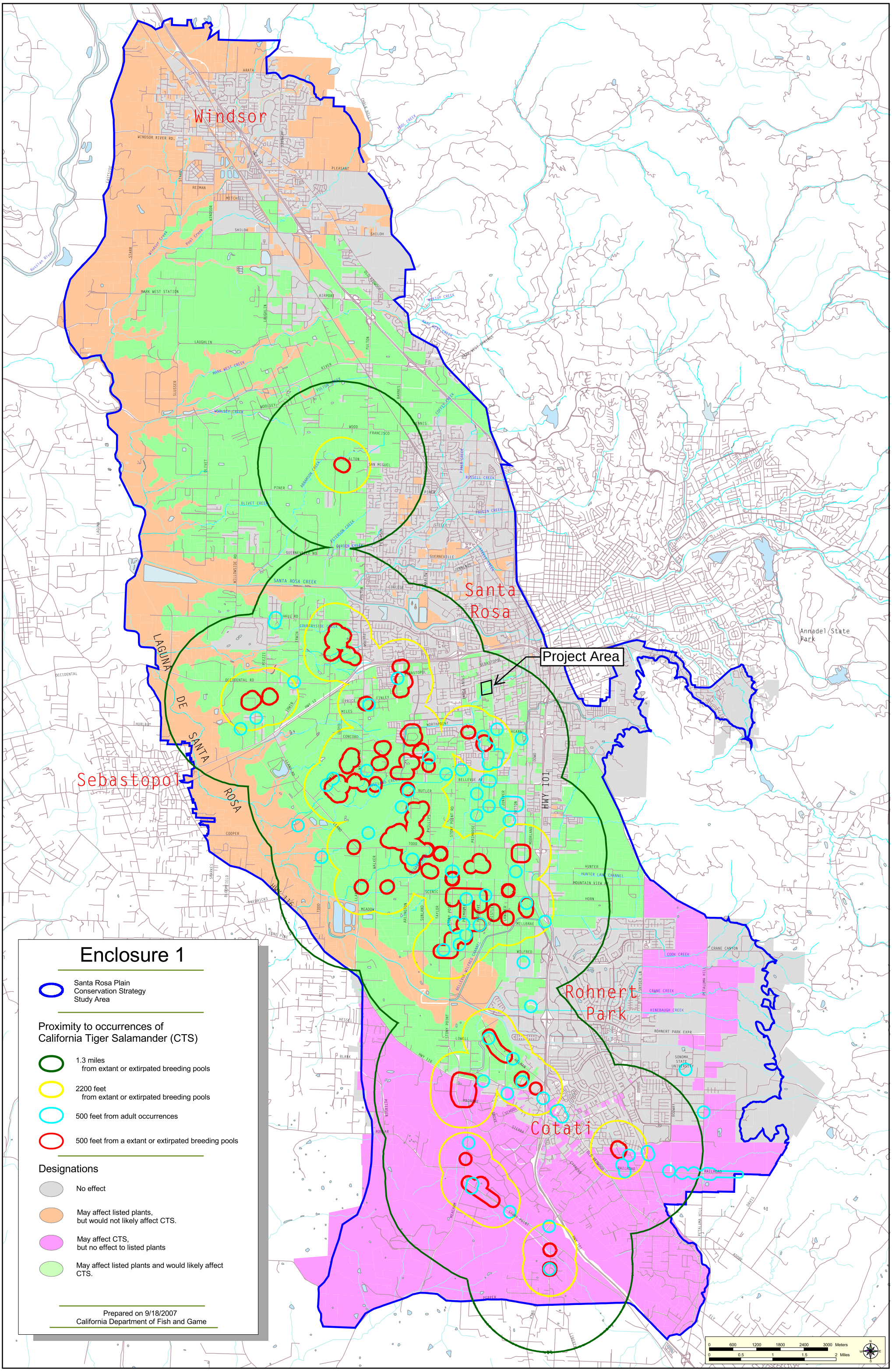
Roseland Creek Community Park
Sonoma County, California

0 37.5 75 150
Feet

Map Prepared Date: 8/28/2019
Map Prepared By: pkobylarz
Base Source: Esri Streaming - Santa Rosa 2013
Data Source(s): WRA

Path: L:\Acad 2000 Files\26000\26067\GIS\ArcMap\Impacts to CTS Upland 20190828.mxd

Figure 7. Excerpted from Programmatic Biological Opinion (USFWS 2007).



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APPENDIX B

LIST OF OBSERVED PLANT AND WILDLIFE SPECIES

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Appendix B-1. Plant Species Observed in the Study Area on May 2, and July 19, 2017, and March 3, April 10, and May 10, 2018.

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Alismataceae	*Alisma triviale*	Northern water plantain	native	perennial herb (aquatic)	-	-
Alliaceae	*Allium triquetrum*	White flowered onion	non-native (invasive)	perennial herb (bulb)	-	-
Anacardiaceae	*Toxicodendron diversilobum*	Poison oak	native	vine, shrub	-	-
Apiaceae	*Conium maculatum*	Poison hemlock	non-native (invasive)	perennial herb	-	Moderate
Apiaceae	*Daucus carota*	Carrot	non-native (invasive)	perennial herb	-	-
Apiaceae	*Foeniculum vulgare*	Fennel	non-native (invasive)	perennial herb	-	High
Apocynaceae	*Vinca major*	Vinca	non-native (invasive)	perennial herb	-	Moderate
Araceae	*Arum italicum*	Italian lords and ladies	non-native	perennial herb	-	-
Araliaceae	*Hedera helix*	English ivy	non-native (invasive)	vine, shrub	-	-
Asteraceae	*Artemisia douglasiana*	California mugwort	native	perennial herb	-	-
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	non-native (invasive)	annual herb	-	Moderate

