APPENDIX 4.2

Biological Resources Assessment

Biological Resources Assessment

GREEN VALLEY II FAIRFIELD PROJECT (APNs: 0148-540-270, 0148-540-300)
FAIRFIELD, SOLANO COUNTY, CALIFORNIA

Prepared For:

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March 2019

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LIST OF ACRONYMS

BRA	Biological Resource Assessment
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CRLF	California red-legged frog
CTS	California tiger salamander
CWA	Clean Water Act
Corps	U.S. Army Corps of Engineers
EACCS	East Alameda County Conservation Strategy
EPA	Environmental Protection Agency
ESA	Endangered Species Act
LFS	longhorn fairy shrimp
MBTA	Migratory Bird Treaty Act
NWI	National Wetland Inventory
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
VPFS	vernal pool fairy shrimp
WBWG	Western Bat Working Group
WRA	WRA, Inc.

1.0 INTRODUCTION

WRA, Inc. (WRA) prepared this biological resource assessment (BRA) report on behalf of the Spanos Corporation for the proposed Green Valley II Fairfield Project (Project). The approximately 13-acre Project Area (APNs: 0148-540-270, 0148-540-300) is located at a vacant property at the intersection of Business Center Drive and Lincoln Highway in the City of Fairfield, Solano County, California (Figure 1). This assessment is based on a site visit conducted on February 12, 2018, and published information.

The purpose of this assessment is to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) and to support the regulatory permit application process. This report describes the results of the site visit and review of existing information in order to assess the Project Area and immediately adjacent areas for: (1) the potential to support special-status plant and wildlife 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. This report also identifies impacts to biological resources that would occur as a result of the Project and recommends mitigation measures for potentially significant impacts under CEQA.

The development project will encompass most of the 13-acre site. This assessment is based on information available at the time of the study and on-site conditions as observed during the various surveys performed in the Project Area. The habitat and species information assembled for the Project Area at the time of this writing and presented herein is considered suitable for an evaluation of the Project's biological resources impacts under CEQA; however, additional protocol-level plant and wildlife surveys for certain species may ultimately be necessary to obtain permits or other regulatory approvals from state and federal regulatory agencies prior to Project development.

1.1 Project Area Description

The Project Area consists of approximately 13 acres of disturbed, disced and mowed land located in the northeastern portion of the Cordelia United States Geologic Survey (USGS) 7.5-minute Quadrangle map (USGS 2015b). The Project Area is within a mixed urban and rural setting, bordered to the north by Business Center Drive, commercial office buildings, and open space, to the east by Lincoln Highway and open space, to the south by open space, and to the west by Business Center Drive and commercial buildings. Historical imagery (Google Earth 2018) shows no evidence of previous development activities, including grading and road development, on the Project Area after 1993. Elevations range from approximately 19 to 32 feet National Geodetic Vertical Datum. The Project Area consists of disturbed, ruderal habitat dominated by a variety of non-native grasses and weeds, with a low diversity of native forbs.

1.2 Proposed Land Uses

The Project will develop a mixed-use residential and recreational complex on the entirety of the 13-acre parcel. Project elements include paved parking lots, apartment buildings, club house, dog park, picnic/recreation lawns, and water quality swales or basins. Development activities would include vegetation removal and grading throughout the site. See Figure 2 for Project design plans.

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Sources: National Geographic, WRA | Prepared By: smortensen, 2/23/2018

Figure 1. Project Area Location

Spanos Green Valley
Biological Resource Assessment
Fairfield, Solano, County, California

0 1 2 Miles

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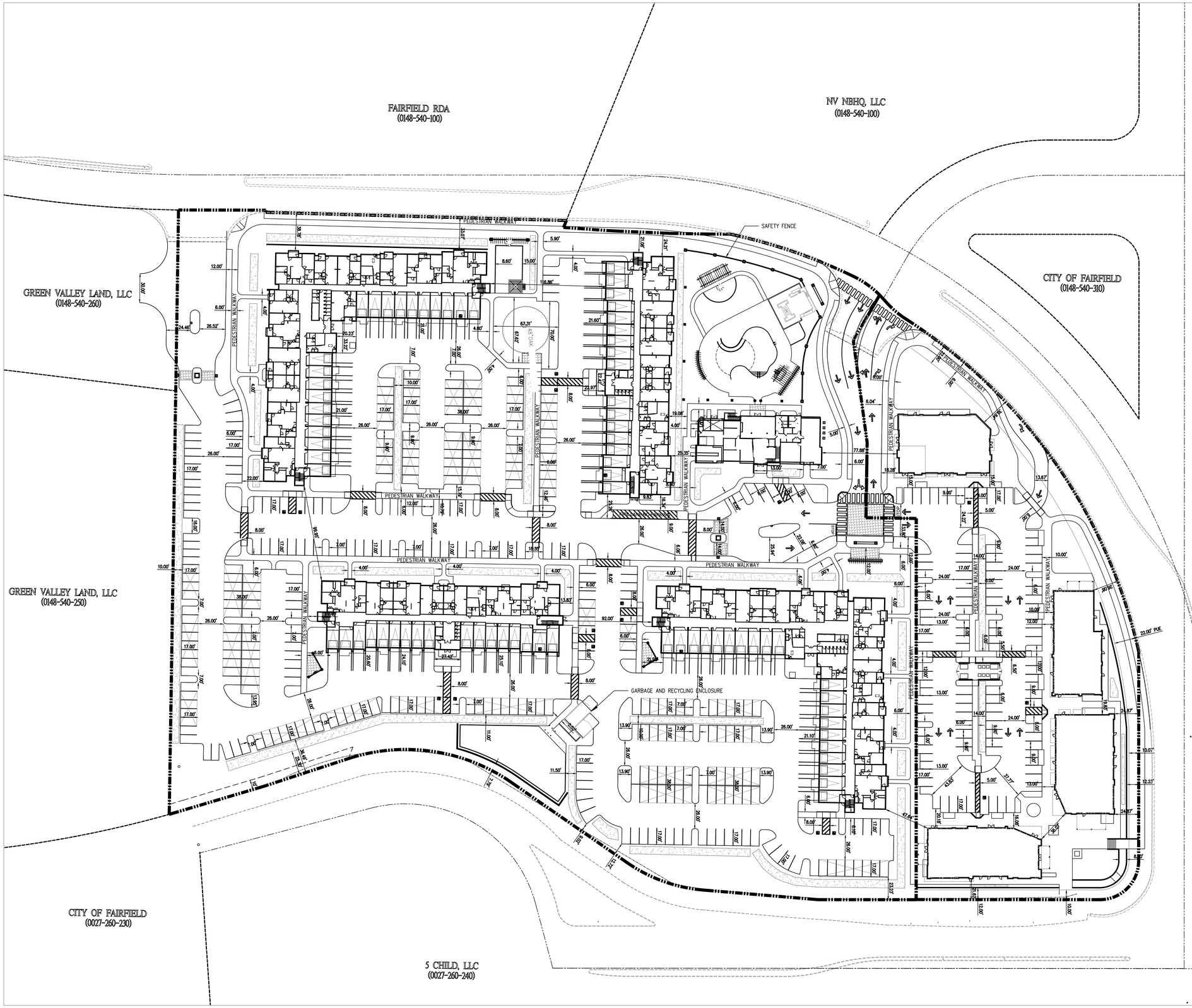
Preliminary Site Plan



LEGEND:

- COVERED PARKING STALLS
- ACCESSIBLE PARKING STALL
- C — COMPACT PARKING STALL
- BIORETENTION AREA
- PROPERTY LINE
- FENCE

PROJECT SUMMARY

SITE AREA	
GROSS:	13.34 ACRES
GENERAL PLAN DESIGNATION	MU (MIXED-USE)
BUILDING AREA:	114,357 SF (GROSS)
LOT COVERAGE:	19.68%

LAND USE SUMMARY:

MULTI-FAMILY :	
4 BUILDINGS:	268 UNITS
RETAIL SPACE :	
4 BUILDINGS:	4 UNITS
TOTAL	272 UNITS

PARKING BREAK DOWN FOR RETAIL AREA

83	STANDARD SP
27	COMPACT SP
3	ACCESSIBLE SP
113	TOTAL RETAIL PARKING
5 PER 1000 SF	OVERALL PARKING RATIO
1 PER 25 SP	BICYCLE STORAGE RATIO

PARKING BREAK DOWN FOR RESIDENTIAL AREA

196	RESIDENT CARPORT COVERED
70	RESIDENT GARAGE
74	RESIDENT DRIVEWAY
134	VISITOR
32	VISITOR COMPACT
4	RESIDENT HC SUPPORT
4	RESIDENT HC GARAGE
9	VISITOR HC
523	TOTAL RESIDENTIAL PARKING
1.95/UNIT	OVERALL PARKING RATIO

Figure 2. Preliminary Site Plan for the Green Valley Project site.

NORTH

0 40 80 120 feet

SCALE: 1" = 40'

GREEN VALLEY MIXED USE

Fairfield, California

Proposed By: **The Spanos Corporation**
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In Association With: **Kephart Architecture (Residential), Phillippi Engineering (Civil), SGPA (Retail), and Omni-Means, Ltd. (Landscape Architecture)**

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2.0 REGULATORY BACKGROUND

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 CWA; state regulations such as the Porter-Cologne Act, Section 1600-1616 of the CFGC, CEQA; Habitat Conservation Plans (HCPs) or local ordinances or policies such as city or county tree ordinances, and General Plan Elements.

