

## Appendix B

# Biological Resources Assessment

---

# Biological Resources Assessment

2<sup>ND</sup> AND WALPERT STREETS  
CITY OF HAYWARD, ALAMEDA COUNTY  
CALIFORNIA

---

**Prepared For:**

Nora Monette  
Principal Project Manager  
David J. Powers & Associates  
1885 The Alameda # 204  
San Jose, California

**Contact:**

Leslie Lazarotti  
lazarotti@wra-ca.com

**Date:**

August 2015



*This page intentionally left blank.*

## TABLE OF CONTENTS

1.0 INTRODUCTION .....	3
2.0 REGULATORY BACKGROUND .....	3
2.1 Special-Status Species .....	3
2.2 Sensitive Biological Communities .....	7
2.3 Local Policies, Ordinances, and Regulations.....	9
3.0 METHODS .....	10
3.1 Biological Communities.....	10
3.1.1 Non-sensitive Biological Communities .....	10
3.1.2 Sensitive Biological Communities .....	10
3.2 Special-Status Species .....	11
3.2.1 Literature Review .....	11
3.2.2 Site Assessment .....	12
4.0 RESULTS .....	13
4.1 Biological Communities.....	13
4.1.1 Non-Sensitive Biological Communities .....	14
4.1.2 Sensitive Biological Communities .....	17
4.2 Special-Status Species .....	18
4.2.1 Plants .....	18
4.2.2 Wildlife.....	21
5.0 SUMMARY AND RECOMMENDATIONS.....	27
5.1 Biological Communities.....	28
5.1.1 Potential Impacts, Avoidance, Minimization, and Mitigation Measures.....	28
5.1.2 Wetlands and Non-Wetland Waters .....	31
5.1.3 Riparian Habitat .....	31
5.1.3 Oak Woodland .....	32
5.2 Special-Status Plant Species .....	33
5.2.1 Avoidance and Minimization Measures.....	33
5.3 Special-Status Wildlife Species .....	33
5.4 Protected Trees .....	34
6.0 REFERENCES.....	36

**LIST OF FIGURES**

Figure 1. Study Area Location Map .....5  
Figure 2. Biological Communities within the Study Area ..... 15  
Figure 3. Special Status Plant Species within 2 miles of the Study Area ..... 19  
Figure 4. Special Status Wildlife Species within 2 miles of the Study Area .....23  
Figure 5. Potential Impacts to Sensitive Biological Communities within the Study Area. ....29

**LIST OF TABLES**

Table 1. Description of CNPS Ranks and Threat Codes ..... 7  
Table 2. Biological Communities within the Study Area..... 14

**LIST OF APPENDICES**

- Appendix A - List of Observed Plant and Animal Species
- Appendix B - Potential for Special-Status Species to Occur in the Study Area
- Appendix C – Representative Photographs of the Study Area

## **1.0 INTRODUCTION**

On June 26, 2014, WRA, Inc. performed an assessment of biological resources at the parcels south of the intersection of 2<sup>nd</sup> and Walpert Streets (Study Area) in the city of Hayward, Alameda County, California (Figure 1). The purpose of the assessment was to review the Study Area's biological resources under the California Environmental Quality Act (CEQA) as part of a land use study and development of General Plan and Zoning amendments. The Study Area consists of 15.40 acres of undeveloped and developed parcels.

This report describes the results of the site visit, which assessed the Study Area for the (1) potential presence of special-status species; (2) potential to support special-status species; and (3) presence of other sensitive biological resources protected by local, state, and federal laws and regulations. This report also contains an evaluation of potential impacts to special-status species and sensitive biological resources that may occur as a result of the proposed project and potential mitigation measures to compensate for those impacts.

A biological resources assessment provides general information on the potential presence of sensitive species and habitats. The biological resources assessment is not an official protocol-level survey for listed species that may be required for project approval by local, state, or federal agencies. However, specific findings on the occurrence of any species or the presence of sensitive habitats may require that protocol surveys be conducted. This assessment is based on information available at the time of the study and on site conditions observed on the date of the site visit.

