wra Environmental Consultants

MEMORANDUM

TO:	Robert Upton Campus Properties Group LLC	**FROM:** Hope Kingma Biology and Regulatory Permitting Director
CC:	Michael Hooper Campus Properties Group LLC	
DATE:	August 14, 2024	
SUBJECT:	Acacia Village CEQA Memo	

In November of 2017, WRA prepared a Biological Resources Assessment (BRA) report (**Attachment A**) on behalf of Campus Properties Group LLC for the proposed Acacia Village Development Project (Project). The purpose of this memo is to provide an update to the 2017 BRA prepared by WRA.

The proposed Project involves the redevelopment of an approximately 2.43-acre property located at 746 Acacia Lane (APNs #182-520-050), in the northeast quadrant of the City of Santa Rosa, Sonoma County, California (**Study Area; Figure 1**). The Study Area consists of approximately 2.5 acres of a former residential/agricultural parcel. The center portion of the Study Area is developed and contains a vacant single-family residence, outbuildings, and chicken coops, whereas the northern and southern portions of the Study Area are non-native grasslands, which are typically used for pasture. The Study Area is surrounded on all sides by single-family residential development. Historic aerial imagery (Sonoma County 2017, NETR 2017) indicates that the majority of undeveloped portions of the Study Area, supported high density, intensive agricultural (orchard) production from at least 1942 to as recently as 1952. A review of more recent aerial imagery from 2017- 2024 (Google Earth 2020) indicates that the Study Area remains unchanged since the BRA was prepared in 2017 (**Figure 2**).

Biological Communities

The BRA documented approximately 1.79 acres of non-native annual grassland and approximately 0.64 acre of developed/landscaped areas within the Study Area. No wetlands, streams, or other sensitive biological communities are present within the Study Area.

Special-Status Species

Special-Status Plants

Based upon a review of the resources and databases listed in Section 3.2.1 of the 2017 BRA, including 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 90 special-status plant species have been documented from the vicinity of the Study Area. Of the 90 special-status species known from the region, all are unlikely or have no potential to occur within the Study Area due to one or more of the following factors:

- The previously developed and disturbed nature of the site has diminished local habitat availability for special-status plant species, and likely precludes the species from persisting in the Study Area;
- The species has a very limited range of endemism and has never been observed in the vicinity of the Study Area;
- Vegetation communities commonly associated with the special-status species (e.g. vernal pools, chaparral, marshes and swamps) are absent from the Study Area;
- Specific edaphic characteristics, such as soil derived from serpentine or volcanic, are absent from the Study Area;
- Specific hydrologic characteristics, such as perennial saline, are absent from the Study Area;
- Very unique pH characteristics, such as alkali scalds or acidic bogs and fens, are absent from the Study Area.

Based on a review of the most recent CNDDB records in 2024 (CDFW 2021b), only four special-status plant species have been documented within a 2-mile radius of the Study Area: Rincon ridge manzanita, Rincon ridge ceanothus, narrow-anthered brodiaea, and coastal triqutrella. The nearest documented occurrences are approximately 1 miles NW and include Rincon Ridge ceanothus (from the 1960's) and Rincon Ridge manzanita (from 1986), and neither species would occur onsite. **As such, WRA concludes that the Study Area does not support any special-status plant species.**

Special-Status Wildlife

Based upon a review of the resources and databases listed in Section 3.2.1 of the 2017 BRA, it was determined that 42 special-status wildlife species have been documented from within the Cotati, Kenwood, Sebastopol, Calistoga, Glen Ellen, Healdsburg, Mark West Springs, Two Rock, and Santa Rosa USGS 7.5-minute quadrangles. Appendix B summarizes the potential for each of these species to occur in the Study Area. Of the 42 special-status wildlife documented in the Study Area vicinity, all are unlikely or have no potential to occur within the Study Area due to one or more of the following reasons:

- The urbanized, and developed nature of the Study Area vicinity provides limited habitat, and presents significant barriers to species mobility;
- Aquatic habitats (e.g., rivers/streams, ponds, estuarine waters) necessary to support the special-status wildlife species are not present in the Study Area;
- Vegetation types (e.g., tidal or freshwater marsh, chaparral, oak woodland) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- Vacant buildings within the Study Area do not provide suitable bat roosting substrates, particularly for maternity roosting; the buildings either lack ingress/egress points necessary for access, or are too open and exposed, and do not provide temperature stability necessary for thermoregulation during roosting;
- Structures or vegetative substrates (e.g., emergent wetland/marsh vegetation, tree cavities/snags) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- The Study Area is outside (e.g. north of, west of) of the special-status wildlife species known local range (including nesting/breeding range, for birds).

Based on a review of the most recent CNDDB records in 2024 (CDFW 2021b), the only documented wildlife species within a 2-mile radius include western pond turtle and a historic yellow rail record from 1912. The nearest documented occurrence for western pond turtle is located approximately 0.5 miles to the east in a channelized portion of Austin Creek in 2003. Western pond turtle and yellow rail are not expected to occur onsite. The nearest documented California tiger salamander (CTS) occurrence is located 4.75 miles southwest along Hearn Avenue in 2003. There are no other CTS records within 5 miles. **As such, WRA concludes that the Study Area does not support any special-status wildlife species.**

AVOIDANCE MEASURES

Use of avoidance and minimization measures and best management practices (BMPs) in the project description instead of requiring mitigation measures can help projects qualify for a Categorical Exemption. The following avoidance and minimization measures are proposed:

Nesting birds

Non-status wildlife (birds) with baseline legal protections have the potential to nest within the Study Area. The Study Area contains vegetation (trees, shrubbery, etc.) that may be used as nesting habitat by bird species with legal baseline protections. These laws/codes apply to a wide variety of native birds, including species that are non-migratory and/or commonly found in Sonoma County.

In order to avoid impacts to nesting birds the initial removal of trees and other vegetation, should be conducted from September 1 to January 31, outside of the nesting bird season. If work is initiated during the nesting bird season (between February 1 and August 31), the following measures are recommended: (1) a qualified biologist should conduct a nesting bird survey 7 days prior to start of work, and if no active nests are found, work may begin and no impacts to birds will result, (2) if active nests are found during the survey, the biologist should establish a protective buffer zone around the nest within which no work will be allowed, and once the young have fledged the nest or the nest becomes inactive (e.g., due to predation), then work may continue within the buffer zone area without restriction.

Protected and Heritage Trees

The Study Area contains several mature trees, some of which are likely to be considered “heritage” trees per Chapter 17-24, “Trees” of the Santa Rosa City Code (Tree Ordinance). Many of the mature trees on-site are non-native ornamental species including Italian stone pine, London plane, and mulberry, which are not considered heritage trees per the Tree Ordinance, regardless of size.

A tree removal permit may be required for any alteration, removal or relocation of a tree (as defined above) including 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.

Incorporation of these measures will allow the proposed residential project to qualify for the CEQA Exemption for *Infill Development* under Section 15332 class 32 since the project site has “no value as habitat for endangered, rare, or threatened species”.