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Asteraceae	*Helminthotheca echioides*	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	Limited
Asteraceae	*Hypochaeris radicata*	Hairy cats ear	non-native (invasive)	perennial herb	-	Moderate
Asteraceae	*Matricaria discoidea*	Pineapple weed	native	annual herb	-	-
Asteraceae	*Taraxacum officinale*	Red seeded dandelion	non-native (invasive)	perennial herb	-	-
Asteraceae	*Tragopogon porrifolius*	Salsify	non-native	perennial herb	-	-
Brassicaceae	*Raphanus sativus*	Jointed charlock	non-native (invasive)	annual, biennial herb	-	Limited
Caprifoliaceae	*Symphoricarpos albus* var. *laevigatus*	Snowberry	native	shrub	-	-
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	non-native (invasive)	perennial herb, vine	-	-
Cyperaceae	*Carex barbarae*	Valley sedge	native	perennial grasslike herb	-	-
Cyperaceae	*Carex praegracilis*	Field sedge	native	perennial grasslike herb	-	-
Cyperaceae	*Cyperus eragrostis*	Tall cyperus	native	perennial grasslike herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Dipsacaceae	*Dipsacus sativus*	Indian teasel	non-native (invasive)	biennial herb	-	Moderate
Dryopteridaceae	*Dryopteris arguta*	Wood fern	native	fern	-	-
Fabaceae	*Acacia melanoxylon*	Blackwood acacia	non-native (invasive)	tree	-	Limited
Fabaceae	*Acmispon americanus* var. *americanus*	Spanish lotus	native	annual herb	-	-
Fabaceae	*Genista monspessulana*	French broom	non-native (invasive)	shrub	-	High
Fabaceae	*Trifolium dubium*	Shamrock	non-native	annual herb	-	-
Fabaceae	*Trifolium glomeratum*	Clustered clover	non-native	annual herb	-	-
Fabaceae	*Trifolium hirtum*	Rose clover	non-native (invasive)	annual herb	-	Limited
Fabaceae	*Vicia sativa*	Spring vetch	non-native	annual herb, vine	-	-
Fagaceae	*Quercus agrifolia*	Coast live oak	native	tree	-	-
Fagaceae	*Quercus lobata*	Valley oak	native	tree	-	-
Geraniaceae	*Geranium dissectum*	Wild geranium	non-native (invasive)	annual herb	-	Limited
Juglandaceae	*Juglans hindsii*	Northern California black walnut	native	tree	Rank 1B.1*	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Juncaceae	*Juncus bufonius*	Common toad rush	native	annual grasslike herb	-	-
Juncaceae	*Juncus patens*	Rush	native	perennial grasslike herb	-	-
Lamiaceae	*Stachys* sp.	-	-	-	-	-
Lythraceae	*Lythrum hyssopifolia*	Hyssop loosestrife	non-native	annual, perennial herb	-	-
Malvaceae	*Malva* sp.	-	-	-	-	-
Myrtaceae	*Eucalyptus camaldulensis*	Red gum	non-native (invasive)	tree	-	Limited
Myrtaceae	*Eucalyptus globulus*	Blue gum	non-native (invasive)	tree	-	Limited
Oleaceae	*Fraxinus latifolia*	Oregon ash	native	tree	-	-
Oleaceae	*Ligustrum lucidum*	Glossy privet	non-native (invasive)	tree, shrub	-	-
Orobanchaceae	*Parentucellia viscosa*	Yellow parentucellia	non-native (invasive)	annual herb	-	Limited
Papaveraceae	*Eschscholzia californica*	California poppy	native	annual, perennial herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Papaveraceae	*Fumaria* sp.	-	-	-	-	-
Pinaceae	*Pinus radiata*	Monterey pine	native	tree	Rank 1B.1*	-
Plantaginaceae	*Plantago lanceolata*	Ribwort	non-native (invasive)	perennial herb	-	Limited
Poaceae	*Avena barbata*	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate
Poaceae	*Briza maxima*	Rattlesnake grass	non-native (invasive)	annual grass	-	Limited
Poaceae	*Briza minor*	Little rattlesnake grass	non-native	annual grass	-	-
Poaceae	*Bromus catharticus*	Rescue grass	non-native	annual, perennial grass	-	-
Poaceae	*Bromus diandrus*	Ripgut brome	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Bromus hordeaceus*	Soft chess	non-native (invasive)	annual grass	-	Limited
Poaceae	*Bromus racemosus*	Smooth brome	non-native	perennial grass	-	-
Poaceae	*Danthonia californica*	California oatgrass	native	perennial grass	-	-
Poaceae	*Elymus glaucus*	Blue wildrye	native	perennial grass	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Poaceae	*Festuca arundinacea*	Reed fescue	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Festuca bromoides*	Brome fescue	non-native	annual grass	-	-
Poaceae	*Festuca myuros*	Rattail sixweeks grass	non-native (invasive)	annual grass	-	-
Poaceae	*Festuca perennis*	Italian rye grass	non-native	annual, perennial grass	-	-
Poaceae	*Hordeum brachyantherum*	Meadow barley	native	perennial grass	-	-
Poaceae	*Hordeum marinum* ssp. *gussoneanum*	Mediterranean barley	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Phalaris aquatica*	Hardinggrass	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Poa annua*	Annual blue grass	non-native	annual grass	-	-
Poaceae	*Stipa pulchra*	Purple needlegrass	native	perennial grass	-	-
Polygonaceae	*Rumex crispus*	Curly dock	non-native (invasive)	perennial herb	-	Limited
Ranunculaceae	*Ranunculus muricatus*	Buttercup	non-native	annual, perennial herb	-	-
Rosaceae	*Cotoneaster pannosus*	Woolly cotoneaster	non-native (invasive)	shrub	-	Moderate

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Rosaceae	*Crataegus monogyna*	Hawthorn	non-native (invasive)	shrub	-	Limited
Rosaceae	*Prunus cerasifera*	Cherry plum	non-native (invasive)	tree	-	Limited
Rosaceae	*Rosa californica*	California wild rose	native	shrub	-	-
Rosaceae	*Rosa* sp.	-	-	-	-	-
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	non-native (invasive)	shrub	-	High
Rubiaceae	*Galium aparine*	Cleavers	native	annual herb	-	-
Salicaceae	*Populus nigra*	Lombardy poplar	non-native	tree	-	-
Salicaceae	*Salix lasiolepis*	Arroyo willow	native	tree, shrub	-	-
Sapindaceae	*Acer macrophyllum*	Bigleaf maple	native	tree	-	-
Sapindaceae	*Aesculus californica*	Buckeye	native	tree	-	-

*Monterey pine, and Northern California black walnut are not native to the Project Area. Both species has been widely planted and naturalized outside of their native ranges. CNPS rarity status only applies to native occurrences which are not found in the Project Area (CDFW 2017).

All species identified using the *Jepson Manual II: Vascular Plants of California* (Baldwin et al. 2012), *A Flora of Sonoma County* (Best et al. 1996) and *Jepson eFlora* (Jepson Flora Project [eds.] 2017); Nomenclature follows *Jepson eFlora*.

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2017a)

FE: Federal Endangered
FT: Federal Threatened
SE: State Endangered
ST: State Threatened

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

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2017)
High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed: Assessed by Cal-IPC and determined to not be an existing current threat

Table B-2. Wildlife Species Observed in the Study Area on May 2, 2017

Common Name (status if applicable)	**Species**
BIRDS	
Anna's hummingbird	*Calypte anna*
wild turkey	*Meleagris gallopavo*
black phoebe	*Sayornis nigricans*
turkey vulture	*Cathartes aura*
REPTILES	
western fence lizard	*Sceloporus occidentalis*
MAMMALS	
domestic cat	*Felis catus*

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APPENDIX C

POTENTIAL FOR SPECIAL-STATUS PLANT AND WILDLIFE SPECIES TO OCCUR IN THE PROJECT AREA

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Appendix C. Potential Special-Status Plant and Wildlife Species Table. Special- status plant and wildlife species table with the potential to occur within the vicinity of the Project Area (Santa Rosa, Healdsburg, Sebastopol, Two Rock, Cotati, Glen Ellen, Kenwood, Calistoga, and Mark West Springs USGS 7.5' topographic quadrangles) Results include database searches of California Native Plant Society (CNPS) Rare and Endangered Plant Inventory, California Natural Diversity Database (CNDDB, CDFW) as well as U.S. Fish and Wildlife Service Threatened and Endangered Species Lists and Santa Rosa Plain Conservation Strategy (2005), Santa Rosa Plain Programmatic Biological Opinion (2007).