2.1.1 Waters of the United States

The Corps regulates “Waters of the United States” under Section 404 of the CWA. 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” and are often characterized by an ordinary high water mark (OHWM), and herein referred to as non-wetland waters. 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 CWA.

2.1.2 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 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 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 CWA 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.

2.1.3 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 by the CDFW in local or regional plans, policies, or regulations. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2018b). Sensitive plant communities are

also identified by CDFW (2018a) and California Native Plant Society (CNPS, 2016a). Vegetation alliances are ranked 1 through 5 by CNDDB based on NatureServe's (2018) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or United States Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (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.

2.1.4 Relevant Local Policies, Ordinances, and Regulations

Solano Multispecies Habitat Conservation Plan

The Project Area is located within the proposed Solano Multispecies Habitat Conservation Plan (Solano HCP) Area. The Solano HCP (LSA 2012) establishes a framework for complying with state and federal endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the plan participants within Solano County over the next 30 years. Although the Solano HCP has not yet been approved, it is currently in the final draft stages and could be approved at any time. Once approved, the Solano HCP would require compliance with conservation measures established under the plan, and projects in the plan area (which includes the Project Area) could receive take coverage for impacts to listed species under the plan. The current draft of the Solano HCP states that a pre-application survey will be required to determine avoidance and minimization measure requirements as well as conservation/mitigation requirements. Additional pre-application survey requirements may be required based on the presence of sensitive natural communities and/or covered species. However, until the HCP is adopted, it is not relevant to the Project.

City of Fairfield Tree Conservation Ordinance

The City of Fairfield Tree Conservation Ordinance was created to improve public health and welfare by conserving tree resources by protecting significant trees from unnecessary destruction or removal, encouraging the replacement of trees lost to disease, natural hazards, or human intervention. On undeveloped private properties, individuals of the following trees are considered “protected” by the City of Fairfield Tree Ordinance if they measure greater than 6 inches in diameter at 4.5 feet above the ground level of the tree: native oaks (*Quercus* spp.), bay laurel (*Umbellularia californica*), madrone (*Arbutus menziesii*), and buckeye (*Aesculus californicus*). Any person proposing to remove a protected tree on private land must apply for a tree removal permit with the City of Fairfield.

2.2 Special-Status Species and Critical Habitat

Plant and Wildlife 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 species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the

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. In addition to regulations for special-status species, most native birds in the United States (including non-special-status species) are protected by the Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.[1]

Plant species included within the CNPS Inventory of Rare and Endangered Plants (Inventory; CNPS 2018b) with California Rare Plant Rank (Rank) of 1, 2, and 3 are also considered special-status plant species and must be considered under CEQA. Very few Rank 4 plant species meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the CFGC that outlines CESA. However, the CNPS and the CDFW strongly recommend that these species be fully considered during the preparation of environmental documentation related to CEQA. This may be particularly appropriate for the type locality of a Rank 4 plant species, for populations at the periphery of a species range, or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates. A description of the CNPS Ranks is provided below in Table 1.

Table 1. Description of California Rare Plant 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

[1] The U.S. Department of the Interior recently issued guidance clarifying that the MBTA only applies to intentional/deliberate killing, harm or collection of covered species (including active nests) (USDOI 2017). According to the guidance, unintentional impacts to birds/nests that occur within the context of otherwise lawful activities are not MBTA violations. However, ambiguity remains regarding application of the CFGC, as well as the extent to which minimization and avoidance measures are still required under the MBTA. Additionally, challenges to the Opinion are anticipated.

Critical Habitat

Critical habitat is a term defined in the ESA as a specific and formally designated 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 designated critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify designated 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 within designated critical habitat 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.

3.0 METHODS

Prior to conducting field surveys, available reference materials were reviewed, including online soil survey data for the Project Area (CSRL 2018), the USGS 7.5-minute quadrangle map for Cordelia (USGS 2015b), the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) data (USFWS 2018a) rainfall and WETS precipitation data (USDA 2018a), and available aerial photographs of the site (Google Earth 2018). On February 12, 2018, WRA conducted a biological resource assessment within the Project Area. The Project Area was traversed on foot for the survey, which sought to determine (1) plant communities present within the Project Area, (2) if existing conditions provided suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present.

All plant and wildlife species encountered were recorded and are listed in Appendix A. Plants were identified using the Jepson Flora Project (2018) to the taxonomic level necessary to determine rarity. Plant nomenclature follows the Jepson Flora Project (2018), except where noted. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities. Appendix B provides a list of species-status species that have been documented in the vicinity and summarizes the potential for occurrence for each of these species based on observed habitat suitability, proximity of known occurrences, or the direct observation of a species. Appendix C includes representative photographs of the Project Area taken during field visits.

3.1 Biological Communities

Prior to the site visits online soil survey data for the Project Area (CSRL 2018), the U.S. Geological Survey 7.5-minute quadrangle map for Cordelia (USGS 2015b), USFWS NWI data (USFWS 2018a), rainfall data and WETS precipitation data (USDA 2018a), and available aerial photographs of the site (Google Earth 2017) were reviewed to identify potential sensitive habitats and areas for further investigation during the site visit. Following the site visit, biological communities present in the Project Area were classified based on existing plant community descriptions described in *A Manual of California Vegetation, Online Edition* (CNPS 2018a; CDFW 2018a). However, in some cases, it was 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 (see Section 2.2, above).

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 4.4.1 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. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Other Sensitive Biological Communities

The Project Area was evaluated for the presence of other sensitive biological communities, including riparian areas, or sensitive plant communities recognized by the CDFW.

3.2 Special-Status Species

3.2.1 Literature Review

The potential for special-status species to occur in the Project Area was evaluated by first determining which special-status species have been documented previously in the Project Area and in the vicinity of the Project Area through a literature and database search. Database searches for known occurrences of special-status species focused on the Cordelia, Mt. George, Fairfield South, and Fairfield North USGS 7.5-minute quadrangles (USGS 2015a-i). The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur within and in the vicinity of the Project Area:

- CNDDB records (CDFW 2018a)
- CNPS Inventory (CNPS 2018a)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2018)
- California Department of Fish and Game publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- California Amphibian and Reptile Species of Special Concern (Thomson et al 2016)
- California Bird Species of Special Concern (Shuford and Gardali 2008)
- USFWS Critical Habitat Mapper (USFWS 2018b)
- Western Bat Working Group, species accounts (WBWG 2018)
- Maps for the California Essential Habitat Connectivity Project (Spencer et al. 2010).

3.2.2 Site Assessment

Habitat conditions were assessed and used to evaluate the potential for presence of special-status species. The potential for each special-status species to occur in the Project Area was evaluated according to the following criteria:

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

- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the Project Area. All species observed in the Project Area were recorded and are listed in Appendix A.

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.

An assessment of the potential for special-status species to occur within the Project Area is provided below in Section 4.3.1 and in Appendix B. For species with a moderate or high potential to occur within the Project Area, but which have not been observed on the site, the site assessment 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 for the purposes of the City of Fairfield's environmental review under CEQA, but further protocol-level special-status species surveys may ultimately be necessary for the Spanos Corporation to obtain permits or approvals from other regulatory agencies.

4.0 RESULTS

4.1 Soils

The online soil survey of the Project Area (CSRL 2018) indicates that the Project Area contains two native soil mapping units, consisting of three soil series: Brentwood clay loam, 0 to 2 percent slopes and Antioch-San Ysidro complex, thick surface, 0 to 2 percent slopes (Figure 3). The soil series are described below.

Antioch Loam, 0-2 percent slopes. The Antioch series consist of moderately well drained soils underlain by old mixed alluvium. These soils occur on low terraces. In a representative profile, the surface layer is dark grayish brown (10YR 4/2) and dark brown (10YR 3/3), strongly acid or medium acid loam approximately 14 inches thick. The subsurface layer is mottled, gray (10YR6/1), medium acid heavy loam approximately three inches thick. The subsoil is mottled, brown (10YR 4/3) clay approximately 19 inches thick. It is slightly acid in the upper part and becomes moderately alkaline as depth increases. The substratum is yellowish brown (10YR 5/4), calcareous clay loam that extends to a depth of more than 60 inches.

Brentwood clay loam, 0 to 2 percent slopes. The Brentwood series consists of well to moderately well drained soils with very slow to medium runoff and moderately slow permeability. These soils occurs on nearly level to gently sloping fans and formed in valley fill from sedimentary rocks. In

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Sources: National Geographic, CNDDB August 2017, WRA | Prepared By: smortensen, 2/21/2018

Figure 3. Soils Documented within the Study Area

Spanos Green Valley
Biological Resource Assessment
Fairfield, Solano, County, California

0 100 200 Feet

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a representative profile, the surface and subsurface layers are grayish brown (10YR 5/2) and very dark grayish brown (10YR 3/2), moderately alkaline clay loams approximately 6 to 8 inches thick. The subsoil layer is brown (10YR 4/3) and dark brown (10YR 3/3), moderately alkaline heavy clay loam approximately 12 to 18 inches thick. The substratum is yellowish brown (10YR 5/4) and dark yellowish brown (10YR 3/4) silty clay loam and exceeds depths of 50 inches.