## **2.0 REGULATORY BACKGROUND**

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

### **2.1 Special-Status Species**

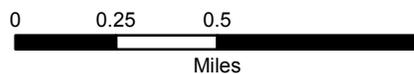
Special-status species include those plants and wildlife species that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing, under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW; previously known as the California Department of Fish and Game [CDFG]) Species of Special Concern and Special-Status Invertebrates and U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern 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. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918 (MBTA) and California Fish and Game Code (FGC). Under this legislation, destroying active nests, eggs, or young is illegal. Also, bat species designated as "High Priority" by the Western Bat Working Group (WBWG) qualify for legal protection under Section 15380(d) of the CEQA Guidelines. Species designated "High Priority" are defined as "imperiled or are at high risk of imperilment based on available information on

*This page intentionally left blank.*



Figure 1. Study Area Location Map

DJP 2nd and Walpert  
Alameda County, California



Map Date: January 2013  
Map By: Derek Chan  
Base Source: ESRI/National Geographic

*This page intentionally left blank.*

distribution, status, ecology and known threats” (CDFG 2006). Plant species listed on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1 or 2 are also considered special-status plant species and must be considered under the CEQA. Rank 3 and Rank 4 species are not traditionally considered special-status species, but may be afforded protection under the CEQA. A description of the CNPS Ranks is provided below in Table 1.

Table 1. Description of CNPS Ranks and Threat Codes

<b>California Rare Plant Ranks (formerly known as CNPS Lists)</b>	
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
<b>Threat Ranks</b>	
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 designated 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 recovery of the species. 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 recovery of the species are protected by the prohibition against adverse modification of designated Critical Habitat.

## **2.2 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 FGC, 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, 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 “non-wetland waters” and are often characterized by an ordinary high water mark (OHWM). Non-wetland waters generally include lakes, rivers, streams, and other open-water habitats. 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 State Water Board and the Regional Water Quality Control Boards (RWQCB) protect all waters under their regulatory scope and have 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. Regional Water Quality Control Board 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 under the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or that 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 for the project. 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 in the form of Waste Discharge Requirements.

## Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600 et seq. of the FGC. Alterations to or work within or adjacent to streambeds or lakes generally require a Notification of Lake or Streambed Alteration. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). “Riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and

occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Notification of Lake or Streambed Alteration.

### Oak Woodland

Under the California Oak Woodlands Conservation Act (2004), impacts to oak woodlands receive consideration under CEQA regardless of whether the woodland is composed of oak (*Quercus* spp.) vegetation types considered to be sensitive by the CDFW. California Public Resources Code (PRC) 21083.4 requires each county in California to implement an oak woodland protection policy to mitigate for the loss of oak woodlands resultant from approved projects within their jurisdiction. In this policy, oak trees are defined as all native species of oaks larger than five inches DBH (diameter at breast height, or 4.5 feet above grade). At least one of four mitigation alternatives for significant conversions of oak woodlands are required in this regulation: 1) conserve oak woodlands through the use of a conservation easement, 2) plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees, 3) contribute funds to the Oak Woodlands Conservation Fund, as established under Section 1363 (a) of the Fish and Game Code, and 4) other mitigation measures developed by the County. Oak woodlands were mapped within the Study Area using aerial imagery (Google Earth 2015) and field observation during the site visit. The oak woodlands observed within the Study Area are described in Section 4.1.2 below.

### Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or that have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDDB; CDFW 2014). Sensitive plant communities are also identified by CDFW (CDFG 2003, 2007, 2009). CNDDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2014) 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 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.

## **2.3 Local Policies, Ordinances, and Regulations**

### City of Hayward Tree Preservation Ordinance

The City of Hayward Tree Preservation Ordinance encourages the preservation and avoidance of trees during development projects. The City of Hayward Municipal Code, Chapter 10 Article 15 declares it unlawful to remove, destroy, cut branches over one-inch diameter, disfigure or cause to be removed or destroyed any protected tree within the City without first obtaining a Tree Removal and Cutting Permit. Protected trees are defined as those with a minimum diameter at breast height (DBH) of eight inches, street trees, memorial trees dedicated by a City-recognized entity, specimen trees that define a neighborhood or community, and those trees planted to replace a protected tree. In addition, most native trees, such as but not limited to oaks and California bay (*Umbellularia californica*), are protected when they measure at least

four inches DBH. Trees located on developed single-family residential lots that cannot be further subdivided are exempt from the ordinance, unless such trees have been required or are protected as a condition of previous permit approvals.