Attachments:

Figures 1 and 2

Attachment A. Biological Resources for the proposed Acacia Village Development Project (WRA 2017)

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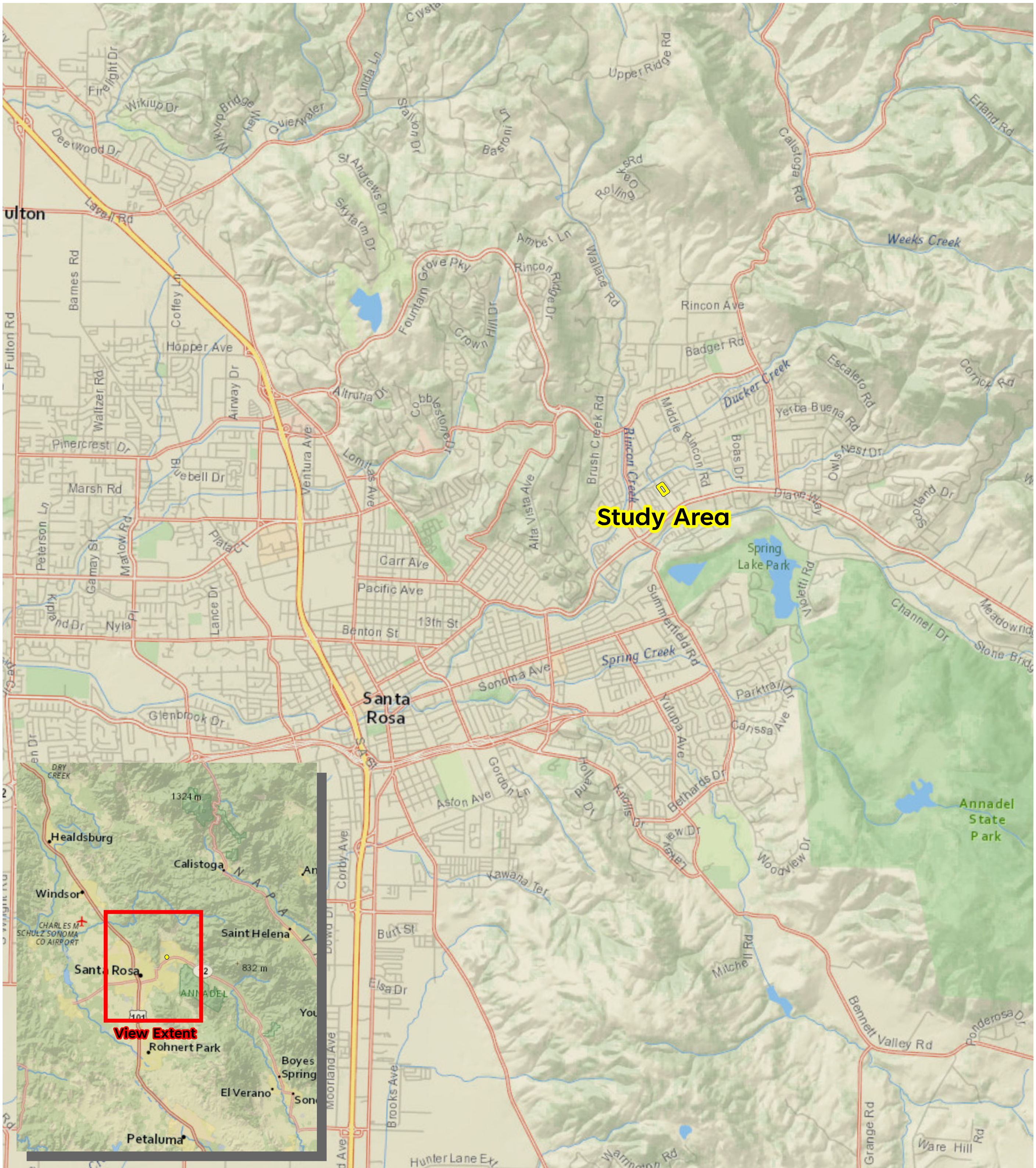

Sources: National Geographic, WRA | Prepared By: kobylarz, 8/14/2024

Figure 1. Study Area Location - Acacia Village

Acacia Village
Santa Rosa, California

0 1 2 Miles

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Sources: Google Earth 3/24, WRA | Prepared By: kobylarz, 8/14/2024

Figure 2. 2024 Aerial Photograph of the Study Area

Acacia Village
Santa Rosa, California

0 50 100 Feet

N

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Biological Resources Assessment

ACACIA VILLAGE DEVELOPMENT PROJECT
SANTA ROSA, SONOMA COUNTY, CALIFORNIA

Prepared For:

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Date:

November 2017

WRA Project No:

27347-2

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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 Campus Properties Group LLC for the proposed Acacia Village Development Project (Project). The proposed Project involves the redevelopment of an approximately 2.43-acre property located at 746 Acacia Lane (APNs #182-520-050), in the northeast quadrant of the City of Santa Rosa, Sonoma County, California (Study Area; Figure 1). The purpose of the assessment was to gather information necessary to assess if any sensitive habitats that would support rare, threatened, or endangered species are present on the site.

This report describes the results of the site visits, which assessed the Study 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. 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 visit(s).

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”

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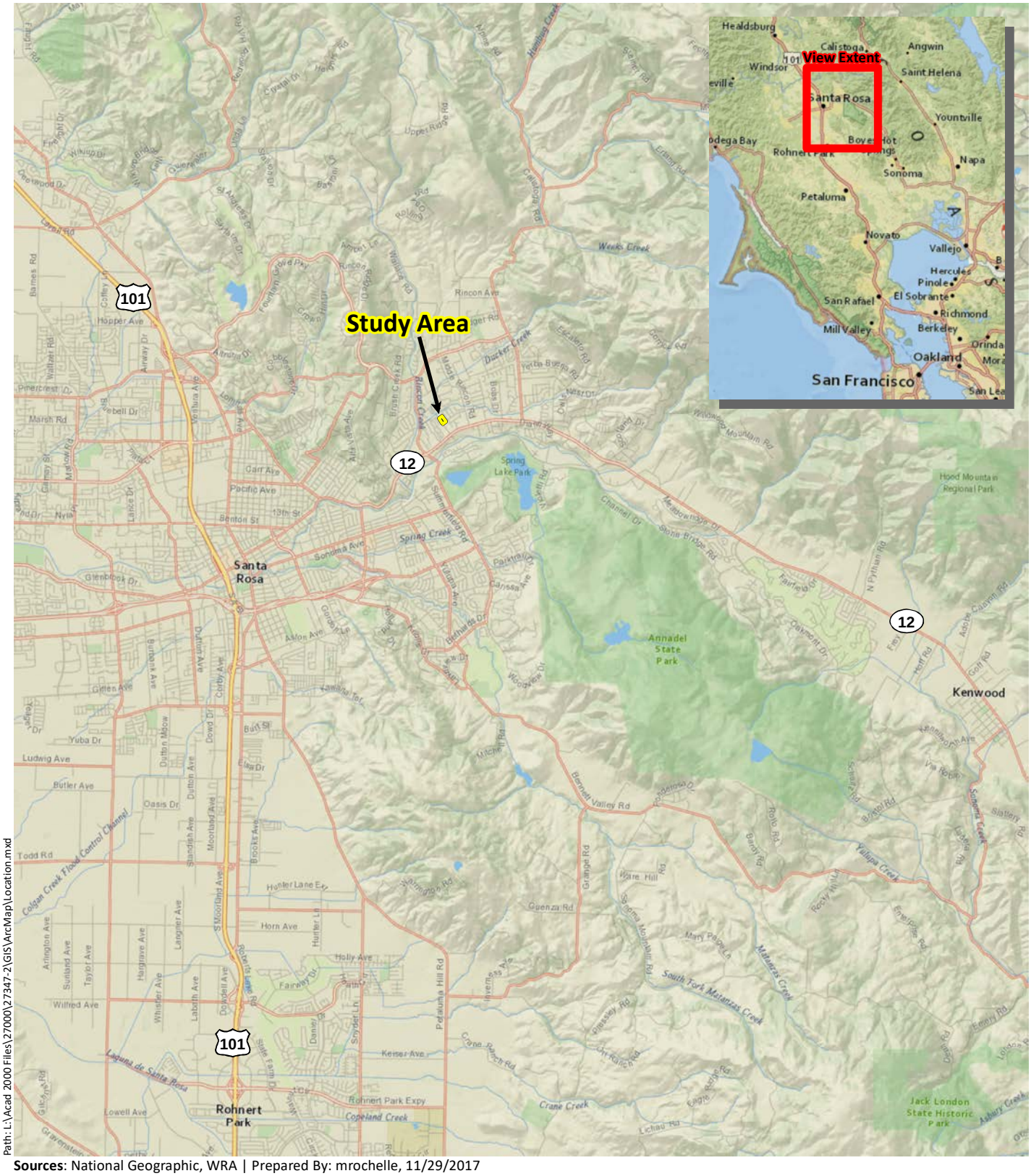

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Sources: National Geographic, WRA | Prepared By: mrochelle, 11/29/2017

Figure 1. Study Area Location

Acacia Lane BRA
Santa Rosa, California

0 1 2 Miles N

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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 2017). In the CNDDB, vegetation alliances are ranked 1 through 5 based on NatureServe's (2016) 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, have baseline legal protections under the federal Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC. Under these laws/codes, deliberately harming or collecting covered species is prohibited, including their active nests (those with eggs, or young).