San Isidro Loam, 0 to 2 Percent Slopes. The San Isidro series are deep, well drained soils on low fan terraces formed in alluvium derived from mixed sources. A representative profile for the series consists of light yellowish brown and pale brown loam from 0 to 16 inches, light brown clay loam from 16 to 42 inches, and very pale brown loam and pale brown sandy clay loam from 42 to 60 inches. These soils are used for irrigated row crops, apricots, prunes, and grapes. A few acres are used for dryland grain hay and pasture.

Soil disturbance was evident throughout the majority of the Project Area, with most of the open field areas appearing recently disced.

4.2 Biological Communities

Table 2 indicates the area of the one biological community type, ruderal herbaceous grassland, was observed in the Project Area. This non-sensitive biological community is illustrated in Figure 4. No sensitive biological community types, such as wetlands, native grasslands, or riparian habitat, were observed during site visits to the Project Area.

Table 2. Summary of Biological Communities in the Project Area

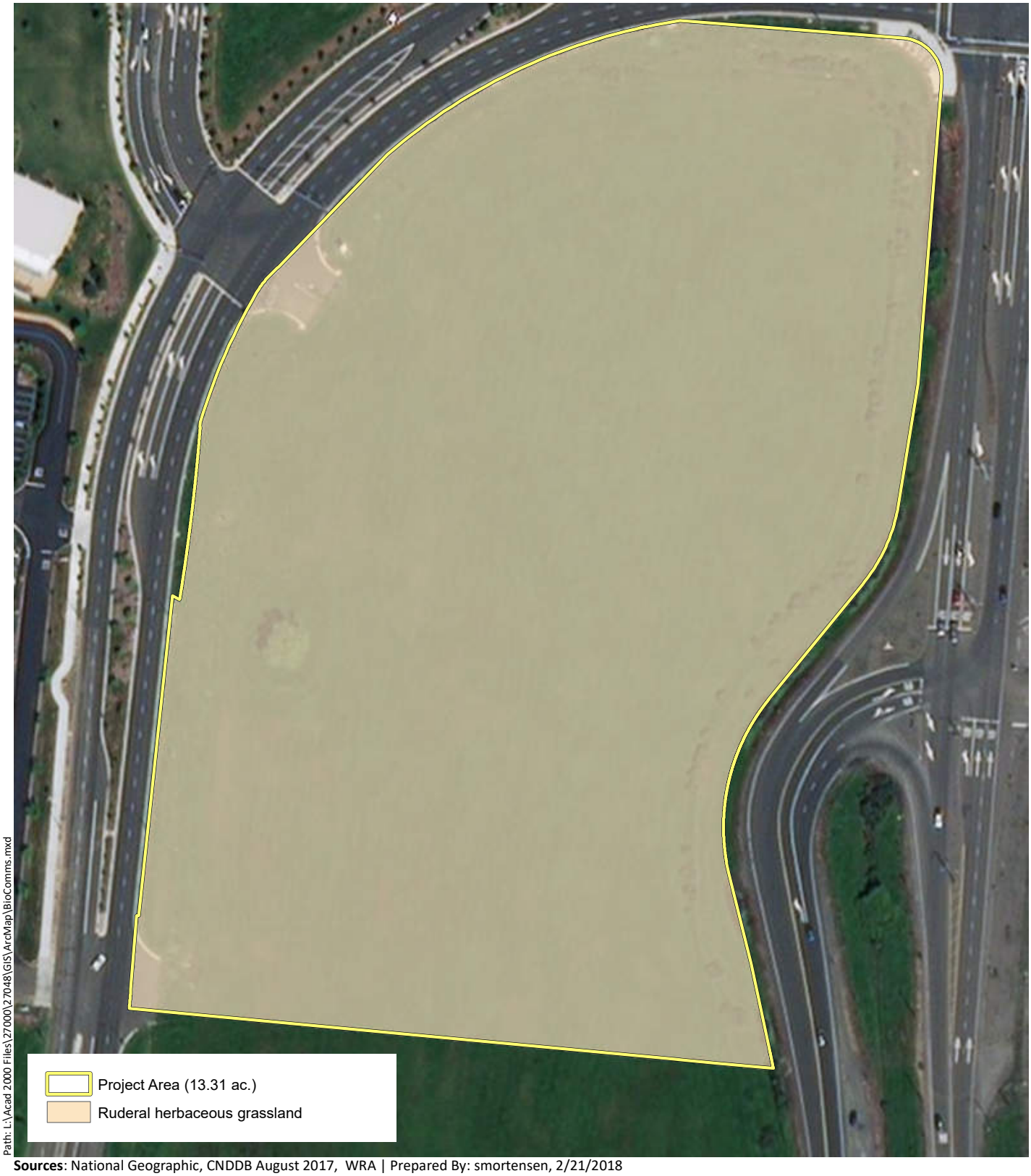
Community Type	Area (acres)
Non-Sensitive	
Ruderal herbaceous grassland	13.31
Total	**13.31**

4.2.1 Non-sensitive Biological Communities

Ruderal herbaceous grassland

Ruderal herbaceous grassland includes areas that have been heavily altered by humans by historic and current land management activities including agriculture, discing, and mowing. The Project Area is composed of approximately 13 acres ruderal habitat, comprised primarily of disced fields, mowed areas, and areas of disturbed vegetation surrounded in part by a dirt berm. Ruderal herbaceous also includes two small paved areas along the western boundary of the Project Area. Ruderal herbaceous areas are comprised primarily of ruderal herbaceous vegetation and dominated by non-native annual species such as ripgut brome *(Bromus diandrus)*, soft chess (*Bromus madritensis*), slender wild oat (*Avena barbata*), Italian thistle (*Carduus pycnocephalus*), and black mustard (*Brassica nigra*). A single valley oak (*Quercus lobata*) individual is present in the western portion of the Project Area.

A shallow drainage ditch lined with plastic tarping a few centimeters below the surface surrounds the north and east boundaries of the disced field. Though the ditch appeared to be designed to drain runoff from the berm to the disced field, indicators of hydrophytic vegetation, hydric soil, and wetland hydrology were not observed. Adjacent to this ditch were scattered individuals of coyote brush and grape (*Vitis* sp.), as well as ruderal herbaceous species such as those listed above.



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Sources: National Geographic, CNDDB August 2017, WRA | Prepared By: smortensen, 2/21/2018

Figure 4. Biological Communities Documented within the Project Area

Spanos Green Valley
Biological Resource Assessment
Fairfield, Solano, County, California

0 100 200 Feet N

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A concrete culvert inlet at the base of a manmade depression, the banks of which were lined with boulder rip rap, was present in the southwest corner of the Project Area. A vertical plastic, perforated culvert was present in a manmade depression in the northwest portion of the Project Area and was surrounded by uplands vegetation.