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Franciscan onion *Allium peninsulare* var. *franciscanum*	Rank 1B.2	Cismontane woodland, valley and foothill grassland/clay, volcanic, often serpentine. Elevation ranges from 170 to 980 feet. Blooms (Apr), May-Jun.	**No Potential.** The Project Area lacks volcanic and serpentine substrates known to support this species.	No further recommendations for this species.
Sonoma alopecurus *Alopecurus aequalis* var. *sonomensis*	FE, Rank 1B.1	Marshes and swamps (freshwater), riparian scrub. Elevation ranges from 20 to 1200 feet. Blooms May-Jul.	**Moderate Potential.** The Project Area contains riparian wetland habitat which could support this species.	No further recommendations for this species.
Napa false indigo *Amorpha californica* var. *napensis*	Rank 1B.2	Broadleafed upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 390 to 6560 feet. Blooms Apr-Jul.	**Unlikely.** The Project Area lacks commonly associated species and is below the documented elevation range of this species. This species is often associated with hillslopes and canyons within woodland and forest habitat. There are no documented occurrences of this species in the Santa Rosa Plain (CDFW 2018, CCH 2018).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
bent-flowered fiddleneck *Amsinckia lunaris*	Rank 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 10 to 1640 feet. Blooms Mar-Jun.	**Unlikely.** Despite potentially suitable grassland habitat, previous and ongoing disturbance within the Project Area likely precludes this species. There is only one historic occurrence of this species within the Project Area vicinity from 1940 (CDFW 2018).	No further recommendations for this species.
slender silver moss *Anomobryum julaceum*	Rank 4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest/damp rock and soil on outcrops, usually on roadcuts. Elevation ranges from 330 to 3280 feet.	**No Potential.** The Project Area lacks suitable habitat for this species.	No further recommendations for this species.
Vine Hill manzanita *Arctostaphylos densiflora*	SE, Rank 1B.1	Chaparral (acid marine sand). Elevation ranges from 160 to 390 feet. Blooms Feb-Apr.	**No Potential.** The Project Area lacks chaparral and acidic marine sand substrate known to support this species.	No further recommendations for this species.
Rincon Ridge manzanita *Arctostaphylos stanfordiana* ssp. *decumbens*	Rank 1B.1	Chaparral (rhyolitic), cismontane woodland. Elevation ranges from 250 to 1210 feet. Blooms Feb-Apr (May).	**No Potential.** The Project Area lacks chaparral and rhyolitic substrate known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Brewer's milk-vetch *Astragalus breweri*	Rank 4.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentine, volcanic. Elevation ranges from 300 to 2400 feet. Blooms Apr-Jun.	**No Potential.** The Project Area lacks gravelly soils derived from serpentine or volcanic substrate necessary to support this species.	No further recommendations for this species.
Clara Hunt's milk-vetch *Astragalus claranus*	FE, ST, Rank 1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland/serpentine or volcanic, rocky, clay. Elevation ranges from 250 to 900 feet. Blooms Mar-May.	**No Potential.** The Project Area lacks serpentine or volcanic substrates known to support this species	No further recommendations for this species.
big-scale balsamroot *Balsamorhiza macrolepis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentine. Elevation ranges from 300 to 5100 feet. Blooms Mar-Jun.	**Unlikely.** The Project Area lacks chaparral and serpentine substrates associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Sonoma sunshine *Blennosperma bakeri*	FE, SE, Rank 1B.1	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 30 to 360 feet (10 to 110 meters). Blooms Mar-May.	**Unlikely.** The Project Area lacks vernal pools known to support this species. Riparian wetland within the Project Area is dominated by perennial wetland species, is completely shaded by surrounding overstory trees, and does not constitute potential habitat for this species.	No further recommendations for this species.
narrow-anthered brodiaea *Brodiaea leptandra*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/volcanic. Elevation ranges from 360 to 3000 feet. Blooms May-Jul.	**No Potential.** The Project Area lacks gravelly soils composed of volcanics.	No further recommendations for this species.
Bolander's reed grass *Calamagrostis bolanderi*	Rank 4.2	Bogs and fens, broadleafed upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps (mesic), marshes and swamps (freshwater), north coast coniferous forest/mesic. Elevation ranges from 0 to 1490 feet. Blooms May-Aug.	**Unlikely.** The Project Area lacks many of the biological communities associated with this species. This species is more closely associated with coastal environments (Jepson eFlora 2018).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Thurber's reed grass *Calamagrostis crassiglumis*	Rank 2B.1	Coastal scrub (mesic), marshes and swamps (freshwater). Elevation ranges from 30 to 200 feet. Blooms May-Aug.	**No Potential.** The Project Area lacks coastal scrub and large intact marshes and swamps associated with this species.	No further recommendations for this species.
serpentine reed grass *Calamagrostis ophiditis*	Rank 4.3	Chaparral (open, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland/serpentine, rocky. Elevation ranges from 300 to 3490 feet. Blooms Apr-Jul.	**No Potential.** The Project Area lacks serpentine substrate known to support this species.	No further recommendations for this species.
pink star-tulip *Calochortus uniflorus*	Rank 4.2	Coastal prairie, coastal scrub, meadows and seeps, north coast coniferous forest. Elevation ranges from 30 to 3510 feet. Blooms Apr-Jun.	**No Potential.** The Project Area lacks coastal prairie, coastal scrub, meadows and seeps, and north coast coniferous forest known to support this species.	No further recommendations for this species.
Mt. Saint Helena morning-glory *Calystegia collina* ssp. *oxyphylla*	Rank 4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland/serpentine. Elevation ranges from 920 to 3310 feet. Blooms Apr-Jun.	**No Potential.** The Project Area lacks serpentine substrates known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
swamp harebell *Campanula californica*	Rank 1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes and swamps (freshwater), north coast coniferous forest/mesic. Elevation ranges from 0 to 1330 feet. Blooms Jun-Oct.	**No Potential.** The Project Area lacks the biological communities associated with this species. This species is more closely associated with coastal environments (Jepson eFlora 2018).	No further recommendations for this species.
johnny-nip *Castilleja ambigua* ssp. *ambigua*	Rank 4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools margins. Elevation ranges from 0 to 1430 feet. Blooms Mar-Aug.	**Unlikely.** Despite potentially suitable grassland habitat, grasslands within the Project Area have been previously and repeatedly disturbed by mowing, likely precluding many annual native forbs such as this species.	No further recommendations for this species.
Pitkin Marsh paintbrush *Castilleja uliginosa*	SE, Rank 1A	Marshes and swamps (freshwater). Elevation ranges from 790 to 790 feet (240 to 240 meters). Blooms Jun-Jul.	**No Potential.** The Project Area lacks large intact marshes and swamps known to support this species. This species was only known from Pitkin Marsh in Sebastapol, and is now presumed extinct (CNPS 2018).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Rincon Ridge ceanothus *Ceanothus confusus*	Rank 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland/volcanic or serpentine. Elevation ranges from 250 to 3490 feet. Blooms Feb-Jun.	**No Potential.** The Project Area lacks coniferous forest, chaparral, and substrates known to support this species.	No further recommendations for this species.
Calistoga ceanothus *Ceanothus divergens*	Rank 1B.2	Chaparral (serpentine or volcanic, rocky). Elevation ranges from 560 to 3120 feet. Blooms Feb-Apr.	**No Potential.** The Project Area lacks chaparral and substrates known to support this species.	No further recommendations for this species.
Vine Hill ceanothus *Ceanothus foliosus* var. *vineatus*	Rank 1B.1	Chaparral. Elevation ranges from 150 to 1000 feet. Blooms Mar-May.	**No Potential.** The project area lacks chaparral habitat necessary to support this species.	No further recommendations for this species.
glory brush *Ceanothus gloriosus* var. *exaltatus*	Rank 4.3	Chaparral. Elevation ranges from 100 to 2000 feet. Blooms Mar-Jun (Aug).	**No Potential.** The Project Area lacks chaparral habitat.	No further recommendations for this species.
holly-leaved ceanothus *Ceanothus purpureus*	Rank 1B.2	Chaparral, cismontane woodland/volcanic, rocky. Elevation ranges from 390 to 2100 feet. Blooms Feb-Jun.	**No Potential.** The Project Area lacks volcanic substrates necessary to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Sonoma ceanothus *Ceanothus sonomensis*	Rank 1B.2	Chaparral (sandy, serpentine or volcanic). Elevation ranges from 710 to 2620 feet. Blooms Feb-Apr.	**No Potential.** The Project Area lacks chaparral and substrates known to support this species.	No further recommendations for this species.
pappose tarplant *Centromadia parryi* ssp. *parryi*	Rank 1B.2	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic)/often alkaline. Elevation ranges from 0 to 1380 feet. Blooms May-Nov.	**No Potential.** The Project Area lacks alkaline soils known to support this species.	No further recommendations for this species.
Sonoma spineflower *Chorizanthe valida*	FE, SE, Rank 1B.1	Coastal prairie (sandy). Elevation ranges from 30 to 1000 feet (10 to 305 meters). Blooms Jun-Aug.	**No Potential.** The Project Area lacks coastal prairie and sandy soils.	No further recommendations for this species.
Brewer's clarkia *Clarkia breweri*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub/often serpentine. Elevation ranges from 710 to 3660 feet (215 to 1115 meters). Blooms Apr-Jun.	**No Potential.** The Project Area lacks chaparral, scrub, and serpentine soils associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Vine Hill clarkia *Clarkia imbricata*	FE, SE, Rank 1B.1	Chaparral, valley and foothill grassland/acidic sandy loam. Elevation ranges from 160 to 250. Blooms Jun-Aug.	**No Potential.** The Project Area lacks chaparral and acidic sandy loam soils. This species is only known from two extant occurrences in the Vine Hill area north of Graton (CNPS 2018).	No further recommendations for this species.