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

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 "tree" as any woody plant having a single trunk

circumference of 12.5 inches or more, or a diameter of 4 inches or more or a combination of multiple trunks having a total circumference of 25.25 inches or more, or a total diameter of 8 inches or more. The 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 tree including "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.

3.0 METHODS

A WRA biologist conducted a site visit on November 22, 2017. The Study Area was traversed on foot to determine (1) plant communities present within the Study Area, (2) whether existing conditions provide suitable habitat for any special-status plant or wildlife species, and (3) whether sensitive habitats are present. All plant and wildlife species encountered were recorded and are summarized in Appendix A. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2017), 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 Study 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 2017) were examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Study Area. Biological communities present in the Study 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 2017a). 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 Study 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 2017a) were reviewed to assess the potential for sensitive biological communities to occur in the Study Area. All alliances within the Study 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 Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study 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 Study Area:

- CNDDB records (CDFW 2017)
- USFWS Information for Planning and Conservation Report (IPaC; USFWS 2017a)
- National Wetlands Inventory (USFWS 2017b)
- CNPS Rare and Endangered Plant Inventory (CNPS 2017b)

- 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 2017)
- *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 Study 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 Study 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 Study 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 Study Area and the results of the site assessment are provided in the following sections. A list of plant and wildlife species observed is included as Appendix A. The assessment of the potential for special-status plant and wildlife species to occur in the Study Area is provided as Appendix B. Photographs of the Study Area are provided as Appendix C.

4.1 Study Area Description

The Study Area consists of approximately 2.5 acres of a former residential/agricultural parcel. The center portion of the Study Area is developed and contains a vacant single-family residence, outbuildings, and chicken coops, whereas the northern and southern portions of the Study Area are non-native grasslands, which are typically used for pasture. The Study Area is surrounded on all sides by single-family residential development. Historic aerial imagery (Sonoma County 2017, NETR 2017) indicates that the majority of undeveloped portions of the Study Area, supported high density, intensive agricultural (orchard) production from at least 1942 to as recently as 1952.

Topography and Soils

The topography in the Study Area is very flat, with elevations ranging from approximately 246 feet above mean sea level (amsl) in the southeastern corner of the site, to approximately 242 feet amsl in the northwestern corner of the site. SoilWeb (USDA 2017a) indicates that the Study Area contains two native soil types: Positas gravelly loam, 0 to 9 percent slopes; and Pleasanton-Haire complex, 0 to 9 percent slopes. Generally, observed soils within undeveloped portions of the Study Area were native with no suspected areas of imported soil. Soil series that make up the soil mapping units are described below.

Positas Series: The Positas series consists of deep and very deep, moderately well drained gravelly loam soils with a clay subsoil. These soils formed in alluvial material from mixed rock sources. Within Sonoma County, these soils are on river valley terraces, mainly in north-central part of the county along the Russian River in Alexander Valley (CSRL 2017, USDA 1972). In a typical profile, the surface layer is dark brown (7.5YR 3/3) moderately acid gravelly loam, about 11 inches thick. This is underlain by a dark reddish brown (5YR 3/3) slightly acid clay from 11 to 20 inches. This is underlain by various clay, clay loam, and very gravelly sandy clay loam layers to approximately 64 inches depth (CSRL 2017). Positas gravelly loam, 0 to 9 percent slopes is not considered a hydric soil and therefore is not associated with natural wetlands (USDA 2017b).

Pleasanton Series: The Pleasanton series consists of well-drained gravelly loams that have a gravelly clay loam subsoil. They are underlain by alluvium from mixed sedimentary and basic rock sources. These soils are on terraces and fans, and within Sonoma County, they are mainly in the north-central parts of the county along the Russian River and Dry Creek valleys (USDA 1972). In a typical profile, the surface layer is slightly acid to neutral, very dark grayish brown (10YR 3/2) to dark brown gravelly sandy clay loam approximately 21 inches thick. This is underlain by various neutral to slightly alkaline gravelly sandy clay loam, gravelly loam, and gravelly fine sandy loam layers to a depth of 72 inches. Pleasanton-Haire complex, 0 to 9 percent slopes is not considered a hydric soil and therefore is not associated with natural wetlands (USDA 2017b).

Haire Series: The Haire series consists of moderately well-drained clay loams that have a clay

subsoil, and are underlain by old terrace-alluvium from mixed sedimentary and basic rock sources. Within Sonoma County, these soils are on terraces and rolling hills, mainly in the southeastern part of the county near the town of Sonoma, and in scattered areas east and southeast of Healdsburg (USDA 1972). In a typical profile, the surface layer is neutral to slightly acid, very dark grayish brown (10YR 3/2) light clay loam and clay loam approximately 24 inches thick. This is underlain by strongly acid clay and very gravelly clay loam layers to a depth of 72 inches. Pleasanton-Haire complex, 0 to 9 percent slopes is not considered a hydric soil and therefore is not associated with wetlands (USDA 2017b).

Climate and Hydrology

Average annual precipitation for Santa Rosa is 25 inches, with the majority falling as rain in the winter months (December through March). The mean daily high temperatures in degrees Fahrenheit range from 56 in December to 81 in September. The mean daily low temperatures in degrees Fahrenheit range from 42 in December to 53 in September (WRCC 2017). The sole source of hydrology within the Study Area appears to be direct precipitation.

4.2 Biological Communities

Table 2 summarizes the area of each biological community type observed in the Study Area. The Study Area contains two biological communities including non-native grassland and developed/landscaped areas. Descriptions for each biological community are contained in the following sections and depicted in Figure 2.

Table 2. Summary of Biological Communities in the Study Area

Community Type	**Area (acres)**
Non-native grassland	1.79
Developed/landscaped	0.64
Total	**2.43**

4.2.1 Non-Sensitive Biological Communities

Non-Native Grassland

Approximately 1.79 acres of non-native annual grassland was mapped within the Study Area. Holland (1986) describes non-native grassland as a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered, native and non-native annual forbs. Non-native annual grasslands within the Study Area were dominated by a mix of non-native grasses, predominantly soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), and Harding grass (*Phalaris aquatica*), along with Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and slim oat (*Avena barbata*) present in lower densities. Common forbs in the herbaceous layer included Indian teasel (*Dipsacus sativus*), field bindweed (*Convolvulus arvensis*), and bristly ox-tongue (*Helminthotheca echioides*). Individual native and non-native trees such as coast live oak (*Quercus agrifolia*), and callery pear (*Pyrus calleryana*), and small clusters of coyote brush (*Baccharis pilularis* ssp. *consanguinea*) shrubs are also included in this community. Individual native trees within this community, may be large enough to be considered heritage trees per the Santa Rosa Tree Ordinance.