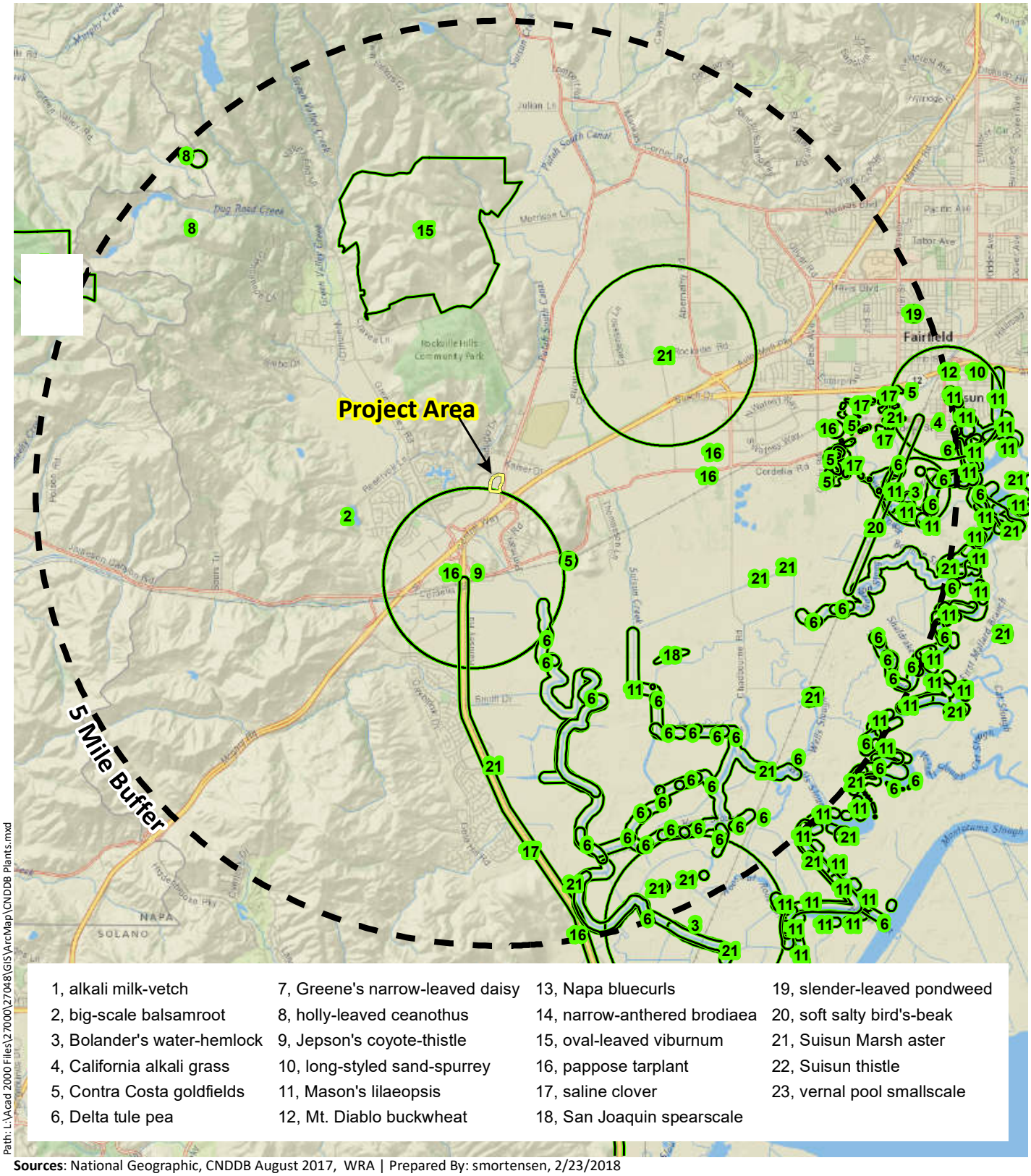
4.3 Special-Status Species

4.3.1 Special-Status Plant Species

Based on a review of the resource databases listed in Section 3.2.1, 36 special-status plant species have been documented in the vicinity of the Project Area, which was defined to include the Cordelia, Mount George, Fairfield North, and Fairfield South USGS 7.5-minute quadrangles. Of these, one special-status species was determined to have a moderate potential to occur within the Project Area. This species is discussed below. See Appendix B for an assessment of the potential for each of the 36 species documented in the vicinity of the Project Area to occur within the Project Area. Figure 5 depicts special-status plant species documented in the CNDDB within 5 miles of the Project Area.

Pappose tarplant (*Centromadia parryi* ssp. *parryi*). Rank 1B.2. Moderate Potential. Pappose tarplant is an annual herb in the sunflower family (Asteraceae) that blooms from May to November. It typically occurs in vernally mesic, often alkaline areas in coastal prairie, meadow, seep, coastal salt marsh, and valley and foothill grassland habitat at elevations ranging from 5 to 1380 feet (CDFW 2018b, CNPS 2018b). Known associated species include bristly ox-tongue (*Helminthotheca echioides*), wild radish (*Raphanus sativus*), foxtail fescue (*Festuca myuros*), willow leaf dock (*Rumex salicifolius*), toad rush (*Juncus bufonius*), Italian rye grass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum*), salt grass (*Distichlis spicata*), alkali heath (*Frankenia salina*), perennial pepperweed (*Lepidium latifolium*), yellow star thistle (*Centaurea solstitialis*), alkali mallow (*Malvella leprosa*), and alkali weed (*Cressa truxillensis*) (CDFW 2018b).

Pappose tarplant has a moderate potential to occur in the Project Area due to the presence of suitable soil conditions, the presence of associated species, and the relative locations of documented occurrences in the greater vicinity.



1, alkali milk-vetch	7, Greene's narrow-leaved daisy	13, Napa bluecurls	19, slender-leaved pondweed
2, big-scale balsamroot	8, holly-leaved ceanothus	14, narrow-anthered brodiaea	20, soft salty bird's-beak
3, Bolander's water-hemlock	9, Jepson's coyote-thistle	15, oval-leaved viburnum	21, Suisun Marsh aster
4, California alkali grass	10, long-styled sand-spurrey	16, pappose tarplant	22, Suisun thistle
5, Contra Costa goldfields	11, Mason's lilaeopsis	17, saline clover	23, vernal pool smallscale
6, Delta tule pea	12, Mt. Diablo buckwheat	18, San Joaquin spearscale	

Path: L:\Acad 2000 Files\27000\27048\GIS\ArcMap\CNDDB Plants.mxd

Sources: National Geographic, CNDDB August 2017, WRA | Prepared By: smortensen, 2/23/2018

Figure 5. Special-Status Plant Species Documented in the CNDDB within 5 Miles of the Project Area

Spanos Green Valley
Biological Resource Assessment
Fairfield, Solano, County, California

0 1 2 Miles

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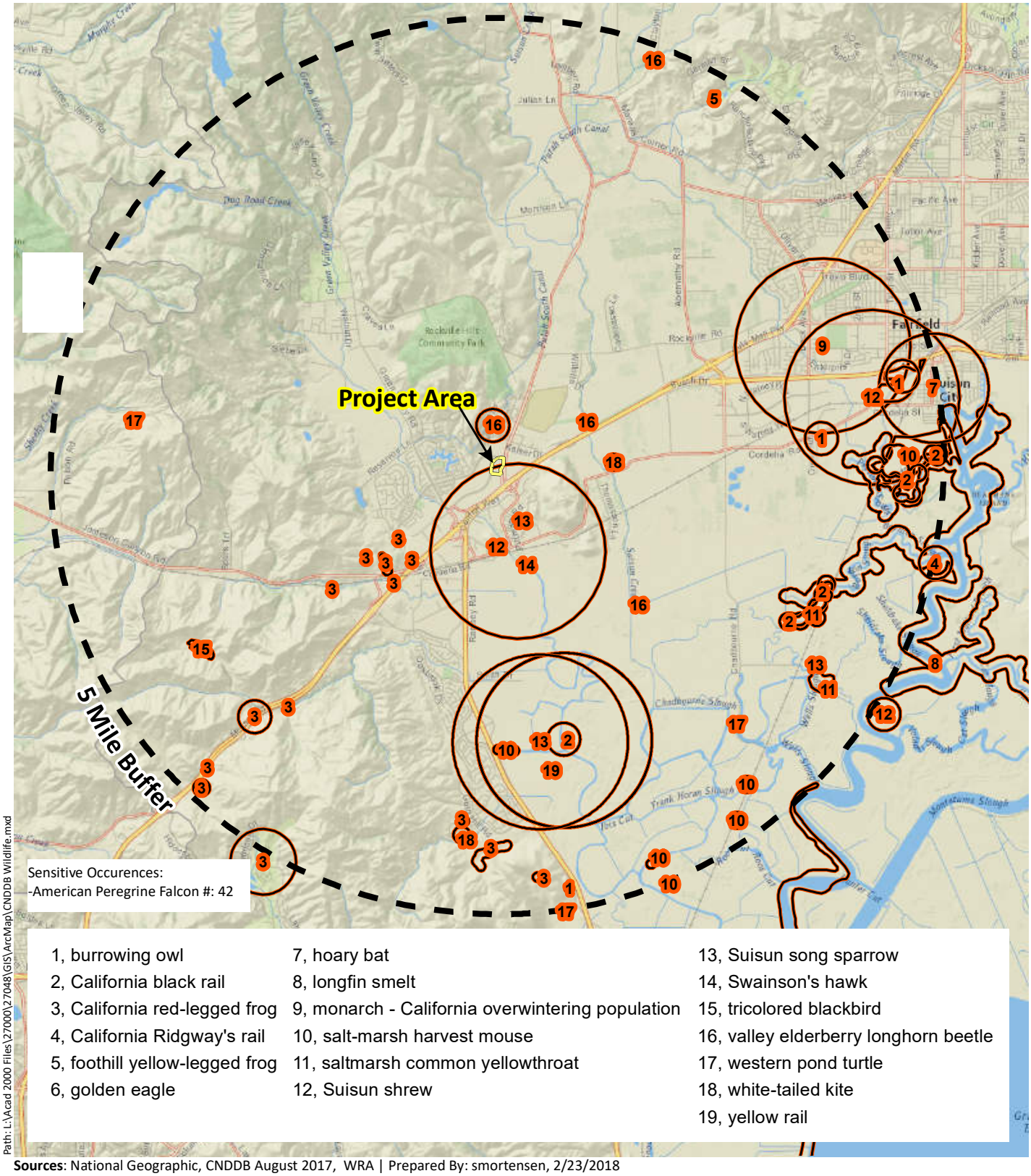
4.3.2 Special-Status Wildlife Species

Based upon a review of the resources databases listed in Section 3.2.1, 27 special-status wildlife species have been documented in the vicinity of the Project Area (i.e., within the four USGS 7.5-minute quadrangles). Of these, 20 species have also been documented in the CNDDB (CDFW 2018b) as occurring within a 5-mile radius of the Project Area. The locations of these records are depicted in Figure 6. Appendix B summarizes the potential for each of these species to occur within the Project Area. One special-status wildlife species has Moderate potential to occur in the Project Area is discussed below. The remaining species are considered unlikely, or have no potential, to occur because one or more of the following reasons about the Project Area:

- Outside of the known or historical range of the species;
- Lacks suitable aquatic habitat (e.g., rivers, streams, vernal pools);
- Lacks suitable foraging habitat (e.g., marshes, fossorial mammal population);
- Lacks suitable tall nesting structures (e.g., trees or snags);
- Lacks suitable soil for den development;
- Lacks mine shafts, caves or abandoned buildings;
- Lacks connectivity with suitable habitat in the region.