### 3.0 METHODS

On June 26, 2014, the Study Area was traversed on foot to determine (1) plant communities present within the Study Area, (2) if existing conditions provide 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 summarized in Appendix A. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2014), except where noted. Because of recent changes in classification for many of the taxa treated by Baldwin et al. and the Jepson Flora Project, relevant synonyms are provided in brackets. 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.

#### 3.1 Biological Communities

Prior to the site visit, the Soil Survey of Alameda County, California, Western Part (NRCS 2014, CSRL 2014), previous biological resource assessments (WRA 2007), and aerial photographs of the Study Area were examined to determine if any unique soil types or aquatic features have been previously identified in the Study Area. Biological communities present in the Study Area were classified based on existing plant community descriptions described in *A Manual of California Vegetation* (Sawyer et al. 2009) and *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). However, in some cases it was necessary to identify variants of community types or communities that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by the 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 the CEQA or other state, federal, or local laws, regulations or 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 the CEQA or other applicable federal, state, or local laws, regulations or ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

#### Wetlands and Non-Wetland Waters

The Study Area was surveyed to determine whether any wetlands or non-wetland waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFW may be present. The preliminary assessment of wetlands was based primarily on the presence of wetland plant

indicators, but may also include any observed indicators of wetland hydrology or wetland soils. Any potential wetland areas were identified as areas dominated by plant species with a wetland indicator status<sup>1</sup> of OBL, FACW, or FAC as given on the current National Wetlands Plant List (Lichvar 2013). Evidence of wetland hydrology may include direct evidence (i.e., primary indicators) such as visible inundation or saturation, algal mats, or oxidized root channels, or indirect evidence (i.e., secondary indicators) such as a water table within two feet of the soil surface during the dry season. Some indicators of wetland soils include dark colored soils, soils with a sulfidic odor, or soils that contain redoximorphic features, as defined by the Natural Resources Conservation Service (NRCS) publication *Field Indicators of Hydric Soils in the United States* (NRCS 2010). The preliminary assessment of non-wetland waters assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as an OHWM or a defined drainage course.

The preliminary assessment conducted during the biological resources assessment does not constitute an official wetland delineation. Collection of additional data may be necessary to prepare a wetland delineation report suitable for submission to the Corps.

### Other Sensitive Biological Communities

The Study Area was evaluated for the presence of other sensitive biological communities, including riparian areas, and sensitive plant communities recognized by the CDFW. Prior to the site visit, aerial photographs, local soil maps, the CDFW's *List of Vegetation Alliances* (CDFG 2009), and *A Manual of California Vegetation* (Sawyer et al. 2009) were reviewed to assess the potential for sensitive biological communities to occur in the Study Area. All vegetation alliances within the Study Area with a State Rank of 1 through 3 were considered sensitive biological communities and were mapped. Some communities in the Study Area may not be considered rare by the CDFW, but are afforded special protections when associated with wetland or riparian habitats. Sensitive biological communities observed in the Study Area are described in Section 4.1.2, below.

## **3.2 Special-Status Species**

### *3.2.1 Literature Review*

The potential for special-status species to occur in the Study Area was evaluated by first determining which special-status species have been documented in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special-status plant and wildlife species focused on the Hayward U.S. Geological Survey (USGS) 7.5-minute quadrangle. 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:

- California Natural Diversity Database (CDFW 2014)

---

<sup>1</sup> OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative Wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

- USFWS quadrangle species lists (USFWS 2014)
- CNPS Rare and Endangered Plant Inventory (CNPS 2014)
- CDFG publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- CDFG publication “Amphibians and Reptile Species of Special Concern in California” (Jennings 1994)
- CDFG publication “California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California” (Shuford and Gardali 2008).
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- Alameda County Breeding Bird Atlas (Richmond et al. 2011)
- Fairy Shrimps of California’s Puddles, Ponds and Playas (Erikson and Belt 1991).
- National Marine Fisheries Service (NMFS) distribution maps for California Salmonid species (NMFS 2007).