serpentine bird's-beak *Cordylanthus tenuis* ssp. *brunneus*	Rank 4.3	Closed-cone coniferous forest, chaparral, cismontane woodland/usually serpentine. Elevation ranges from 1560 to 3000 feet. Blooms Jul-Aug.	**No Potential.** The Project Area lacks the associated vegetation communities and serpentine substrates.	No further recommendations for this species.
Pennell's bird's-beak *Cordylanthus tenuis* ssp. *capillaris*	FE, SR, Rank 1B.2	Closed-cone coniferous forest, chaparral/serpentine. Elevation ranges from 150 to 1000 feet. Blooms Jun-Sep.	**No Potential.** The Project Area lacks the associated vegetation communities and serpentine substrates.	No further recommendations for this species.
Peruvian dodder *Cuscuta obtusiflora* var. *glandulosa*	Rank 2B.2	Marshes and swamps (freshwater). Elevation ranges from 50 to 920 feet. Blooms Jul-Oct.	**No Potential.** The Project Area lacks marsh habitat known to support this species.	No further recommendations for this species.
mountain lady's-slipper *Cypripedium montanum*	Rank 4.2	Broadleafed upland forest, cismontane woodland, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 610 to 7300 feet. Blooms Mar-Aug.	**No Potential.** The Project Area is well below the documented elevation of this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Baker's larkspur *Delphinium bakeri*	FE, SE, Rank 1B.1	Broadleafed upland forest, coastal scrub, valley and foothill grassland/decomposed shale, often mesic. Elevation ranges from 260 to 1000 feet. Blooms Mar-May.	**Unlikely.** The Project Area lacks the associated lacks decomposed shale substrates. This species is known from only one extant occurrence along Marshall-Petaluma Road (CDFW 2018).	No further recommendations for this species.
golden larkspur *Delphinium luteum*	FE, SR, Rank 1B.1	Chaparral, coastal prairie, coastal scrub/rocky. Elevation ranges from 0 to 330 feet. Blooms Mar-May.	**No Potential.** The Project Area lacks the associated vegetation communities and rocky substrates.	No further recommendations for this species.
dwarf downingia *Downingia pusilla*	Rank 2B.2	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 0 to 1460 feet. Blooms Mar-May.	**Unlikely.** The Project Area lacks vernal pools associated with this species.	No further recommendations for this species.
streamside daisy *Erigeron biolettii*	Rank 3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest/rocky, mesic. Elevation ranges from 100 to 3610 feet. Blooms Jun-Oct.	**No Potential.** The Project Area rocky sites associated with this species.	No further recommendations for this species.
serpentine daisy *Erigeron serpentinus*	Rank 1B.3	Chaparral (serpentine, seeps). Elevation ranges from 200 to 2200 feet. Blooms May-Aug.	**No Potential.** The Project Area lacks serpentine seeps associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
slender cottongrass *Eriophorum gracile*	Rank 4.3	Bogs and fens, meadows and seeps, upper montane coniferous forest/acidic. Elevation ranges from 4200 to 9510 feet Blooms May-Sep.	**No Potential.** The Project Area lacks acidic soils known to support this species (CDFW 2018), and is well below the documented elevation range.	No further recommendations for this species.
fragrant fritillary *Fritillaria liliacea*	Rank 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland/often serpentine. Elevation ranges from 10 to 1350 feet. Blooms Feb-Apr.	**Unlikely.** Despite potentially suitable grassland habitat underlain by clay soils, the Project Area lacks serpentine influence often associated with this species. The historic and current disturbance regime also likely precludes this species.	No further recommendations for this species.
woolly-headed gilia *Gilia capitata* ssp. *tomentosa*	Rank 1B.1	Coastal bluff scrub, valley and foothill grassland/serpentine, rocky, outcrops. Elevation ranges from 30 to 720 feet. Blooms May-Jul.	**No Potential.** The Project Area lacks serpentine soils and rocky outcrops associated with this species.	No further recommendations for this species.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	SE, Rank 1B.2	Marshes and swamps (lake margins), vernal pools/clay. Elevation ranges from 30 to 7790 feet. Blooms Apr-Aug.	**No Potential.** The Project Area lacks large intact marshes and swamps, or vernal pools associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
congested-headed hayfield tarplant *Hemizonia congesta* ssp. *congesta*	Rank 1B.2	Valley and foothill grassland/sometimes roadsides. Elevation ranges from 70 to 1840 feet. Blooms Apr-Nov.	**Moderate Potential.** The Project Area contains potentially suitable grassland habitat that may support this species. This species is relatively disturbance-tolerant and may not be precluded by historic and current disturbance regime in the Project Area.	A protocol-level rare plant survey is recommended in early July to determine the presence or absence of this species.
hogwallow starfish *Hesperevax caulescens*	Rank 4.2	Valley and foothill grassland (mesic, clay), vernal pools (shallow)/sometimes alkaline. Elevation ranges from 0 to 1660 feet. Blooms Mar-Jun.	**No Potential.** The Project Area lacks vernal pools and alkaline soils associated with this species. This species was included in the CNPS inventory database as a checklist for the Healdsburg quadrangle. However, this species is not documented in Sonoma or Marin counties (CCH 2018, Jepson eFlora 2018, CNPS 2018, Best et. al. 1996, Howell et. al. 2007).	No further recommendations for this species.
thin-lobed horkelia *Horkelia tenuiloba*	Rank 1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland/mesic openings, sandy. Elevation ranges from 160 to 1640 feet. Blooms May-Jul (Aug).	**Unlikely.** The Project Area lacks sandy soils associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
harlequin lotus *Hosackia gracilis*	Rank 4.2	Broadleafed upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, north coast coniferous forest, valley and foothill grassland/wetlands, roadsides. Elevation ranges from 0 to 2300 feet. Blooms Mar-Jul.	**Unlikely.** Despite potentially suitable grassland habitat, grasslands within the Project Area have been previously and repeatedly disturbed by mowing, likely precluding many annual native forbs such as this species.	No further recommendations for this species.
coast iris *Iris longipetala*	Rank 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps/mesic. Elevation ranges from 0 to 1970 feet. Blooms Mar-May.	**Unlikely.** Despite potentially suitable grassland habitat, this species is more closely associated with coastal environments.	No further recommendations for this species.
Burke's goldfields *Lasthenia burkei*	FE, SE, Rank 1B.1	Meadows and seeps (mesic), vernal pools. Elevation ranges from 50 to 1970 feet. Blooms Apr-Jun.	**Unlikely.** The Project Area lacks vernal pools known to support this species. Riparian wetland within the Project Area is dominated by perennial wetland species, is completely shaded by surrounding overstory trees, and does not constitute potential habitat for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Baker's goldfields *Lasthenia californica* ssp. *bakeri*	Rank 1B.2	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps. Elevation ranges from 200 to 1710 feet. Blooms Apr-Oct.	**No Potential.** There is only one documented occurrence of this species in the vicinity of the Project Area from 1899 (CDFW 2018). The majority of documented occurrences in Sonoma County are closer to the coast, and centered around the Bodega Bay area.	No further recommendations for this species.
Contra Costa goldfields *Lasthenia conjugens*	FE, Rank 1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools/mesic. Elevation ranges from 0 to 1540 feet Blooms Mar-Jun.	**No Potential.** The Project Area lacks vernal pools and alkaline substrates associated with this species.	No further recommendations for this species.
Colusa layia *Layia septrionalis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sandy, serpentine. Elevation ranges from 330 to 3590 feet. Blooms Apr-May.	**No Potential.** The Project Area lacks sandy serpentine soils associated with this species.	No further recommendations for this species.
legenere *Legenere limosa*	Rank 1B.1	Vernal pools. Elevation ranges from 0 to 2890 feet. Blooms Apr-Jun.	**No Potential.** The Project Area lacks vernal pools associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
bristly leptosiphon *Leptosiphon acicularis*	Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet. Blooms Apr-Jul.	**Unlikely.** The Project Area lacks shallow rocky soils and sparsely vegetated areas known to support this species.	No further recommendations for this species.
Jepson's leptosiphon *Leptosiphon jepsonii*	Rank 1B.2	Chaparral, cismontane woodland/usually volcanic. Elevation ranges from 330 to 1640 feet (100 to 500 meters). Blooms Mar-May.	**No Potential.** The Project Area lacks the vegetation communities and volcanic soils associated with this species.	No further recommendations for this species.
woolly-headed Lessingia *Lessingia hololeuca*	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentine. Elevation ranges from 50 to 1000 feet. Blooms Jun-Oct.	**No Potential.** The Project Area lacks serpentine soils known to support this species.	No further recommendations for this species.
Pitkin Marsh lily *Lilium pardalinum* ssp. *pitkinense*	FE, SE, Rank 1B.1	Cismontane woodland, meadows and seeps, marshes and swamps (freshwater)/mesic, sandy. Elevation ranges from 110 to 210 feet. Blooms Jun-Jul.	**No Potential.** The Project Area lacks large intact marsh habitat and sandy soils associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
redwood lily *Lilium rubescens*	Rank 4.2	Broadleafed upland forest, chaparral, lower montane coniferous forest, north coast coniferous forest, upper montane coniferous forest/sometimes serpentine, sometimes roadsides. Elevation ranges from 100 to 6270 feet. Blooms Apr-Aug (Sep).	**No Potential.** The Project Area lacks the vegetation communities associated with this species.	No further recommendations for this species.