While the aforementioned factors contribute to the absence of many special-status wildlife species from the Project Area, the Project Area was determined to have adequate conditions and locality to warrant a moderate potential to occur for one species described below.

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Moderate Potential. White-tailed kite is a resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The Project Area contains open habitat for foraging by this species as well as shrubs and a tree suitable for nesting. The nearest recorded nesting occurrence of this species is within 1.5 miles of the Project Area from 2004 (CDFW 2018b). White-tailed kite has a moderate potential to occur.



Sources: National Geographic, CNDDB August 2017, WRA | Prepared By: smortensen, 2/23/2018

Figure 6. Special-Status Wildlife Species Documented in the CNDDB within 5 Miles of the Project Area

Spanos Green Valley
Biological Resource Assessment
Fairfield, Solano, County, California

0 1 2 Miles

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4.4 Critical Habitat

The Project Area is not located within any units of designated critical habitat (USFWS 2018a).

4.5 City of Fairfield Protected Trees

A precise measurement of the diameter at 4.5 feet above the ground level of single valley oak within the Project Area was not obtained. However, this tree is clearly larger than 6 inches in diameter, has been shown to be a 48-inch diameter tree on tentative maps, and therefore likely meets the criteria for a protected tree under the City of Fairfield Tree Conservation Ordinance.

4.6 Wildlife Movement Corridors

Wildlife movement between suitable habitat areas typically occurs via wildlife movement corridors. The primary function of wildlife corridors is to connect two larger habitat blocks, also referred to as core habitat areas (Beier 1992, Soulé and Terborgh 1999). The Project Area is approximately one half of an isolated piece of land directly surrounded on all sides by multi-lane roadways, within a greater block of existing urban development. Given that the Project Area is bounded by urban development, it is unlikely that it would function as a wildlife corridor connecting two or more areas of occupied/suitable habitat.

5.0 POTENTIAL IMPACTS AND MITIGATION

5.1 Significance Threshold Criteria

Pursuant to Appendix G, Section IV of the State CEQA Guidelines, a project would have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or,

f) Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

This report uses these thresholds in the analysis of impacts and determination of the significance of those impacts. The assessment of impacts under CEQA is based on the change caused by the Project relative to the CEQA baseline, which in this case are the existing conditions at the site. In applying CEQA Appendix G, the terms “substantial” and “substantially” are used as the basis for significance determinations in many of the thresholds but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, the determination of a substantial adverse effect (i.e., significant impact) may be relatively straightforward. For instance, “take” or other direct adverse impacts to special-status species listed under the CESA or ESA or their habitat without implementation of appropriate mitigation is considered a significant impact. In other cases, the determination of a substantial adverse effect (i.e., significant impact) requires application of best professional judgment based on knowledge of site conditions as well as the ecology and physiology of biological resources present in a given area and the type of effect that would be caused by a project. Determinations of whether or not Project activities will result in a substantial adverse effect to biological resources are discussed in the following sections for sensitive biological communities, special-status plant species, and special-status wildlife species.

Regarding item a above, the Project would convert existing biological communities that could provide habitat to special-status species, and Project activities would create a potential to have adverse impacts on special-status plant and animal species that may be present in the Project Area. Impacts BIO-1 and BIO-2 discuss potential impacts associated with these items.

Regarding item e above, Project activity has the potential to adversely affect a tree that meets the criteria for a protected tree under the City of Fairfield Tree Conservation Ordinance. Impact BIO-3 discusses potential impacts associated with this item.

Regarding item b, above, no sensitive natural communities are present within the Project Area, and therefore, no impacts to such communities from Project activity are anticipated.

Regarding item c, above, no evidence of state or federally protected wetlands was observed during the site visit, and therefore, no impacts to state or federally protected wetlands from Project activity are anticipated.

Regarding item d, above, the Project Area does not function as a wildlife movement corridor or serve as a native nursery site; therefore, impacts to wildlife movement corridors or native nursery sites as a result of Project activity are not anticipated.

Regarding item f, above, no habitat conservation plans are applicable within the Project Area. Thus, the Project would not conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2 Potential Impacts and Recommended Mitigation Measures

Impact BIO-1: Project Activities Could Adversely Affect Nesting Birds

The Project has the potential to adversely impact special-status and non-status native nesting birds with baseline federal and state protections. Project activities such as vegetation removal and ground disturbance associated with development would have the potential to affect these species by causing direct mortality of eggs or young, or by causing auditory, vibratory, and/ or visual disturbance of a sufficient level to cause abandonment of an active nest. If Project Activities occur during the nesting season, which generally extends from February 1 through August 15, nests of both special-status and non-special-status native birds could be impacted by construction and other ground disturbing activities. Impacts to nesting birds are potentially significant under CEQA. Implementation of Mitigation Measure BIO-3 will reduce this potential impact to less than significant.

Level of Significance before Mitigation: Potentially Significant

MM BIO-1: Nesting Bird Avoidance Measures

The removal of trees and shrubbery on-site, as well as initial ground disturbance, shall be conducted between August 16 and January 31 (outside of the February 1 to August 15 nesting season) to the extent feasible, which is outside of the nesting season and would avoid impacts to nesting birds. If such activities must be conducted during the nesting season, a pre-disturbance nesting-bird survey shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey shall include the disturbance area and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by Project activities.

If active nests of protected species are found within the survey area, a work exclusion zone shall be established around each nest by the qualified biologist. Established exclusion zones shall remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes shall be determined by a qualified biologist and vary dependent upon the species, nest location, existing visual buffers, noise levels, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species or as large as 250 feet or more for raptors. Exclusion zone size may be reduced from established levels if supported with nest monitoring findings by a qualified biologist indicating that work activities outside the reduced radius are not adversely impacting the nest and that a reduced exclusion zone would not adversely affect the subject nest.

Level of Significance after Mitigation: Less than Significant

Impact BIO-2: Potential Effects on Special-Status Plants

Although no special-status plant species were observed within the Project Area, pappose tarplant (Rank 1B.2) has moderate potential to occur there. If present, this species could be adversely impacted by Project activity by its removal.

Level of Significance before Mitigation: Potentially Significant

MM BIO-2: Conduct Special-Status Plant Surveys

Special-status plant survey should be conducted during the blooming period of the species ideally during the summer months for pappose tarplant. If none of these plants are found, then no

adverse impacts would occur. If this species is observed within the Study Area during a survey, then appropriate avoidance and minimization and/or mitigation measures should be developed dependent upon the results of the survey which could include avoiding areas where the plants occur, preserving land where the species are known to exist, or collecting mature seed of the species and establishing a similar sized population at a different suitable location.

Level of Significance after Mitigation: Less than Significant

Impact BIO-3: Potential Effects on Protected Trees

The Project has the potential to adversely affect a tree that meets the criteria for a protected tree under the City of Fairfield Tree Conservation Ordinance. Although the Project plans to avoid this tree and incorporate it into their design (Figure 2), construction activity has the potential to adversely affect this tree.

Level of Significance before Mitigation: Potentially Significant

MM BIO-3: Incorporate Additional Tree Protection Measures

The following measures should be implemented during construction:

- All construction activity (grading, filling, paving, landscaping etc.) shall respect the root protection zone around the protected tree. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. .
- Temporary protective fencing shall be installed around the dripline of the tree prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence shall be clearly marked to prevent inadvertent encroachment by heavy machinery.
- Drainage shall not be allowed to pond around the base of the tree.
- An ISA-Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity.
- Roots exposed as a result of construction activities shall be covered with wet burlap to avoid desiccation and should be buried as soon as practicable.
- Construction materials or heavy equipment shall not be stored within the root protection zone.
- Only an ISA-Certified Arborist or tree specialist should make specific recommendations as to where the tree can safely tolerate some level of fill within the drip line.
- Trenches which are required within the root protection zone of the protected tree shall be bored (tunneled) under the root(s) using an auger or drill, rather than trenched, to avoid root disturbance.
- Construction materials shall be properly stored away from the tree to avoid spillage or damage to trees.

Level of Significance after Mitigation: Less than Significant

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Appendix A

List of Observed Plant and Wildlife Species in the Project Area

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Appendix A-1. List of Plant Species Observed in the Project Area February 12, 2018.