### 3.2.2 Site Assessment

An assessment of the potential for special-status plant and wildlife species to occur in the Study Area was conducted based on the literature review and types and condition of habitats observed in the Study Area. The potential for occurrence is a rating of general habitat suitability that considers several factors related to the ability of a site to support a particular species, including:

- Historic and existing species range and documented occurrences in the vicinity;
- Current understanding of the life history and habitat requirements of each species;
- Suitability of physical and biological conditions of the site to support sustainable populations including appropriate breeding, foraging, and dispersal habitat; and
- Existing and historic on-site and surrounding land uses that may affect habitat suitability.

Each special-status species identified in the literature search as occurring in the vicinity of the Study Area was assigned a potential for occurrence rating based on the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species. For wildlife, this is based on a lack of one or more essential habitat elements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, or disturbance regime). Species surveys are not considered necessary.
- 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. Species surveys not considered necessary but may be performed to confirm species absence.
- 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. Species surveys may be necessary to avoid project impacts.

- 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. Species surveys may be necessary to avoid project impacts.

Statements of results and recommendations for further actions are provided for each species based on the potential for occurrence rating and available survey results if previous surveys have been conducted. Presence or absence results may utilize the following categories, if applicable:

- Presumed Absent. Species not observed during surveys or there is no potential for occurrence.
- Present. Species was observed on the site or has been documented recently as being on the site.

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 of the Study Area to determine its potential to occur in the Study Area. The site assessment 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 was observed during the site visit, its presence was recorded and it is discussed in Section 4, below. For some species, a site assessment visit 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

The 15.40-acre Study Area is located in the City of Hayward, and consists of a combination of vacant, residential, and City-owned parcels. The Study Area ranges from approximately 155 to 298 feet (47 to 91 meters) in elevation and is surrounded by urban and suburban land uses on nearly all sides, including residential, commercial, and public uses such as Hayward High School to the north. The perennial Ward Creek with its associated riparian forest vegetation lines the southern perimeter of the Study Area, and enters an underground culvert outside of the Study Area that ultimately drains to San Francisco Bay. The Study Area is partially developed with a mix of single-family residences or undeveloped open space with mowed and disked grasslands and forested riparian corridors.

The following sections present the results and discussion of the biological assessment within the Study Area.

### 4.1 Biological Communities

Table 1 summarizes the area of each biological community type observed in the Study Area. Non-sensitive biological communities in the Study Area include non-native annual grassland and developed areas. Three sensitive biological community types are found in the Study Area: oak woodland, riparian forest, and non-wetland waters. Descriptions for each biological

community are contained in the following sections. Biological communities within the Study Area are shown in Figure 2.

Table 2. Biological Communities within the Study Area.

Community Type	Approximate Area (acres/linear feet[LF])
<i>Non-Sensitive Biological Communities</i>	
Non-native annual grassland	11.65
Development (Urban/landscaping)	0.76
<i>Sensitive Biological Communities</i>	
Waters	1,026 LF*
Riparian forest	2.69
Oak woodland	0.31
<b>Total Study Area:</b>	<b>15.41</b>

\*this measurement is included within the 2.79-acre of riparian forest

#### 4.1.1 Non-Sensitive Biological Communities

##### Non-Native Annual Grassland

Non-native annual grassland is present in the large, steep undeveloped parcels of the Study Area. This community type is described as non-native grassland by Holland (1986) and California annual grassland by Sawyer (2009), and is dominated by exotic annual grasses with scattered native and non-native forbs. At the time of this assessment, disked areas of non-native annual grasslands were sparsely vegetated and consisted almost exclusively of common invasive grasses such as oats (*Avena* sp.), riggut brome (*Bromus diandrus*) and Italian ryegrass (*Festuca perennis*). The exotic herbaceous species observed in this community included rose clover (*Trifolium hirtum*), chicory (*Cichorium intybus*), fennel (*Foeniculum vulgare*), wild radish (*Raphanus sativus*), field bindweed (*Convolvulus arvensis*) and black mustard (*Brassica nigra*). Scattered native and exotic trees and shrubs are naturally-occurring or planted in the grasslands, but do not generally create more than five percent average canopy cover, including coyote brush (*Baccharis pilularis*). Most portions of the Study Area mapped as non-native annual grassland continue to be managed by discing. Based on aerial imagery, the more eastern parcel of non-native grassland is recreationally used for motorsports.