Sebastopol meadowfoam *Limnanthes vinculans*	FE, SE, Rank 1B.1	Meadows and seeps, valley and foothill grassland, vernal pools/vernally mesic. Elevation ranges from 50 to 1000 feet. Blooms Apr-May.	**Unlikely.** The Project Area lacks vernal pools known to support this species. Riparian wetland within the Project Area is dominated by perennial wetland species, is completely shaded by surrounding overstory trees, and does not constitute potential habitat for this species.	No further recommendations for this species.
Napa Lomatium *Lomatium repostum*	Rank 4.3	Chaparral, cismontane woodland/serpentine. Elevation ranges from 300 to 2720 feet. Blooms Mar-Jun.	**No Potential.** The Project Area lacks the vegetation communities and serpentine substrate known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Cobb Mountain lupine *Lupinus sericatus*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 900 to 5000 feet. Blooms Mar-Jun.	**No Potential.** The Project Area lacks the associated vegetation communities and is well below the documented elevation range of the species.	No further recommendations for this species.
Mt. Diablo cottonweed *Micropus amphibolus*	Rank 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky. Elevation ranges from 150 to 2710 feet. Blooms Mar-May.	**Unlikely.** The Project Area lacks rocky substrates known to support this species.	No further recommendations for this species.
marsh microseris *Microseris paludosa*	Rank 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 20 to 1160 feet (5 to 355 meters). Blooms Apr-Jun (Jul).	**Unlikely.** Despite potentially suitable grassland habitat, the historic and current disturbance regime (i.e. agricultural conversion, and mowing) within the Project Area and dense thatch accumulation from non-native annual grasses likely precludes this species.	No further recommendations for this species.
green monardella *Monardella viridis*	Rank 4.3	Broadleafed upland forest, chaparral, cismontane woodland. Elevation ranges from 330 to 3310 feet. Blooms Jun-Sep.	**No Potential.** The Project Area lacks the vegetation communities associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
cotula navarretia *Navarretia cotulifolia*	Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland/adobe. Elevation ranges from 10 to 6000 feet. Blooms May-Jun.	**Unlikely.** Despite potentially suitable grassland habitat and clay soils, the historic and current disturbance regime (i.e. agricultural conversion, and mowing) within the Project Area and dense thatch accumulation from non-native annual grasses likely precludes this species.	No further recommendations for this species.
Baker's navarretia *Navarretia leucocephala* ssp. *bakeri*	Rank 1B.1	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/mesic. Elevation ranges from 20 to 5710 feet. Blooms Apr-Jul.	**No Potential.** The Project Area lacks vernal pools with associated vernal pool indicator species, and alkaline soils associated with this species (CDFW 2018).	No further recommendations for this species.
many-flowered navarretia *Navarretia leucocephala* ssp. *plieantha*	FE, SE, Rank 1B.2	Vernal pools (volcanic ash flow). Elevation ranges from 100 to 3120 feet (30 to 950 meters). Blooms May-Jun.	**No Potential.** The Project Area lacks vernal pools and volcanic ash flow substrates associated with this species.	No further recommendations for this species.
Sonoma beardtongue *Penstemon newberryi* var. *sonomensis*	Rank 1B.3	Chaparral (rocky). Elevation ranges from 2300 to 4490 feet. Blooms Apr-Aug.	**No Potential.** The Project Area lacks chaparral and is well below the documented elevation range of this species	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Gairdner's yampah *Perideridia gairdneri* ssp. *gairdneri*	Rank 4.2	Broadleafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools/vernally mesic. Elevation ranges from 0 to 2000 feet (0 to 610 meters). Blooms Jun-Oct.	**Unlikely.** Despite potentially suitable grassland habitat, the historic and current disturbance regime (i.e. agricultural conversion, and mowing) within the Project Area and dense thatch accumulation from non-native annual grasses likely precludes this species.	No further recommendations for this species.
Calistoga popcornflower *Plagiobothrys strictus*	FE, ST, Rank 1B.1	Meadows and seeps, valley and foothill grassland, vernal pools/alkaline areas near thermal springs. Elevation ranges from 300 to 520 feet. Blooms Mar-Jun.	**No Potential.** This species is known from only two extant occurrences near Calistoga, where it is associated with hot springs (CNPS 2018)	No further recommendations for this species.
North Coast semaphore grass *Pleuropogon hooverianus*	ST, Rank 1B.1	Broadleafed upland forest, meadows and seeps, north coast coniferous forest/open areas, mesic. Elevation ranges from 30 to 2200 feet. Blooms Apr-Jun.	**Unlikely.** The Project Area lacks open wet meadows associated with this species (Best et al. 1996).	No further recommendations for this species.
nodding semaphore grass *Pleuropogon refractus*	Rank 4.2	Lower montane coniferous forest, meadows and seeps, north coast coniferous forest, riparian forest/mesic. Elevation ranges from 0 to 5250 feet. Blooms (Mar), Apr-Aug.	**Unlikely.** The Project Area lacks coniferous forested habitats most often associated with this species. This species has not been documented within Sonoma County (CCH 2018, Best et al. 1996).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Cunningham Marsh cinquefoil *Potentilla uliginosa*	Rank 1A	Marshes and swamps/freshwater, permanent oligotrophic wetlands. Elevation ranges from 100 to 130. Blooms May-Aug.	**No Potential.** The Project Area lacks permanent oligotrophic wetlands. This species is presumed extinct.	No further recommendations for this species.
California alkali grass *Puccinellia simplex*	Rank 1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools/alkaline, vernally mesic; sinks, flats, and lake margins. Elevation ranges from 10 to 3050 feet (2 to 930 meters). Blooms Mar-May.	**No Potential.** The Project Area lacks alkaline substrates associated with this species.	No further recommendations for this species.
Lobb's aquatic buttercup *Ranunculus lobbii*	Rank 4.2	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools/mesic. Elevation ranges from 50 to 1540 feet. Blooms Feb-May.	**Unlikely.** The Project Area lacks large seasonally ponded areas with standing water depths of 6 inches or greater necessary to support this species.	No further recommendations for this species.
white beaked-rush *Rhynchospora alba*	Rank 2B.2	Bogs and fens, meadows and seeps, marshes and swamps (freshwater). Elevation ranges from 200 to 6690 feet. Blooms Jul-Aug.	**Unlikely.** The Project Area lacks large intact bogs, marshes and swamps associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
California beaked-rush *Rhynchospora californica*	Rank 1B.1	Bogs and fens, lower montane coniferous forest, meadows and seeps (seeps), marshes and swamps (freshwater). Elevation ranges from 150 to 3310 feet. Blooms May-Jul.	**Unlikely.** The Project Area lacks large intact bogs, marshes and swamps associated with this species.	No further recommendations for this species.
brownish beaked-rush *Rhynchospora capitellata*	Rank 2B.2	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest/mesic. Elevation ranges from 150 to 6560 feet. Blooms Jul-Aug.	**Unlikely.** The Project Area lacks large intact bogs, marshes and swamps, and coniferous forest associated with this species.	No further recommendations for this species.
round-headed beaked-rush *Rhynchospora globularis*	Rank 2B.1	Marshes and swamps (freshwater). Elevation ranges from 150 to 200 feet. Blooms Jul-Aug.	**Unlikely.** The Project Area lacks large intact bogs, marshes and swamps associated with this species.	No further recommendations for this species.
Napa checkerbloom *Sidalcea hickmanii* ssp. *napensis*	Rank 1B.1	Chaparral/rhyolitic. Elevation ranges from 1360 to 2000 feet. Blooms Apr-Jun.	**No Potential.** The Project area lacks chaparral and rhyolitic substrates known to support this species.	No further recommendations for this species.
Kenwood Marsh checkerbloom *Sidalcea oregana* ssp. *valida*	FE, SE, Rank 1B.1	Marshes and swamps (freshwater). Elevation ranges from 380 to 490 feet. Blooms Jun-Sep.	**Unlikely.** The Project Area lacks marshes and swamps associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
two-fork clover *Trifolium amoenum*	FE, Rank 1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentine). Elevation ranges from 20 to 1360 feet. Blooms Apr-Jun.	**Unlikely.** Despite potentially suitable grassland habitat present within the Project Area, grasslands within the Project Area are relatively disturbed. This species is only known from one natural extant occurrence in Marin County (CNPS 2018, USFWS 2012).	No further recommendations for this species.
Santa Cruz clover *Trifolium buckwestiorum*	Rank 1B.1	Broadleafed upland forest, cismontane woodland, coastal prairie/gravelly, margins. Elevation ranges from 340 to 2000 feet. Blooms Apr-Oct.	**No Potential.** The Project Area lacks gravelly substrates known to support this species.	No further recommendations for this species.
saline clover *Trifolium hydrophilum*	Rank 1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 980 feet. Blooms Apr-Jun.	**No Potential.** The Project Area lacks alkaline marshes and swamps known to support this species.	No further recommendations for this species.
coastal triquetrella *Triquetrella californica*	Rank 1B.2	Coastal bluff scrub, coastal scrub/soil. Elevation ranges from 30 to 330 feet.	**No Potential.** The Project Area lacks coastal scrub habitats.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
oval-leaved viburnum *Viburnum ellipticum*	Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 600 to 4200 feet. Blooms May-June.	**No Potential.** This species is commonly associated with chaparral, and yellow pine forest habitat on north facing slopes (Jepson eFlora 2018).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Mammals				
fringed myotis *Myotis thysanodes*	WBWG: High Priority	Associated with a wide variety of habitats including mixed coniferous-deciduous forest and redwood/ sequoia groves. Roosts in caves, mines, buildings, and crevices. Separate day and night roosts may be used.	**Moderate Potential.** The Project Area contains uninhabited buildings that could potentially provide a roosting structure for this species.	See Section 5.0 for recommended avoidance and minimization measures.