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]	Wetland Status[3]	East Bay Rare and Unusual[4]
Apiaceae	*Foeniculum vulgare*	Fennel	non-native (invasive)	perennial herb	-	High	-	-
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	Coyote brush	native	shrub	-	-	-	-
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	non-native (invasive)	annual herb	-	Moderate	-	-
Asteraceae	*Cynara cardunculus*	Artichoke thistle	non-native (invasive)	perennial herb		Moderate		
Asteraceae	*Dittrichia graveolens*	Stinkwort	non-native (invasive)	annual herb	-	Moderate	-	-
Asteraceae	*Helminthotheca echioides*	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	Limited	FAC	-
Asteraceae	*Lactuca serriola*	Prickly lettuce	non-native (invasive)	annual herb	-	-	FACU	-
Asteraceae	*Sonchus asper* ssp. *asper*	Sow thistle	non-native (invasive)	annual herb	-	-	FAC	-
Brassicaceae	*Brassica nigra*	Black mustard	non-native (invasive)	annual herb	-	Moderate	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]	Wetland Status[3]	East Bay Rare and Unusual[4]
Brassicaceae	*Hirschfeldia incana*	Mustard	non-native (invasive)	perennial herb	-	Moderate	-	-
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	non-native (invasive)	perennial herb, vine	-	-	-	-
Fabaceae	*Medicago polymorpha*	California burclover	non-native (invasive)	annual herb	-	Limited	FACU	-
Fabaceae	*Trifolium hirtum*	Rose clover	non-native (invasive)	annual herb	-	Limited	-	-
Fabaceae	*Vicia sativa*	Spring vetch	non-native	annual herb, vine	-	-	FACU	-
Fagaceae	*Quercus lobota*	Valley oak	native	tree			FACU	
Geraniaceae	*Erodium botrys*	Big heron bill	non-native (invasive)	annual herb	-	-	FACU	-
Geraniaceae	*Erodium moschatum*	Musky stork's bill	non-native	annual herb				
Geraniaceae	*Geranium dissectum*	Wild geranium	non-native (invasive)	annual herb	-	Limited	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]	Wetland Status[3]	East Bay Rare and Unusual[4]
Geraniaceae	*Geranium* sp.							
Onagraceae	*Epilobium ciliatum*	Slender willow herb	native	perennial herb	-	-	FACW	
Papaveraceae	*Eschscholzia californica*	California poppy	native	annual, perennial herb	-	-	-	-
Poaceae	*Avena barbata*	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate	-	-
Poaceae	*Bromus diandrus*	Ripgut brome	non-native (invasive)	annual grass	-	Moderate	-	-
Poaceae	*Bromus hordeaceus*	Soft chess	non-native (invasive)	annual grass	-	Limited	FACU	-
Poaceae	*Elymus caput-medusae*	Medusa head	non-native (invasive)	annual grass		High		
Poaceae	*Festuca bromoides*	Brome fescue	non-native	annual grass	-	-	FACU	-
Poaceae	*Festuca perennis*	Italian rye grass	non-native	annual, perennial grass	-	-	FAC	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]	Wetland Status[3]	East Bay Rare and Unusual[4]
Poaceae	*Festuca perennis*	Brome fescue	non-native	annual grass			FACU	
Poaceae	*Hordeum murinum*	Foxtail barley	non-native (invasive)	annual grass	-	Moderate	FACU	-
Poaceae	*Hordeum brachyantherum*	Meadow barley	native	annual grass	-		FACW	-
Poaceae	*Polypogon monspeliensis*	Annual beard grass	non-native (invasive)	annual grass	-	Limited	FACW	-
Polygonaceae	*Rumex pulcher*	Fiddle dock	non-native	perennial herb	-	-	FAC	
Polygonaceae	*Rumex crispus*	Curly dock	non-native (invasive)	perennial herb	-	Limited	FAC	-
Rubiaceae	*Galium aparine*	Cleavers	native	annual herb			FACU	
Vitaceae	*Vitis* sp.							

- All species identified using the *Jepson eFlora* [Jepson Flora Project (eds.) 2017]; nomenclature follows *Jepson eFlora* [Jepson Flora Project (eds.) 2017]

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

FE:	Federal Endangered
FT:	Federal Threatened
SE:	State Endangered
ST:	State Threatened
SR:	State Rare
Rank 1A:	Plants presumed extinct in California
Rank 1B:	Plants rare, threatened, or endangered in California and elsewhere
Rank 2:	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

[3]Wetland Status: National List of Plant Species that Occur in Wetlands, California – Arid West (Lichvar et al. 2016)

OBL:	Almost always found in wetlands; >99% frequency
FACW:	Usually found in wetlands; 67-99% frequency
FAC:	Equally found in wetlands and uplands; 34-66% frequency
FACU:	Usually not found in wetlands; 1-33% frequency
UPL:	Almost never found in wetlands; >1% frequency
NL:	Not listed, assumed almost never found in wetlands; >1% frequency
NI:	No information; not factored during wetland delineation

[4]East Bay Rare and Unusual: Rare, Unusual, and Significant Plants of Alameda and Contra Costa Counties, 8th Edition (Lake 2010)

A1:	Locally Rare Species. Species occurring in two or fewer regions in Alameda and Contra Costa counties
A1x:	Locally Rare Species. Species presumed extirpated from Alameda and Contra Costa counties
A1?:	Locally Rare Species. Species possibly occurring in Alameda and Contra Costa counties. Identification or location is uncertain
A2:	Locally Rare Species. Plants occurring in three to five regions or are otherwise threatened in Alameda and Contra Costa counties.
B:	High Priority Watch List. Plants occurring in six to nine regions in Alameda and Contra Costa counties.
C:	Second Priority Watch List. Plants occurring in ten to fifteen regions in Alameda and Contra Costa counties.
*:	Ranks preceded by an asterisk (e.g. "*A1") also have a statewide rarity ranking

Appendix A-2. Wildlife Species Observed in the Project Area on February 12, 2018

Common Name (status if applicable)	**Species**
BIRDS	
Killdeer	*Charadrius vociferous*
Western meadowlark	*Sturnella neglecta*
Anna's hummingbird	*Calypte anna*
European starling	*Sturnus vulgaris*
California scrub jay	*Aphelocoma californica*
Hutton's Vireo	*Vireo huttoni*
Yellow rumped warbler	*Setophaga coronata*
Turkey vulture	*Cathartes aura*
American kestrel	*Falco sparverius*

Appendix B

Potential for Occurrence of Special Status Species in the Project Area

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Appendix B. Potential for special-status species to occur in the Project Area. List compiled from U.S. Fish and Wildlife Service IPaC Trust Report (USFWS 2017b), a search of the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2017b) and the California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2017b) for the Cordelia, Mt. George, Fairfield North, and Fairfield South USGS 7.5' quadrangles (USGS 2015a-i).