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Sources: 2013 Sonoma Veg Aerial and LiDAR, WRA | Prepared By: mrochelle, 11/29/2017

Figure 2. Biological Communties within the Study Area

Acacia Lane BRA
Santa Rosa, California

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Developed/landscaped

Approximately 0.64 acre of developed/landscaped areas was mapped in the Study Area. Developed/landscaped portions of the Study Area include the previously developed single-family residence, outbuildings, and associated landscaped ornamental trees and shrubs, as well as the chicken coops in the eastern portion of the Study Area. The single-family residence was vacant during the time of the site visit, and the majority of the outbuildings are currently used for storage. Dominant vegetation within the developed/disturbed areas consists of a mixture of ornamental non-native and native planted and volunteer tree and shrub species including London plane (*Platanus* x *acerifolia*), Italian stone pine (*Pinus pinea*), coast redwood (*Sequoia sempervirens*), mulberry (*Morus alba*), and oleander (*Nerium oleander*). Herbaceous species within this community are predominantly non-native grasses and forbs, as well as non-native, invasive Himalayan blackberry (*Rubus armeniacus*). This community contains several native tree species large enough to be considered heritage trees per the Santa Rosa Tree Ordinance. This community contains a roadside ditch along the western portion of the Study Area along Acacia Lane, which also intersects the non-native grassland community. This feature is predominantly co-dominated by a mixture of upland and facultative grasses including soft chess and Italian ryegrass, but also contained occasional scattered hydrophytic plants such as tall cyperus (*Cyperus eragrostis*), and common lippia (*Phyla nodiflora*). This man-made roadside ditch appears to have been dug in uplands for the purpose of draining surrounding uplands, and it did not contain indicators of hydrology, nor did it contain indicators of hydric soils. Thus, the roadside ditch would not be considered a jurisdictional wetland, and is not a sensitive feature.

4.2.2 Sensitive Biological Communities

No wetlands, streams, or other sensitive biological communities are present within the Study Area.

4.3 Special-Status Species

4.3.1 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 90 special-status plant species have been documented from the vicinity of the Study Area; special-status plant species documented from within 5 miles of the site are shown on Figure 3. Of the 90 special-status species known from the region, all are unlikely or have no potential to occur within the Study Area due to one or more of the following factors:

- The previously developed and disturbed nature of the site has diminished local habitat availability for special-status plant species, and likely precludes the species from persisting in the Study Area;
- The species has a very limited range of endemism and has never been observed in the vicinity of the Study Area;
- Vegetation communities commonly associated with the special-status species (e.g. vernal pools, chaparral, marshes and swamps) are absent from the Study Area;
- Specific edaphic characteristics, such as soil derived from serpentine or volcanic, are absent from the Study Area;

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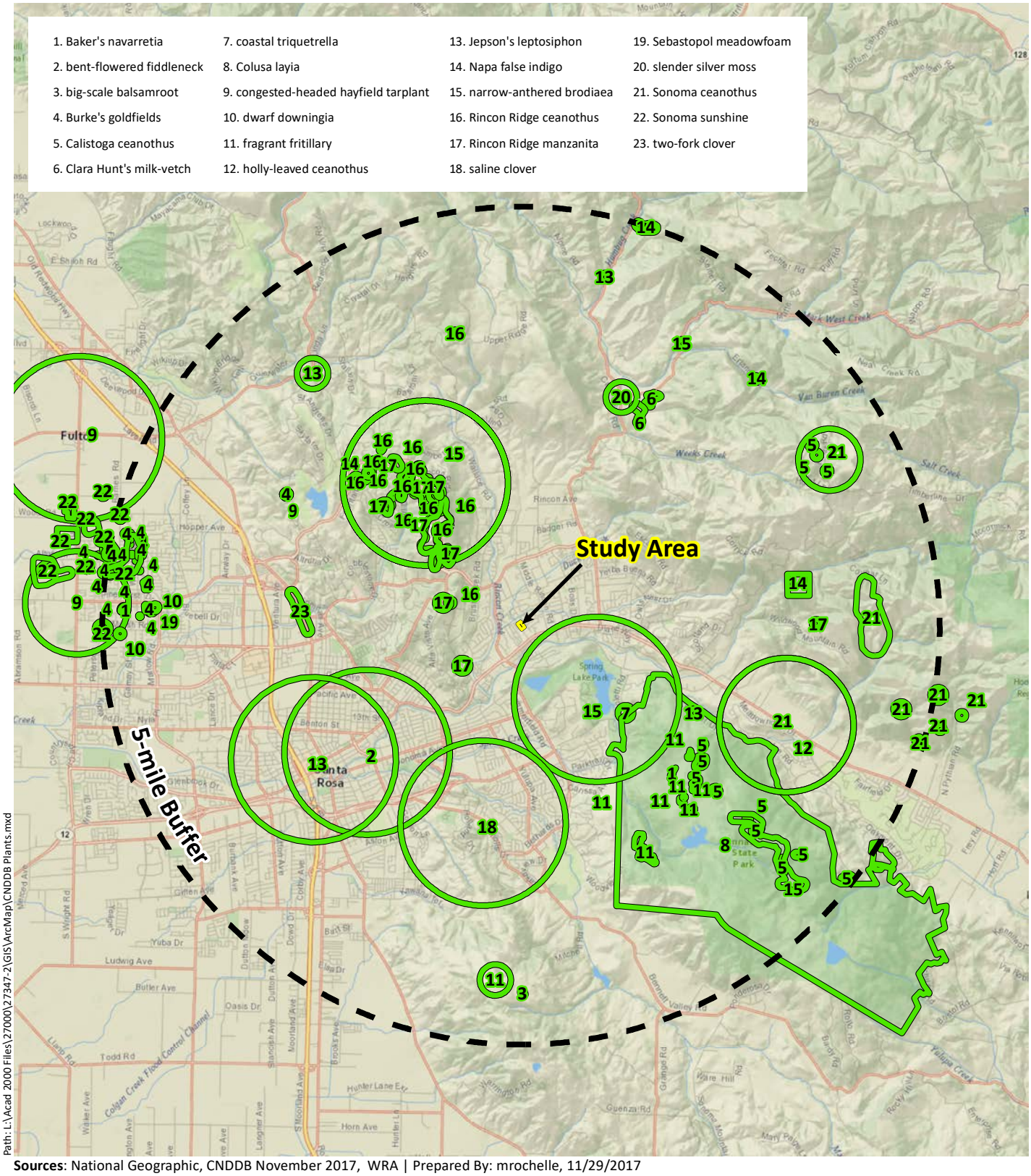

Sources: National Geographic, CNDDB November 2017, WRA | Prepared By: mrochelle, 11/29/2017

Figure 3. Special-Status Plant Species Documented within 5-miles of the Study Area

Acacia Lane BRA
Santa Rosa, California

0 1 2 Miles N

wra ENVIRONMENTAL CONSULTANTS

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- Specific hydrologic characteristics, such as perennial saline, are absent from the Study Area;
- Very unique pH characteristics, such as alkali scalds or acidic bogs and fens, are absent from the Study Area.

4.3.2 Special-Status Wildlife

Based upon a review of the resources and databases listed in Section 3.2.1, it was determined that 42 special-status wildlife species have been documented from within the Cotati, Kenwood, Sebastopol, Calistoga, Glen Ellen, Healdsburg, Mark West Springs, Two Rock, and Santa Rosa USGS 7.5-minute quadrangles. Appendix B summarizes the potential for each of these species to occur in the Study Area. Special-status wildlife species that have been documented in CNDDB within a 5-mile radius of the Study Area are depicted in Figure 4. Of the 42 special-status wildlife documented in the Study Area vicinity, all are unlikely or have no potential to occur within the Study Area due to one or more of the following reasons:

- The urbanized, and developed nature of the Study Area vicinity provides limited habitat, and presents significant barriers to species mobility;
- Aquatic habitats (e.g., rivers/streams, ponds, estuarine waters) necessary to support the special-status wildlife species are not present in the Study Area;
- Vegetation types (e.g., tidal or freshwater marsh, chaparral, oak woodland) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- Vacant buildings within the Study Area do not provide suitable bat roosting substrates, mostly particularly for maternity roosting; the buildings either lack ingress/egress points necessary for access, or are too open and exposed, and do not provide temperature stability necessary for thermoregulation during roosting;
- Structures or vegetative substrates (e.g., emergent wetland/marsh vegetation, tree cavities/snags) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- The Study Area is outside (e.g. north of, west of) of the special-status wildlife species known local range (including nesting/breeding range, for birds).

Non-status wildlife (birds) with baseline legal protections have the potential to nest within the Study Area.

Nesting birds (non-status), High Potential (Present). The Study Area contains vegetation (trees, shrubbery, etc.) that may be used as nesting habitat by bird species with legal baseline protections. These laws/codes apply to a wide variety of native birds, including species that are non-migratory and/or commonly found in Sonoma County.