long-legged myotis *Myotis volans*	WBWG: High Priority	Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices and buildings are important day roosts. Other roosts include caves, mines and buildings.	**Moderate Potential.** The Project Area contains uninhabited buildings that could potentially provide a roosting structure for this species.	See Section 5.0 for recommended avoidance and minimization measures.
hoary bat *Lasiurus cinereus*	WBWG: Medium Priority	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Moderate Potential.** The Project Area contains trees with sufficient foliage for cover and potential roosting structure for this species. In addition Roseland Creek may provide adequate water for this species.	See Section 5.0 for recommended avoidance and minimization measures.
pallid bat *Antrozous pallidus*	SSC, WBWG: High Priority	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential.** The Project Area contains trees of sufficient size to potentially provide roosting structure for this species. In addition, Roseland Creek may provide adequate water for this species.	See Section 5.0 for recommended avoidance and minimization measures.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Townsend's big-eared bat *Corynorhinus townsendii*	SSC; WBWG: High Priority	Associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**Moderate Potential.** The Project Area contains an uninhabited building that could potentially provide a roosting structure for this species. In addition, Roseland Creek may provide adequate water for this species.	See Section 5.0 for recommended avoidance and minimization measures.
western red bat *Lasiurus blossevillii*	SSC	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. Roosts are usually in broad-leaved trees including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Moderate Potential.** The Project Area contains potentially suitable roosting habitat which may support this species. In addition, Roseland Creek may provide adequate water for this species.	See Section 5.0 for recommended avoidance and minimization measures.
Yuma myotis *Myotis yumanensis*	WBWG: Low-Medium Priority	Known for its ability to survive in urbanized environments. Also found in heavily forested settings. Day roosts in buildings, trees, mines, caves, bridges and rock crevices. Night roosts associated with man-made structures.	**Moderate Potential.** The Project Area contains an uninhabited building that could potentially provide a roosting structure for this species. In addition, Roseland Creek may provide adequate water for this species.	See Section 5.0 for recommended avoidance and minimization measures.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
American badger *Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**No Potential.** The Project Area is surrounded by residential and other development and does not contain the vast uninterrupted open spaces typically required by this species for breeding dens and foraging.	No further surveys or mitigation measures are recommended.
Birds				
ferruginous hawk *Buteo regalis*	BCC	Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys and fringes of pinyon-juniper habitats.	**Unlikely.** This species may occasionally forage within the Project Area. However, habitat quality is greatly diminished due to small parcel size and surrounding residential development. Few trees within Project Area to support potential nesting.	No further surveys or mitigation measures are recommended.
golden eagle *Aquila chrysaetos*	CFP, BCC	Found in rolling foothills with open grasslands, scattered trees, and cliff-walled canyons.	**Unlikely.** This species may occasionally forage within the Project Area. However, habitat quality is greatly diminished due to small parcel size and surrounding residential development. Few trees within Project Area to support potential nesting.	No further surveys or mitigation measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
white-tailed kite *Elanus leucurus*	CFP	Year-long resident of coastal and valley lowlands, including agricultural areas. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians.	**Moderate Potential.** The Project Area contains potentially suitable foraging and nesting habitat for this species.	See Section 5.0 for recommended avoidance and minimization measures.
American peregrine falcon *Falco peregrinus anatum*	FD, SD, CFP, BCC	Winters throughout Central Valley. Requires protected cliffs and ledges for cover. Feeds on a variety of birds, and some mammals, insects, and fish.	**No Potential.** This species may occasionally forage within the Project Area, however the Project Area lacks sufficient nesting habitat for this species and habitat quality is further reduced due to the proximity of low-level residential development.	No further surveys or mitigation measures are recommended.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FC, SE, BCC	Nests in riparian jungles of willow often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. Species requires an average of 17 hectares per pair for foraging and nesting.	**No Potential.** The Project Area does not contain sufficient forested or aquatic habitat necessary for this species.	No further surveys or mitigation measures are recommended.
burrowing owl *Athene cunicularia*	SSC, BCC	Frequents open grasslands and shrublands with perches and burrows. Preys upon insects, small mammals, reptiles, birds, and carrion. Nests and roosts in old burrows of small mammals.	**Unlikely.** This species may occasionally forage in the Project Area, but the Project Area lacks small mammal burrows essential for nesting and common in foraging habitat.	No further surveys or mitigation measures are recommended.
black swift *Cyseloides niger*	SSC, BCC	Nesting sites are associated with sheer cliffs and waterfalls, either near the coast or in the mountains. Does not winter in California.	**No Potential.** The Project Area lacks sufficient cliff or waterfall habitat for this species.	No further surveys or mitigation measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Vaux's swift *Chaetura vauxi*	SSC	Forages high in the air over most terrain and habitats but prefers rivers/lakes. Requires large hollow trees for nesting.	**Unlikely**. The Project Area lacks the aquatic habitat preferred by this species. Few trees provide potential nesting habitat for this species, however its hollows are likely too small for use.	No further surveys or mitigation measures are recommended.
Allen's hummingbird *Selasphorus sasin*	BCC	Found in a wide variety of habitats that provide nectar-producing flowers. A common migrant and uncommon summer resident of California.	**Moderate Potential.** The Project Area is contains potentially suitable foraging and nesting habitat which could support this species.	See Section 5.0 for recommended avoidance and minimization measures.
olive-sided flycatcher *Contopus cooperi*	SSC, BCC	Most often found in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	**No Potential.** The Project Area does not contain sufficient forested or aquatic habitat necessary for this species.	No further surveys or mitigation measures are recommended.
yellow warbler *Setophaga petechia*	SSC, BCC	Nests in riparian stands of willows, cottonwoods, aspens, sycamores, and alders. Also nests in montane shrubbery in open conifer forests.	**No Potential.** The Project Area does not contain sufficient forested or riparian habitat necessary for this species.	No further surveys or mitigation measures are recommended.
yellow-breasted chat *Icteria virens*	SSC	Breeds in riparian thickets and woodlands, particularly those dominated by willows and cottonwoods.	**Moderate Potential.** The Project Area contains potentially suitable riparian habitat which could support this species.	See Section 5.0 for recommended avoidance and minimization measures.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
grasshopper sparrow *Ammodramus savannarum*	SSC	Frequents dense tall, dry or well-drained grasslands, especially native grasslands with mixed grasses and forbs for foraging and nesting. Nests on ground at base of overhanging clumps of vegetation.	**Unlikely.** This species is not known to nest in the vicinity, and the Project Area does not provide well-drained grasslands typical of this species. This species is more common in the coastal hills and dry interior hills.	No further surveys or mitigation measures are recommended.
tricolored blackbird *Agelaius tricolor*	SSC, BCC	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs.	**Unlikely.** The Study Area is primarily oak woodland and does not contain dense riparian habitat such as cattails or tules typical for nesting by this species.	No further surveys or mitigation measures are recommended.
Lawrence's goldfinch *Carduelis lawrencei*	BCC	Inhabits oak woodlands, chaparral, pinyon-juniper associations, and weedy areas near water during the breeding season; highly erratic and localized in occurrence.	**Unlikely.** No suitable chaparral or xeric oak woodland is present to support nesting of the species within the Project Area. The species is also an extremely rare breeder in Sonoma County.	No further surveys or mitigation measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
bank swallow *Riparia riparia*	ST	Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co.	**No Potential.** The Study Area does not contain the riparian cliff habitat necessary for this species.	No further recommendations for this species.
Nuttall's woodpecker *Picoides nuttalli*	BCC	Year-round resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.	**High Potential.** The Study Area contains oak woodland suitable for nesting and foraging by this species.	See Section 5.2 for recommended measures.
Reptiles and Amphibians				
Pacific (western) pond turtle *Actinemys marmorata*	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and shelter.	**Moderate Potential.** The Study Area contains an intermittent stream which could support this species through part of the year. There are multiple recorded occurrences of this species within 5-miles of the Study Area (CDFW, 2018).	See Section 5.2 for recommended measures