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Plants				
Henderson's bent grass *Agrostis hendersonii*	Rank 3.2	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 225 to 1000 feet (70 to 305 meters). Blooms Apr-Jun.	**Unlikely.** The Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
alkali milk-vetch *Astragalus tener var. tener*	Rank 1B.2	Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation ranges from 0 to 195 feet (1 to 60 meters). Blooms Mar-Jun.	**Unlikely.** The Project Area does not contain playa, adobe, or vernal pool habitat. The Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
vernal pool smallscale *Atriplex persistens*	Rank 1B.2	Vernal pools (alkaline). Elevation ranges from 30 to 375 feet (10 to 115 meters). Blooms Jun,Aug,Sep,Oct.	**No Potential.** Vernal pool habitat is not present throughout the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
big-scale balsamroot *Balsamorhiza macrolepis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 5100 feet (45 to 1555 meters). Blooms Mar-Jun.	**Unlikely.** Species is known to occur on serpentine or volcanic substrate (CDFW 2018a), which is not found throughout the Project Area. The Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended 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. Elevation ranges from 360 to 3000 feet (110 to 915 meters). Blooms May-Jul.	**No Potential.** This species is only known from volcanic substrates (CDFW 2018a), which are not present in the Project Area.	No further actions are recommended for this species.
Mt. Diablo fairy-lantern *Calochortus pulchellus*	Rank 1B.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Elevation ranges from 95 to 2755 feet (30 to 840 meters). Blooms Apr-Jun.	**Unlikely.** Species is found on woody or brushy slopes (CDFW 2018a), which are not present in Project Area. In addition, the Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
Tiburon paintbrush *Castilleja affinis var. neglecta*	FE, ST, Rank 1B.2	Valley and foothill grassland (serpentine). Elevation ranges from 195 to 1310 feet (60 to 400 meters). Blooms Apr-Jun.	**No Potential.** The Project Area does not contain serpentine substrate.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
holly-leaved ceanothus *Ceanothus purpureus*	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 390 to 2100 feet (120 to 640 meters). Blooms Feb-Jun.	**No Potential.** The Project Area does not contain rocky volcanic slopes, chaparral, or woodland habitats.	No further actions are recommended for this species.
pappose tarplant *Centromadia parryi ssp. parryi*	Rank 1B.2	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic). Elevation ranges from 0 to 1380 feet (0 to 420 meters). Blooms May-Nov.	**Moderate Potential.** This species is known to occur in highly disturbed areas such as those present within the Project Area.	Appropriately timed surveys are recommended for this species.
soft bird's-beak *Chloropyron molle ssp. molle*	FE, SR, Rank 1B.2	Marshes and swamps (coastal salt). Elevation ranges from 0 to 10 feet (0 to 3 meters). Blooms Jun-Nov.	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.
Bolander's water-hemlock *Cicuta maculata var. bolanderi*	Rank 2B.1	Marshes and swamps coastal, fresh or brackish water. Elevation ranges from 0 to 655 feet (0 to 200 meters). Blooms Jul-Sep.	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.
Suisun thistle *Cirsium hydrophilum var. hydrophilum*	FE, Rank 1B.1	Marshes and swamps (salt). Elevation ranges from 0 to 5 feet (0 to 1 meters). Blooms Jun-Sep.	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.
dwarf downingia *Downingia pusilla*	Rank 2B.2	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 0 to 1460 feet (1 to 445 meters). Blooms Mar-May.	**No Potential.** The Project Area does not contain vernal pool or seasonal wetland habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
streamside daisy *Erigeron biolettii*	Rank 3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest. Elevation ranges from 95 to 3610 feet (30 to 1100 meters). Blooms Jun-Oct.	**No Potential**. The Project Area does not contain broadleafed forest, cistmontane woodland, or coniferous forest habitat.	No further actions are recommended for this species.
Greene's narrow-leaved daisy *Erigeron greenei*	Rank 1B.2	Chaparral (serpentine or volcanic). Elevation ranges from 260 to 3295 feet (80 to 1005 meters). Blooms May-Sep.	**No Potential.** The Project Area does not contain serpentine or volcanic substrate.	No further actions are recommended for this species.
Tiburon buckwheat *Eriogonum luteolum var. caninum*	Rank 1B.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 0 to 2295 feet (0 to 700 meters). Blooms May-Sep.	**No Potential.** The Project Area does not contain serpentine substrate.	No further actions are recommended for this species.
Mt. Diablo buckwheat *Eriogonum truncatum*	Rank 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Elevation ranges from 5 to 1150 feet (3 to 350 meters). Blooms Apr-Sep(Nov-Dec).	**Unlikely.** The Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
Jepson's coyote thistle *Eryngium jepsonii*	Rank 1B.2	Valley and foothill grassland, vernal pools. Elevation ranges from 5 to 985 feet (3 to 300 meters). Blooms Apr-Aug.	**No Potential.** The Project Area does not contain vernal pool or seasonal wetland habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
San Joaquin spearscale *Extriplex joaquinana*	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 0 to 2740 feet (1 to 835 meters). Blooms Apr-Oct.	**Unlikely.** The Project Area is highly disturbed by discing and mowing. In addition, typically associated species, including *Distichalis spicata* and *Frankenia salina,* are not present.	No further actions are recommended for this species.
woolly-headed gilia *Gilia capitata ssp. tomentosa*	Rank 1B.1	Coastal bluff scrub, valley and foothill grassland. Elevation ranges from 30 to 720 feet (10 to 220 meters). Blooms May-Jul.	**No Potential.** The Project Area does not contain coastal bluff scrub, rocky outcrops, or serpentine substrate (CDFW 2018a).	No further actions are recommended for this species.
Diablo helianthella *Helianthella castanea*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation ranges from 195 to 4265 feet (60 to 1300 meters). Blooms Mar-Jun.	**Unlikely.** This species typically occurs in chaparral and oak woodland interface on rocky, azonal soils (CDFW 2018a), which are not present in the Project Area. In addition, the Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
Brewer's western flax *Hesperolinon breweri*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 95 to 3100 feet (30 to 945 meters). Blooms May-Jul.	**No Potential.** This species is found in rocky serpentine soil in serpentine chaparral and serpentine grassland habitats (CDFW 2018a), none of which are present in the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Contra Costa goldfields *Lasthenia conjugens*	FE, Rank 1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun.	**No Potential.** The Project Area does not contain vernal pool habitat or clay soils. In addition, the Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
Delta tule pea *Lathyrus jepsonii var. jepsonii*	Rank 1B.2	Marshes and swamps (freshwater and brackish). Elevation ranges from 0 to 15 feet (0 to 5 meters). Blooms May-Jul(Aug-Sep).	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.
legenere *Legenere limosa*	Rank 1B.1	Vernal pools. Elevation ranges from 0 to 2885 feet (1 to 880 meters). Blooms Apr-Jun.	**No Potential.** The Project Area does not contain vernal pool habitat.	No further actions are recommended for this species.
Mason's lilaeopsis *Lilaeopsis masonii*	SR, Rank 1B.1	Marshes and swamps (brackish or freshwater), riparian scrub. Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Apr-Nov.	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Mt. Diablo cottonweed *Micropus amphibolus*	Rank 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 2705 feet (45 to 825 meters). Blooms Mar-May.	**Unlikely.** This species is known to prefer bare, grassy, or rocky slopes (CDFW 2018a), which are not found within the Project Area. In addition, the Project Area is highly disturbed by discing and mowing, and this species is not known to occur in habitats regularly disturbed by such activities.	No further actions are recommended for this species.
California alkali grass *Puccinellia simplex*	Rank 1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 3050 feet (2 to 930 meters). Blooms Mar-May.	**Unlikely.** This species is associated with vernally mesic sinks, flats, and lake margins (CDFW 2018a), which are not present in the Project Area.	No further actions are recommended 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 145 to 3315 feet (45 to 1010 meters). Blooms May-Jul.	**No Potential.** The Project Area does not contain marsh, seep, or swamp habitat.	No further actions are recommended for this species.
Napa checkerbloom *Sidalcea hickmanii ssp. napensis*	Rank 1B.1	Chaparral. Elevation ranges from 1360 to 2000 feet (415 to 610 meters). Blooms Apr-Jun.	**No Potential.** The Project Area does not contain chaparral habitat.	No further actions are recommended for this species.
Marin checkerbloom *Sidalcea hickmanii ssp. viridis*	Rank 1B.1	Chaparral (serpentine). Elevation ranges from 160 to 1410 feet (50 to 430 meters). Blooms May-Jun.	**No Potential.** The Project Area does not contain chaparral habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
slender-leaved pondweed *Stuckenia filiformis ssp. alpina*	Rank 2B.2	Marshes and swamps (assorted shallow freshwater). Elevation ranges from 980 to 7055 feet (300 to 2150 meters). Blooms May-Jul.	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.
Suisun Marsh aster *Symphyotrichum lentum*	Rank 1B.2	Marshes and swamps (brackish and freshwater). Elevation ranges from 0 to 10 feet (0 to 3 meters). Blooms (Apr)May-Nov.	**No Potential.** The Project Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.
Napa bluecurls *Trichostema ruygtii*	Rank 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 95 to 2230 feet (30 to 680 meters). Blooms Jun-Oct.	**Unlikely.** This species is generally found on thin clay soils on dry rocky slopes and flats that are often adjacent to exposed volcanic bedrock (Lewis 2006), none of which is present in the Project Area.	No further actions are recommended 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 985 feet (0 to 300 meters). Blooms Apr-Jun.	**Unlikely.** This species is typically associated with vernal pool habitat, which is not present in Project Area. Additionally, the Project Area is highly disturbed from annual discing and mowing, which provides poor quality habitat for this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
oval-leaved viburnum *Viburnum ellipticum*	Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 705 to 4595 feet (215 to 1400 meters). Blooms May-Jun.	**No Potential.** The Project Area does not contain broadleafed upland forest, chaparral, or lower montane coniferous forest habitat.	No further actions are recommended for this species.
Wildlife				
Mammals				
Hoary bat *Lasiurus cinereus*	WBWG Medium	Prefers open 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.	**Unlikely.** This species is typically associated with forested habitat. The Project Area is isolated and surrounded by development. Furthermore, the tree within the Project Area is unlikely to support roosting habitat because it does not provide dense foliage.	No further actions are recommended for this species.
Salt marsh harvest mouse *Reithrodontomys raviventris*	FE, SE, CFP	Found only in saline emergent wetlands of San Francisco Bay and its tributaries. Primary habitat is dominated by pickleweed (*Salicornia*). Requires adjacent, upland areas as refuge during high tides.	**No Potential.** Salt marsh habitat is not present within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Suisun shrew *Sorex ornatus sinuosus*	SSC	Tidal marshes of the northern shores of San Pablo and Suisun Bays. Requires dense low-lying cover, driftweed, and other litter above the mean high tide line for nesting and foraging.	**No Potential.** Tidal marsh habitat is not present and the Project Area is outside the known range of this subspecies.	No further actions are recommended for this species.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC, WBWG High	This species is 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. Males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**No Potential.** The Project Area and adjacent areas do not contain open forest foraging habitat or suitable roosting habitat for the species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Birds				
Golden eagle *Aquila chrysaetos*	CFP, BCC, SSC	Resident in rolling foothill and mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range. Eats mostly lagomorphs and rodents. Needs open terrain for hunting; grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats.	**Unlikely.** The Project Area does not contain suitable nesting structures to support this species. This species may occasionally forage within the Project Area.	No further actions are recommended for this species.
northern harrier *Circus cyaneus*	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	**Unlikely.** Marsh and grassland habitat suitable for this species is not present within the Project Area.	No further actions are recommended for this species.
white-tailed kite *Elanus leucurus*	CFP	Year-long resident of coastal and valley lowlands. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians. Can be abundant where habitat remains free of disturbance.	**Moderate Potential.** The Project Area only contains one tree suitable for nesting. The species may forage in the open grassland present within the Project Area.	See section 5.2 for further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Western burrowing owl *Athene cunicularia*	SSC, BCC	Largely resident in the region. Found in grasslands and other open habitats with a sparse to absent shrub/tree canopy. Nests and roosts in old mammal burrows, typically those of ground squirrels. Preys upon insects, and also small mammals, reptiles and birds.	**Unlikely.** Habitat was found to be unsuitable during the February 12, 2018 site visit: no ground squirrels, ground squirrel burrows or burrow complexes capable of supporting owl nesting were observed. No piles of debris that could be used in place of burrows were observed. Based on aerial imagery, the site is regularly disked which reduces both the suitability of the site for prey species and likelihood for ground squirrels to establish burrow complexes. Due to the disturbed nature of the site, lack of suitable burrows, shelter, and nearby documented occurrences (over 3.5 miles from the Project Area (CNDDB 2018)), this species is unlikely to occur in the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
tricolored blackbird *Agelaius tricolor*	SCE, SSC, BCC	Resident, though disperses somewhat when not breeding. Typically nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. Highly colonial; breeding aggregations tend to be large.	**No Potential.** The Project Area does not have any suitable habitat such as: marsh or thickets of willow, to support nesting or foraging of this species.	No further actions are recommended for this species.
black-crowned night heron *Nycticorax nycticorax*	none (breeding sites protected by CDFW)	(Rookery) colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	**No Potential.** No foraging areas including lake margins, bays, or marsh are present within the Project Area or immediate vicinity to support this species.	No further actions are recommended for this species.
California Ridgway's (clapper) rail *Rallus obsoletus obsoletus*	FE, SE, CFP	Resident in tidal marshes of the San Francisco Bay Estuary. Requires tidal sloughs and mud flats for foraging, and dense vegetation for nesting. Associated with abundant growth of cordgrass and pickleweed. Largest populations in south San Francisco Bay.	**No Potential.** The Project Area does not contain tidal marsh habitat for the species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Saltmarsh (San Francisco) common yellowthroat *Geothlypis trichas sinuosa*	SSC, BCC	Breeding habitat is marshes or similar wet areas with low, dense vegetation. Requires continuous, thick cover down to water for foraging. Less common in dry areas.	**No Potential.** The Project Area does not contain emergent dense wetland vegetation suitable for foraging and nesting by this species.	No further actions are recommended for this species.
Suisun song sparrow *Melospiza melodia maxillaris*	SSC, BCC	Resident of brackish-water marshes surrounding Suisun Bay. Inhabits cattails, tules and other sedges, and Salicornia; also known to frequent tangles bordering sloughs.	**No Potential.** The Project Area is outside of this subspecies' known range (Shuford and Gardali 2008).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Swainson's Hawk *Buteo swainsoni*	ST, BCC	Summer resident in the region. Forages in grasslands and nests in the immediate vicinity, often in relatively isolated, trees or tree groves. Most of the California population breeds in the Central Valley. Forages on insects and rodents, also other vertebrates.	**Unlikely. O**ne isolated oak tree is present, but it has never been a nest tree in the past. A nest tree within 1 mile has not been active for more than 14 years (nest trees inactive for 10 years may be considered for removal; Solano County HCP). No other nest trees are closer than 7 miles (CDFW 2018). The site is regularly disturbed by disking which reduces the suitability of the site for prey occurrence, and none were observed. Due to limited foraging opportunities, few occurrences nesting in the vicinity, and long duration since last nesting activity at the nearest nest, Swainson's hawk is unlikely to occur in or near the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Short-eared owl *Asio flammeus*	SSC	Occurs as a resident and winter visitor in California. Suitable year-round habitat for this species consists of open areas with herbaceous cover, and includes grasslands, prairies, marshes and wetlands, and agricultural areas. Within California, breeding is restricted to the Great Basin, portions of the Central Valley, and scattered other lowland locations (e.g., the northern Sacramento-San Joaquin Delta; Roberson 2008). Nests are placed on the ground within vegetative cover.	**Unlikely.** The Project Area is located west of the current breeding range of the species (Shuford and Gardali 2008) and wetlands within the Project Area are too small to support the demands of nesting. This species may occasionally forage in the area. The nearest documented nest occurrence is from 1987 at Grizzly Island, approximately 10 miles southeast of the Project Area (CDFW 2018).	No further actions are recommended for this species.
yellow rail *Coturnicops noveboracensis*	BCC, SSC	Summer resident in eastern Sierra Nevada in Mono County, breeding in shallow freshwater marshes and wet meadows with dense vegetation. Also a rare winter visitor along the coast and other portions of the state. Extremely cryptic.	**No Potential.** The Project Area does not contain emergent dense wetland vegetation suitable for foraging and nesting by this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Reptiles and Amphibians				
western pond turtle *Actinemys (Emys) marmorata*	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter	**No Potential.** The Project Area lacks suitable perennial water habitat to support the species.	No further actions are recommended 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.** The Project Area is surrounded by development and does not contain aquatic features to support reproduction, or any life stage of this species. Due to the isolated nature of the Project Area, it is also not suitable upland habitat for the species.	No further actions are recommended for this species.
Foothill yellow-legged frog *Rana boylii*	SSC	Inhabits rocky streams in a variety of habitats, including valley-foothill hardwood, valley foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Adults often back on exposed rock surfaces near streams.	**No Potential.** The Project Area lacks any suitable habitat to support such a species. No streams are present within the Project Area or immediate vicinity.	No further actions are recommended for this species.
Fishes				