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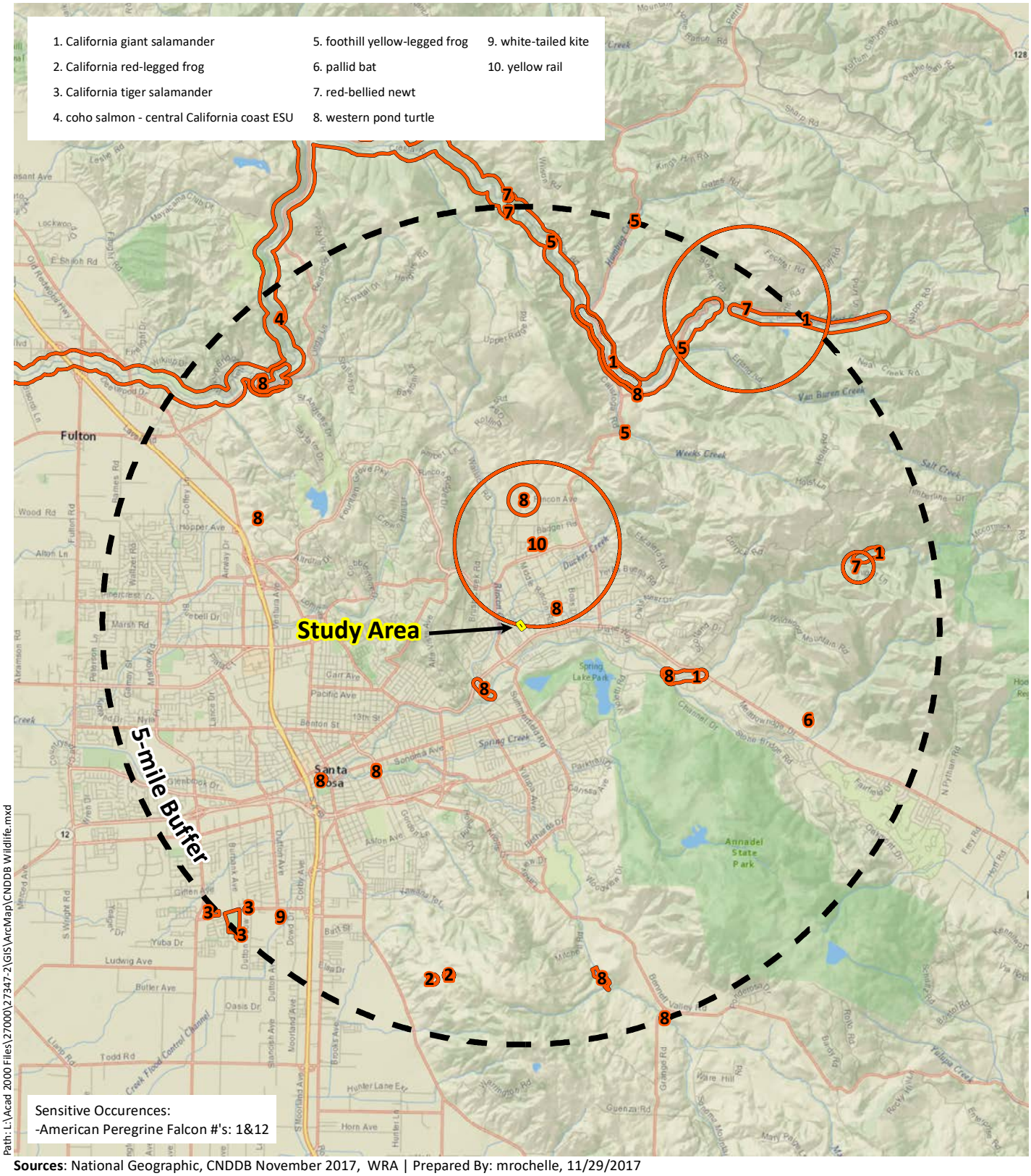

Sources: National Geographic, CNDDB November 2017, WRA | Prepared By: mrochelle, 11/29/2017

Figure 4. Special-Status Wildlife Species Documented within 5-miles of the Study Area

Acacia Lane BRA
Santa Rosa, California

0 1 2 Miles N

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5.0 SUMMARY AND RECOMMENDATIONS

The Study Area contains two vegetative communities: developed/landscaped and non-native grassland, neither of which are considered sensitive biological communities. No wetlands, streams, or riparian areas are present. All special-status plant and wildlife species documented within the vicinity of the Study Area are unlikely or have no potential to occur. No further studies are required or recommended for this site.

Therefore, the proposed residential project will be in compliance with the CEQA Exemption for Infill Development under Section 15332 class 32 that the project site has "no value as habitat for endangered, rare, or threatened species".

The following sections present recommendations for compliance with other laws and regulations.

5.1 Migratory Bird Treaty Act

All birds are protected under the federal Migratory Bird Treaty Act (MBTA) and some of these species have the potential to nest within the Study Area. It is anticipated that the project will be in compliance with the MBTA under the following conditions. No further CEQA action is required with this compliance.

Nesting birds

In order to avoid impacts to nesting birds the initial removal of trees and other vegetation, should be conducted from September 1 to January 31, outside of the nesting bird season.

If work is initiated during the nesting bird season (between February 1 and August 31), the following measures are recommended: (1) a qualified biologist should conduct a nesting bird survey no sooner than 14 days prior to start of work, and if no active nests are found, work may begin and no impacts to birds will result, (2) if active nests are found during the survey, the biologist should establish a protective buffer zone around the nest within which no work will be allowed, and once the young have fledged the nest or the nest becomes inactive (e.g., due to predation), then work may continue within the buffer zone area without restriction.

5.2 Protected and Heritage Trees

The Study Area contains several mature trees, some of which are likely to be considered "heritage" trees per Chapter 17-24, "Trees" of the Santa Rosa City Code (Tree Ordinance). Many of the mature trees on-site are non-native ornamental species including Italian stone pine, London plane, and mulberry, which are not considered heritage trees per the Tree Ordinance, regardless of size.

A tree removal permit may be required for any alteration, removal or relocation of an tree (as defined above) including 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.

6.0 REFERENCES

Baldwin, BG, DH Goldman, DJ Keil, R Patterson, TJ Rosatti, and DH Wilken (eds.). 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley, CA.

Best, C, JT Howell, W Knight, I Knight, and M Wells. 1996. A Flora of Sonoma County: Manual of the Flowering Plants and Ferns of Sonoma County, California. CNPS.

City of Santa Rosa. 2017. Chapter 17-24, Trees (Tree Ordinance, Ord. 2858 § 1, 1990). Online at: http://ci.santa-rosa.ca.us/departments/cityadmin/cityclerk/Pages/CityCode.aspx; most recently accessed: November 2017.

[CDFW] California Department of Fish and Wildlife. 2017. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch, Sacramento, CA. Accessed: November 2017.

[CNPS] California Native Plant Society. 2017a. A Manual of California Vegetation, Online Edition. Sacramento, California. Online at: http://vegetation.cnps.org/; most recently accessed: November 2017.

[CNPS] California Native Plant Society. 2017b. Inventory of Rare and Endangered Plants (online edition, v8-02). Sacramento, California. Online at: http://rareplants.cnps.org/; most recently accessed: November 2017.

[CSRL] California Soil Resources Lab. 2017. Online Soil Survey. Available at: http://casoilresource.lawr.ucdavis.edu/drupal/; most recently accessed: November 2017.

[CCH] Consortium of California Herbaria. 2017. Data provided by the participants of the Consortium of California Herbaria. Available at: http://ucjeps.berkeley.edu/consortium; most recently accessed: November 2017.

[Corps] U.S. Army Corps of Engineers (Corps). 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. May 2008.

[Corps] U.S. Army Corps of Engineers (Corps). 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OWHM) in the Arid West Region of the Western United States. August 2008.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Department of the Army, Waterways Experiment Station, Vicksburg, Mississippi 39180-0631.