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
California giant salamander *Dicamptodon ensatus*	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**No Potential.** The Project Area does not contain mesic coniferous forest habitat necessary for this species.	No further surveys or mitigation measures are recommended.
California tiger salamander *Ambystoma californiense*	FE, ST, SSC	Inhabits annual grassland habitat and mammal burrows. Seasonal ponds and vernal pools crucial to breeding. Federal Endangered status limited to populations in Sonoma and Santa Barbara counties.	**Unlikely.** As per Trenham and Cook (2008), Hearn Avenue and directly associated infrastructure (e.g., storm drains) provides a barrier to CTS movement. The Project Area does not provide any wetlands or seasonal aquatic features suitable for CTS breeding, and as such the persistence of a population there and on adjacent properties north of Hearn Avenue is highly unlikely.	No further surveys or mitigation measures are recommended.
red-bellied newt *Taricha rivularis*	SSC	Inhabits coastal redwood forests and occasionally other forest types. Adults remain in breeding stream drainages in the non-breeding season. Breeding habitats are often fast-moving streams. Stagnant water sources are often avoided.	**No Potential.** The Project Area does not contain sufficient aquatic breeding or aestivation habitat for this species.	No further surveys or mitigation measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
California red-legged frog *Rana draytonii*	FT, SSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains.	**Unlikely.** No suitable aquatic breeding, dispersal, or upland habitat is present within the Project Area.	No further surveys or mitigation measures are recommended.
foothill yellow-legged frog *Rana boylii*	SSC	Found in or near rocky streams in a variety of habitats. Feed on both aquatic and terrestrial invertebrates.	**Unlikely.** Roseland Creek provides only marginal habitat for this species and no occurrences have been documented within 5 miles of Project Area.	No further surveys or mitigation measures are recommended.
Fish				
Coho salmon - southern Oregon/northern California ESU *Oncorhynchus kisutch*	FT, ST, SSC	Occurs in inland and in coastal marine waters from the Cape Blanco, Oregon, through Punta Gorda, California. Adult coho salmon enter fresh water from September through January to spawn. Requires beds of medium to small gravel substrate and sufficient dissolved oxygen for spawning. Rearing habitat consists of riparian cover, cool water and sufficient dissolved oxygen.	**No Potential.** The Study Area does not contain suitable streams, rivers or other perennial waters to support this species.	No further recommendations for this species.
Navarro roach *Lavinia symmetricus navarroensis*	SSC	Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams.	**No Potential.** The Study Area does not contain suitable streams, rivers or other perennial waters to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Russian River tule perch *Hysterocarpus traski pomo*	SSC	Found in clear, flowing freshwater with abundant vegetation and overhanging cover. Confined to the Russian River and tributaries.	**No Potential.** The Study Area does not contain suitable streams, rivers or other perennial waters to support this species.	No further recommendations for this species.
steelhead - Central California Coast ESU *Oncorhynchus mykiss irideus*	FT	From Russian River south to Soquel Creek and Pajaro River. Also San Francisco and San Pablo Bay Basins.	**No Potential.** The Study Area does not contain suitable streams, rivers or other perennial waters to support this species.	No further recommendations for this species.
Invertebrates				
California freshwater shrimp *Syncaris pacifica*	FE, SE, SSI	Endemic to Marin, Napa, and Sonoma Counties. Found in shallow pools away from streamflow in low gradient streams where riparian cover is moderate to heavy.	**Unlikely.** The Study Area does not contain perennial stream habitat with suitable shallow pools to support this species.	No further recommendations for this species.