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Longfin smelt Spirinchus thaleichthys	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	**No Potential.** No estuarine or other suitable aquatic habitat is present in the Project Area for this species.	No further actions are recommended for this species.
Sacramento splittail *Pogonichthys macrolepidotus*	SSC	Endemic to California's Central Valley. Primarily freshwater fish, but are tolerant of moderate salinity and can survive in water with salinities of 10-18 parts per thousand. Spawn on submerged vegetation in temporarily flooded upland and riparian habitat. Spawning occurs in the lower reaches of rivers, dead-end sloughs and in the larger sloughs. Found in Sacramento-San Joaquin Delta.	**No Potential.** No estuarine or other suitable aquatic habitat is present in the Project Area for this species.	No further actions are recommended for this species.
Invertebrates				
vernal pool fairy shrimp *Branchinecta lynchi*	FT	Occurs mostly in vernal pools; however, it is also found in a variety of both natural and artificial wetland habitats, such as alkali pools, ephemeral drainages, stock ponds, roadside ditches, vernal swales, and rock outcrop pools.	**No Potential.** The Project Area does not contain any vernal pool features that are required to support the species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
California linderiella *Linderiella occidentalis*	SSI	Occurs in vernal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	**No Potential.** The Project area does not contain any vernal pool features that are required to support the species.	No further actions are recommended for this species.
Western bumble bee *Bombus occidentalis*	RP	Once common and widespread species, has declined precipitously from central California to Southern British Columbia, possibly due to disease.	**No Potential.** The last known observance of this species was in 1985. This species is presumed extant.	No further actions are recommended for this species.
Callippe silverspot butterfly *Speyeria callippe callippe*	FE, SSI	Two populations in San Bruno mountain and the Cordelia Hills are recognized. Hostplant is Viola pedunculata, which is found on serpentine soils. Most adults found on east-facing slopes; males congregate on hilltops in search of females.	**No Potential.** The Project Area does not contain habitat to support this species. The nearest occurrences are over 6 miles to the southwest in the hills (CNDDB 2018).	No further actions are recommended for this species.
monarch butterfly Danaus plexippus	SSI	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**No Potential.** The Project Area does not contain eucalyptus, Monterey pine, or Monterey cypress groves or the nearby water sources necessary for winter roosting by this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT, SSI, RP	Occurs only in the central valley of California, in association with blue elderberry (Sambucus spp.). Prefers to lay eggs in elderberrry 2 to 8 inches in diameter; some preference shown for "stressed" elderberry.	**No Potential.** The Project Area does not contain blue elderberry.	No further actions are recommended for this species.

*** Key to status codes:**

BCC	U.S. Fish & Wildlife Service (USFWS) Birds of Conservation Concern
CFP	CDFW Fully Protected Animal
FCT	Federal Candidate Threatened
FE	Federal Endangered
FT	Federal Threatened
RP	Sensitive species included in a USFWS Recovery Plan or Draft Recovery Plan
SE	State Endangered
SCT	State Candidate Threatened
SI	California Department of Fish and Wildlife Special-Status Invertebrate.
SSC	California Department of Fish and Game (CDFG) Species of Special Concern
ST	State Threatened
Rank 1A	California Native Plant Society (CNPS) Rank 1A: Plants presumed extirpated in California and rare or extinct elsewhere
Rank 1B.1	California Native Plant Society (CNPS) Rank 1B.1: Plants rare, threatened or endangered in California and elsewhere (seriously threatened in California)
Rank 1B.2	California Native Plant Society (CNPS) Rank 1B.2: Plants rare, threatened, or endangered in California and elsewhere (moderately threatened in California)
Rank 2B.2	California Native Plant Society (CNPS) Rank 2B.2: Plants rare, threatened, or endangered in California, but more common elsewhere (moderately threatened in California)
Rank 3	California Native Plant Society (CNPS) Rank 3: Plants about which more information is needed (a review list).
Rank 4.3	California Rare Plant Rank 4.3: Plants of Limited Distribution - A Watch List (not very threatened in California)
WBWG	Western Bat Working Group Priority Species
WL	CDFW Watch List

****Potential species occurrence definitions:**

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

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.

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.

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 has a low probability of being found on the site.

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).

Appendix C

Representative Photographs of the Project Area

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Photograph 1. Image depicts the disced field of non-native grasses in the central portion of the Project Area. The single valley oak individual within the Project Area is visible in the background. View facing northeast.

Photograph taken February 12, 2018.

Photograph 2. Image depicts a portion of the manmade ditch lined with plastic tarp that borders the north and eastern boundary of the Project Area. View facing south. Scattered coyote brush individuals are visible in the background.

Photograph taken February 12, 2018.