Google Earth. 2017. Aerial Imagery 1993-2017. Most recently accessed: November 2017.

Holland, RF. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Prepared for the California Department of Fish and Game, Sacramento, CA.

Jennings, MR. 2004. An Annotated Check List of Amphibians and Reptile Species of California and Adjacent Waters, third revised edition. California Department of Fish and Game, Sacramento, CA.

Jepson Flora Project (eds.). 2017. Jepson eFlora. Online at: http://ucjeps.berkeley.edu/IJM.html; most recently accessed November 2017.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

Lowther, Peter E. 2000. Nuttall's Woodpecker (Picoides nuttallii), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online:http://bna.birds.cornell.edu/bna/species/555; most recently accessed November 2017.

Madrone Audubon Society. 1995. Sonoma County Breeding Bird Atlas. Madrone Audubon Society. Sonoma County, CA.

Mitchell, D.E. 2000. Allen's Hummingbird (Selasphorus sasin), The Birds of North America Online (A Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/501; most recently accessed November 2017.

[NETR] Nationwide Environmental Title Research. 2017. Historic Aerials. Available online at: http://www.historicaerials.com/; most recently accessed: November 2017.

NatureServe. 2017. NatureServe Conservation Status. Available online at: http://explorer.natureserve.org/ranking.htm; most recently accessed November 2017.

Philpott, W. L. 1996 (Year Approximate). Natural Histories of California Bats. U.S. Forest Service, 17 pages.

Pierson, ED and WE Rainey. 1998. Distribution, Status and Management of Townsend's Big-eared Bat (Corynorhinus townsendii) in California. Department of Fish and Game. BMCP Technical Report Number 96-7.

Sawyer, JO, T Keeler-Wolf, and JM Evens. 2009. A Manual of California Vegetation, 2nd Edition. California Native Plant Society in collaboration with California Department of Fish and Game. Sacramento, CA.

Shuford, WD, and T Gardali (eds). 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, CA and CDFG, Sacramento, CA.

Stebbins, RC. 2003. A Field Guide to Western Reptiles and Amphibians, third edition. The Peterson Field Guide Series, Houghton Mifflin Company, NY.

Sonoma County. 2017. 1942 Aerials – Central Sonoma County. Agricultural Preservation and Open Space District. Available online at: http://sonomaopenspace.maps.arcgis.com/home/index.html; most recently accessed November 2017.

Thomson, R.C., Wright, A.N., Shaffer, H.B. 2016. California Amphibian and Reptile Species of Special Concern. University of California Press and California Department of Fish and Wildlife. California.

[USDA] U.S. Department of Agriculture, Soil Conservation Service. 1972. Soil Survey of Sonoma County, California. In cooperation with the University of California Agricultural Experiment Station.

[USDA] U.S. Department of Agriculture, Natural Resources Conservation Service. 2017a. Web Soil Survey. Online at http://websoilsurvey.nrcs.usda.gov; most recently accessed November 2017.

[USDA] United States Department of Agriculture. 2017b. National List of Hydric Soils. Natural Resources Conservation Service. December. Available online at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/; most recently accessed November 2017.

[USFWS] United States Fish and Wildlife. 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants.

[USFWS] United States Fish and Wildlife Service. 2017a. Information for Planning and Conservation Report (iPAC), Sacramento Fish and Wildlife Office. Available online at: http://www.fws.gov/sacramento; most recently accessed: November 2017.

[USFWS] U.S. Fish and Wildlife Service. 2017b. National Wetlands Inventory website. U.S. Department of the Interior, Washington, D.C. Online at: http://www.fws.gov/nwi/; most recently accessed November 2017.

[WBWG] Western Bat Working Group. 2017. Species Accounts. Available online at: http://wbwg.org/western-bat-species/; most recently accessed November 2017.

Western Regional Climate Center (WRCC). 2017. www.wrcc.dri.edu; most recently accessed: November 2017.

APPENDIX A

LIST OF OBSERVED PLANT AND WILDLIFE SPECIES

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Appendix A-1. Plant Species Observed in the Study Area on November 22, 2017.

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Apiaceae	*Foeniculum vulgare*	Fennel	non-native (invasive)	perennial herb	-	High
Apocynaceae	*Nerium oleander*	Oleander	non-native (invasive)	tree	-	-
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	Coyote brush	native	shrub	-	-
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	non-native (invasive)	annual herb	-	Moderate
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	*Lactuca serriola*	Prickly lettuce	non-native (invasive)	annual herb	-	-
Asteraceae	*Taraxacum officinale*	Red seeded dandelion	non-native (invasive)	perennial herb	-	-
Cactaceae	*Opuntia ficus-indica*	Tuna	non-native	shrub (stem succulent)	-	-
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	non-native (invasive)	perennial herb, vine	-	-
Cupressaceae	*Calocedrus decurrens*	Incense cedar	native	tree	-	-
Cupressaceae	*Cedrus deodara*	Deodar cedar	non-native	tree	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Cupressaceae	*Sequoia sempervirens*	Coast redwood	native	tree	-	-
Cyperaceae	*Cyperus eragrostis*	Tall cyperus	native	perennial grasslike herb	-	-
Dipsacaceae	*Dipsacus sativus*	Indian teasel	non-native (invasive)	biennial herb	-	Moderate
Fabaceae	*Vicia* sp.	Vetch	non-native	annual herb	-	-
Fagaceae	*Quercus agrifolia*	Coast live oak	native	tree	-	-
Fagaceae	*Quercus lobata*	Valley oak	native	tree	-	-
Geraniaceae	*Erodium botrys*	Big heron bill	non-native (invasive)	annual herb	-	-
Geraniaceae	*Erodium cicutarium*	Coastal heron's bill	non-native (invasive)	annual herb	-	Limited
Geraniaceae	*Geranium molle*	Crane's bill geranium	non-native (invasive)	annual, perennial herb	-	-
Malvaceae	*Malva* sp.	Mallow	non-native	annual, perennial herb	-	-
Moraceae	*Morus alba*	Mulberry	non-native	tree	-	-
Myrtaceae	*Eucalyptus globulus*	Blue gum	non-native (invasive)	tree	-	Limited

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Oleaceae	*Fraxinus velutina* 'Modesto'	Modesto ash	non-native	tree	-	-
Oleaceae	*Ligustrum lucidum*	Glossy privet	non-native (invasive)	tree, shrub	-	-
Pinaceae	*Pinus pinea*	Italian stone pine	non-native	tree	-	-
Plantaginaceae	*Kickxia elatine*	Sharp point fluellin	non-native	perennial herb	-	-
Plantaginaceae	*Plantago lanceolata*	Ribwort	non-native (invasive)	perennial herb	-	Limited
Platanaceae	*Platanus × acerifolia*	London plane	non-native	tree	-	-
Poaceae	*Avena barbata*	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate
Poaceae	*Bromus hordeaceus*	Soft chess	non-native (invasive)	annual grass	-	Limited
Poaceae	*Festuca perennis*	Italian rye grass	non-native	annual, perennial grass	-	-
Poaceae	*Hordeum murinum*	Foxtail barley	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Phalaris aquatica*	Harding grass	non-native (invasive)	perennial grass	-	Moderate
Polygonaceae	*Rumex crispus*	Curly dock	non-native (invasive)	perennial herb	-	Limited

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Polygonaceae	*Rumex pulcher*	Fiddleleaf dock	non-native	perennial herb	-	-
Rosaceae	*Prunus cerasifera*	Cherry plum	non-native (invasive)	tree	-	Limited
Rosaceae	*Pyracantha angustifolia*	Firethorn	non-native (invasive)	shrub	-	-
Rosaceae	*Pyrus calleryna*	Callery pear	non-native	tree	-	-
Rosaceae	*Rosa* sp.	Rose	non-native	shrub	-	-
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	non-native (invasive)	shrub	-	High
Verbenaceae	*Phyla nodiflora*	Common lippia	native	perennial herb	-	-

All species identified using the *Jepson Manual II: Vascular Plants of California* (Baldwin et al. 2012), *A Sonoma County Flora* (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 2017b)

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 A-2. Wildlife Species Observed in the Study Area on November 22, 2017

Common Name (status if applicable)	**Species**
BIRDS	
Common raven	*Corvus corax*
Northern mockingbird	*Mimus polyglottos*

APPENDIX B

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

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Appendix B. 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 Study 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 (USFWS) Information for Planning and Consultation (IPaC) species lists.