*** Key to status codes:**

FE	Federal Endangered
FT	Federal Threatened
SE	State Endangered
SD	State Delisted
ST	State Threatened
SR	State Rare
SSC	Species of Special Concern
SSI	Species of Special Interest
BCC	Bird of Conservation Concern
California Rare Plant Rank (CRPR)	
Rank 1A	CRPR 1A: Plants presumed extinct in California
Rank 1B	CRPR 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2A	CRPR 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B	CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CRPR 3: Plants about which CNPS needs more information (a review list)

Rank 4	CRPR 4: Plants of limited distribution (a watch list)
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

****Potential to Occur:**

No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

*****Results and Recommendations:**

Present. Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

Assumed Present. Species has a high likelihood of occurring and actions to avoid/mitigate impacts are recommended; surveys not conducted.

Assumed Absent. Species is assumed to not be present or utilize the site due to a lack of key habitat components.

Not Observed. Species was not observed during protocol-level surveys.

APPENDIX D

SITE PHOTOGRAPHS

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Photograph 1. Photograph depicting disturbed valley oak woodland composed of young, potentially planted trees in the northern portion of the Project Area.

Photograph 2. Photograph depicting developed/landscaped portion of the Project Area.

Photograph 3. Photograph depicting Roseland Creek, an intermittent, USGS 'blue-line' stream within the central portion of the Project Area.

Photograph 4. Photograph depicting purple needlegrass grassland within the southern portion of the Project Area.

Photograph 5. Photo depicting riparian wetland adjacent to Roseland Creek within the western portion of the Project Area.

Photograph 6. Photograph depicting non-native annual grassland with dying black walnut (*Juglans hindsii*) in the northern portion of the Project Area.