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 Study 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.	**No Potential.** The Study Area lacks marshes and swamps known to 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.	**No Potential.** The Study Area lacks suitable habitat for this species.	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, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native annual forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area. There is only one historic occurrence of this species within the Study Area vicinity from 1940 (CDFW 2017).	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 Study Area lacks suitable habitat for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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 Study Area lacks chaparral and rhyolitic substrate known to support this species.	No further recommendations for this species.
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 Study Area lacks gravelly soils derived from serpentine or volcanic substrate.	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 Study Area lacks serpentine or volcanic substrates known to support this species	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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.	**No Potential.** The Study Area lacks chaparral, cismontane woodland and serpentine substrates associated with this species.	No further recommendations for this species.
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.	**No Potential.** The Study Area lacks vernal pools known to support this species, and is outside of the known range of the 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 Study Area lacks gravelly soils composed of volcanics.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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.	**No Potential.** The Study Area lacks the biological communities associated with this species. This species is more closely associated with coastal environments (Jepson eFlora 2017).	No further recommendations for this species.
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 Study Area lacks coastal scrub, 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 Study Area lacks serpentine substrate known to support this species.	No further recommendations for this species.
Brewer's calandrinia *Calandrinia breweri*	Rank 4.2	Chaparral, coastal scrub on sandy or loamy soil; disturbed sites and burns. Elevation ranges from 30 to 3660 feet (10-1220 meters). Blooms January-June	**No Potential.** The Study Area does not contain chaparral or coastal scrub and is not recently burned.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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.	**Unlikely.** Despite potentially suitable grassland habitat, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native perennial forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	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 Study Area lacks serpentine substrates known to support this species.	No further recommendations for this species.
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 Study Area lacks the biological communities associated with this species. This species is more closely associated with coastal environments (Jepson eFlora 2017).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native annual forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	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 Study Area lacks marshes and swamps known to support this species. This species was only known from Pitkin Marsh in Sebastapol, and is now presumed extinct (CNPS 2016b).	No further recommendations for this species.
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 Study Area lacks the vegetation communities and substrates known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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 Study Area lacks chaparral habitat.	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 Study 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 Study Area lacks chaparral and woodland habitats and volcanic substrates.	No further recommendations for this species.
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 Study Area lacks chaparral and substrates known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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 Study 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 Study Area lacks the vegetation communities and serpentine soils associated with this species.	No further recommendations for this species.
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 Study 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 2016b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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 Study 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 Study Area lacks marsh habitat.	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 Study Area lacks the vegetation communities associated with 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.	**No Potential.** The Study Area lacks the associated vegetation communities and decomposed shale substrates.	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 Study 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.	**No Potential.** The Study 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 Study Area lacks the vegetation communities 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 Study 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 Study Area lacks acidic soils and associated vegetation communities known to support this species.	No further recommendations for this species.
Loch Lomond button celery *Eryngium constancei*	FE, SE, Rank 1B.1,	Vernal pools. Elevation ranges from 1380 to 2565 feet. Blooms April-June	**No Potential.** The Study Area lacks vernal pools known to support this species.	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, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native perennial forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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 Study Area lacks large intact marshes and swamps, or vernal pools associated with this species.	No further recommendations for this species.
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.	**Unlikely.** Despite potentially suitable grassland habitat, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native annual forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study Area lacks vernal pools associated with this species.	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).	**No Potential.** The Study Area lacks sandy soils associated with this species.	No further recommendations for this species.
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.	**No Potential.** The Study Area wetlands associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete native perennial forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	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.	**No Potential.** The Study Area lacks wetlands and vernal pools known to support this species and is outside of the known range of the species.	No further recommendations for this species.
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.** The Study Area lacks the vegetation communities associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study Area lacks vernal pools and alkaline substrates associated with this species.	No further recommendations for this species.
Colusa layia *Layia septentrionalis*	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 Study 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 Study Area lacks vernal pools associated with this species.	No further recommendations for this species.
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.	**No Potential.** The Study Area lacks shallow rocky soils and sparsely vegetated areas known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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 Study 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 Study Area lacks large intact marsh habitat and sandy soils associated with this species.	No further recommendations for this species.
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 Study Area lacks the vegetation communities associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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.	**No Potential.** The Study Area lacks seasonal wetlands and vernal pools associated with this species and is outside of the documented range of the 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 Study Area lacks the vegetation communities and serpentine substrate known to support this species.	No further recommendations for this species.
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 Study 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.	**No Potential.** The Study Area lacks rocky substrates known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native annual forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	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 Study Area lacks the vegetation communities associated with this species.	No further recommendations for this species.
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.	**No Potential.** The Study Area lacks adobe clay soils associated with this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
Tehama navarretia *Navarretia heterandra*	Rank 4.3	Vernal pools, valley and foothill grasslands (mesic). Elevations range from 90 to 3030 feet. Blooms April-June	**No Potential.** The Study Area lacks vernal pools and seasonal wetlands associated with 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 Study Area lacks vernal pools and alkaline soils associated with this species (CDFW 2017).	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 Study 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 Study 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, grasslands within the Study Area are relatively disturbed and dominated by non-native annual grasses that tend to outcompete small native annual forbs such as this species. The Study Area is also completely surrounded by residential development, likely eliminating potential seed sources from the vicinity of the Study Area.	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 2016b)	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.	**No Potential.** The Study Area lacks forested habitats and wetlands known to support this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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.	**No Potential.** The Study Area lacks forested habitats and wetlands known to support this species.	No further recommendations for this species.
Napa blue grass *Poa napensis*	Rank 1B.1	Meadows and seeps, valley and foothill grasslands; alkaline, near thermal springs. Elevations range from 300 to 600 feet. Blooms May-Aug.	**No Potential.** This species is known only from thermal springs in the Calistoga areas.	No further recommendations for this species.
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 Study Area lacks oligotrophic wetlands. This species is presumed extinct.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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 Study 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.	**No Potential.** The Study Area lacks 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.	**No Potential.** The Study Area lacks bogs, marshes, and swamps associated with this species.	No further recommendations for this species.
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.	**No Potential.** The Study Area lacks bogs, marshes, and swamps associated with this species..	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS***
Plants				
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.	**No Potential.** The Study Area lacks bogs, marshes, and swamps 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.	**No Potential.** The Study Area lacks 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 Study 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.	**No Potential.** The Study 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 Study Area, grasslands within the Study Area are relatively disturbed. This species is only known from one natural extant occurrence in Marin County (CNPS 2016b, 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 Study 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 Study 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 Study 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.** The Study Area lacks the vegetation communities associated with this species.	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.	**Unlikely.** Buildings within the Study Area which could provide habitat for this species are not suitable to support bat roosting. The vacant single-family residence lacks ingress and egress points necessary for access and the various outbuildings on-site are too open and have metal roofs which do not provide stable temperatures necessary to support thermoregulation while roosting.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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.	**Unlikely.** Buildings within the Study Area which could provide habitat for this species are not suitable to support bat roosting. The vacant single-family residence lacks ingress and egress points necessary for access and the various outbuildings on-site are too open and have metal roofs which do not provide stable temperatures necessary to support thermoregulation while roosting.	No further recommendations for this species.
hoary bat *Lasiurus cinereus*	WBWG: High 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.	**No Potential.** The Study Area does not provide typical forested roosting habitat, is too small for the foraging requirements for this species, and does not contain a water source.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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.	**Unlikely.** Buildings within the Study Area which could provide habitat for this species are not suitable to support bat roosting. The vacant single-family residence lacks ingress and egress points necessary for access and the various outbuildings on-site are too open and have metal roofs which do not provide stable temperatures necessary to support thermoregulation while roosting.	No further recommendations for this species.
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.	**Unlikely.** Buildings within the Study Area which could provide habitat for this species are not suitable to support bat roosting. The vacant single-family residence lacks ingress and egress points necessary for access and the various outbuildings on-site are too open and have metal roofs which do not provide stable temperatures necessary to support thermoregulation while roosting.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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.	**Unlikely.** The Study Area does not contain tree species and types to support maternity roosts. Additionally, Study Area does not contain suitable water sources typically used by this species.	No further recommendations for this species.
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.	**Unlikely.** Buildings within the Study Area which could provide habitat for this species are not suitable to support bat roosting. The vacant single-family residence lacks ingress and egress points necessary for access and the various outbuildings on-site are too open and have metal roofs which do not provide stable temperatures necessary to support thermoregulation while roosting.	No further recommendations for this species.

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.	**Unlikely.** The Study Area is surrounded by residential development on all sides, and is not contiguous with typical open grassland inhabited by this species for dens and foraging. No potential burrows were observed. The nearest documented occurrence is approximately 6 miles west of the Study Area, and the area in between the Study Area and the nearest documented occurrence is completely urbanized.	No further surveys or mitigation measures are recommended.
Birds				
ferruginous hawk *Buteo regalis*	BCC	Winter visitor to open habitats, including grasslands, sagebrush flats, scrub, and low foothills surrounding valleys. Preys on mammals. Does not breed in California.	**Unlikely.** The Study Area is outside of the breeding range of this species, and the Study Area is completely surrounded by residential development which limits potential foraging availability.	No further recommendations for this species.
golden eagle *Aquila chrysaetos*	CFP, BCC	Found in rolling foothills with open grasslands, scattered trees, and cliff-walled canyons.	**Unlikely.** Typical nesting trees are not present within the Study Area or vicinity. The Study Area is completely surrounded by residential development which limits potential foraging availability.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
bald eagle *Haliaeetus leucocephalus*	FD, SE, CFP, BCC	Occurs year-round in California, but primarily a winter visitor. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely.** This species is unlikely to forage within the Study Area and is unlikely to nest as there are not trees large enough to accommodate a nest.	No further recommendations for this species.
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.	**Unlikely.** This species may occasionally forage within the Study Area. However, habitat quality is greatly diminished as a result of surrounding residential development. Few trees within Study Area to support potential nesting.	No further recommendations for this species.
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.	**Unlikely.** This species may occasionally forage within the Study Area. However, habitat quality is greatly diminished as a result of surrounding residential development. The Study Area lacks nesting habitat for this species. No cliff, ledge, or high-rise buildings are present.	No further recommendations for this species.
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 Study Area and vicinity do not contain forested or riparian habitat necessary for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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 Study Area, but the Study Area lacks small mammal burrows essential for nesting and common in foraging habitat. This species is extremely rare in Sonoma County.	No further recommendations for this species.
northern spotted owl *Strix occidentalis caurina*	FT, ST, SSC	Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	**No Potential.** The Study Area and vicinity do not contain old growth coniferous forest.	No further recommendations for this species.
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 Study Area and vicinity lack cliff or waterfall habitat for this species.	No further recommendations for this species.
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 Study Area lacks the aquatic habitat preferred by this species. No snags or trees with suitable hollows typically used by this species are present within the Study Area.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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.	**Unlikely.** Trees present within the Study Area provide potential nesting habitat. However, the Study Area is primarily grassland with little foraging potential for this species. Typical nectar-producing flowers that provide foraging for this species are not present.	No further recommendations for this species.
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 Study Area does not contain sufficient forested or aquatic habitat necessary for this species.	No further recommendations for this species.
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 Study Area does not contain forested or riparian habitat necessary for this species.	No further recommendations for this species.
yellow-breasted chat *Icteria virens*	SSC	Breeds in riparian thickets and woodlands, particularly those dominated by willows and cottonwoods.	**No Potential.** The Study Area does not contain forested or riparian habitat necessary for this species.	No further recommendations for this species.
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 Study Area does not contain native grasslands. This species is more common in the coastal hills and dry interior hills.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
oak titmouse *Baeolophus inornatus*	BCC	Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.	**Unlikely.** The Study Area does not contain oak woodland or savannah habitat. Native oaks within the Study Area are small, and are unlikely to support nesting of this species.	No further recommendations for this species.
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.	**No Potential.** The study area lacks marsh habitat known to support this species.	No further recommendations for this species.
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 oak woodland is present to support nesting of the species within the Study Area. The species is also an extremely rare breeder in Sonoma County.	No further recommendations for this species.
bank swallow *Riparia riparia*	ST; SSC	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 riparian or other aquatic habitat necessary for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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.	**Unlikely.** The Study Area lacks typical oak woodland and riparian woodland habitat associated with this species, and lacks tree cavities necessary to support this species.	No further recommendations for this species.
least bittern *Ixobrychus exilis*	SSC, BCC	Summer resident in portions of the Central Valley and southern California. Typically breeds in deeper freshwater marshes with dense emergent and woody vegetation.	**No Potential.** The Study Area does not contain suitable breeding or nesting habitat for the species.	No further recommendations for this species.
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.	**No Potential.** The Study Area does not contain aquatic habitat such as deep ponds or creeks to support the species.	No further recommendations for this species.
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 Study Area does not contain forested or aquatic habitat necessary for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
California tiger salamander *Ambystoma californiense*	FE, ST	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.	**No Potential.** The Study Area does not contain aquatic breeding habitat or burrows necessary to support aestivation. The Study Area is outside of the documented range of this species within Sonoma County.	No further recommendations for this species.
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 Study Area does not contain forested or aquatic habitat for this species.	No further recommendations for this species.
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 Study Area. The Study Area vicinity is highly urbanized which limits potential movement of this species into the Study Area.	No further recommendations for this species.
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.	**No Potential.** No stream habitat is present within the Study Area. The Study Area vicinity is highly urbanized which limits potential movement of this species into the Study Area.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Fish				
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 streams, rivers or other perennial waters to support this species.	No further surveys or mitigation measures are recommended.
coho salmon - Central California Coast ESU *Oncorhynchus kisutch*	FE, SE	State listing is limited to Coho south of San Francisco Bay. The Federal listing is limited to naturally spawning populations in streams between Punta Gorda, Humboldt County and the San Lorenzo River, Santa Cruz County. Spawns in coastal streams at temperatures from 4-14C. Prefer beds of loose, silt-free, coarse gravel and cover nearby for adults.	**No Potential.** The Study Area does not contain streams, rivers or drainages to support this species.	No further surveys or mitigation measures are recommended.
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 streams, rivers drainages to support this species.	No further surveys or mitigation measures are recommended.
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 streams, rivers or other perennial waters to support this species.	No further surveys or mitigation measures are recommended.
Invertebrates				
western bumblebee *Bombus occidentalis*	SSI	Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g. mammal burrows). Many plant species are visited and pollinated.	**Unlikely.** No small mammal burrows are present within the Study Area. This species may forage in the Study Area on occasion.	No further surveys or mitigation measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
WILDLIFE				
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.	**No Potential.** The Study Area does not contain streams, rivers or other perennial waters to support this species.	No further surveys or mitigation measures are recommended.

*** 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.

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APPENDIX C

SITE PHOTOGRAPHS

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Photograph 1. Photograph depicting developed/landscaped area including the vacant single-family residence and associated ornamental trees.

Photograph 2. Photograph depicting non-native grassland dominated by soft chess (*Bromus hordeaceus*), and Italian ryegrass (*Festuca perennis*).

Photograph 3. Photograph depicting chicken coops in the eastern portion of the Study Area in the developed/landscaped area.

Photograph 4. Photograph depicting roadside ditch along Acacia Lane. This feature contained only sparse hydrophytic vegetation and lacked indicators of hydrology and hydric soils. This man-made ditch does not constitute a jurisdictional wetland and is not considered sensitive.