Approximately 11.65 acres of non-native annual grassland are present in the Study Area, which was recently disked during the site visit. Given the disturbed nature but relatively large size of these grassland areas, they represent habitat for special-status and common plant and wildlife species. Wildlife species likely to be found in this or similar habitat include harvest mouse (*Reithrodontomys* sp.), shrew (*Sorex* sp.), western meadowlark (*Sturnella neglecta*), and gopher snake (*Pituophis catenifer*).

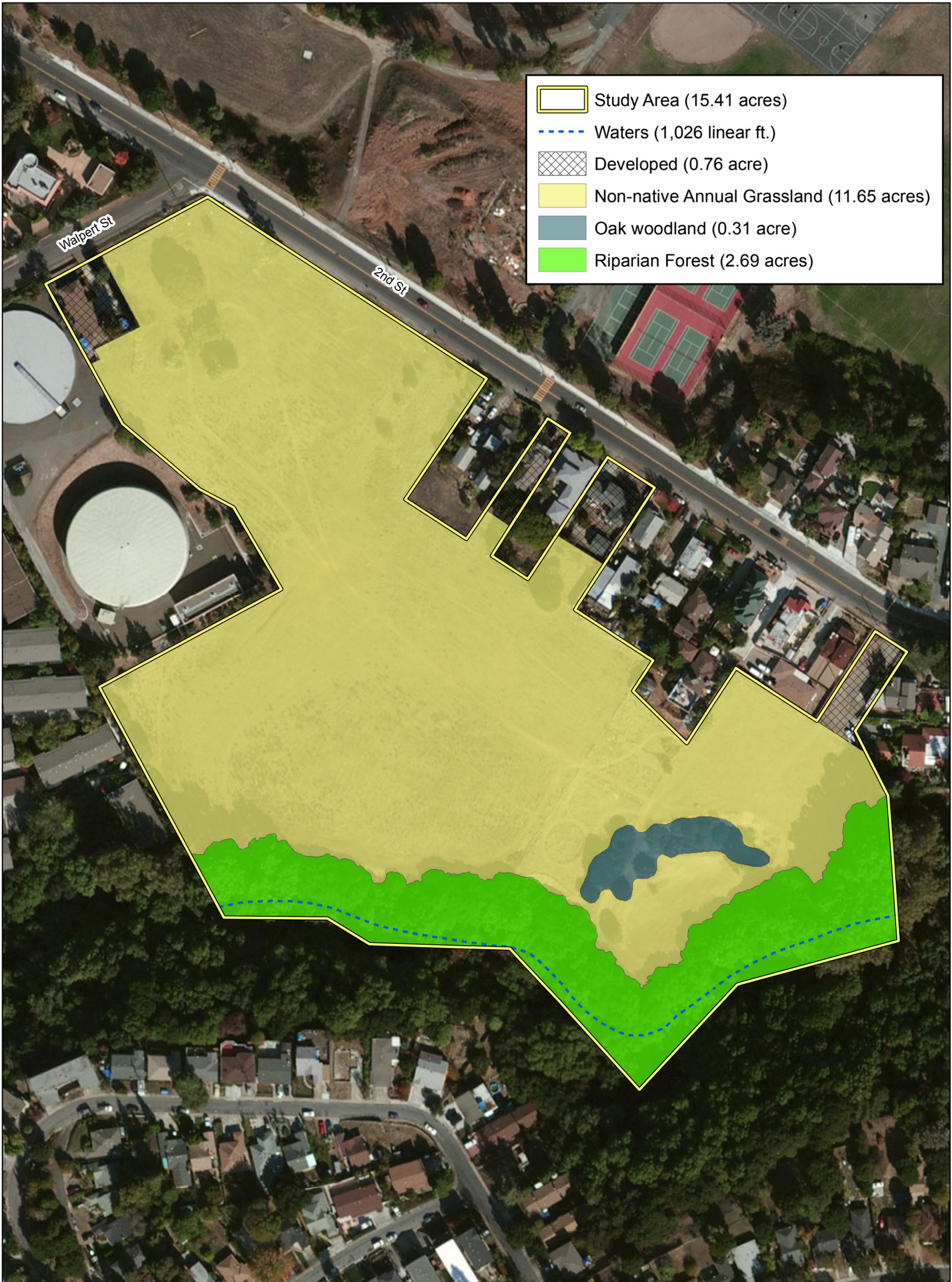
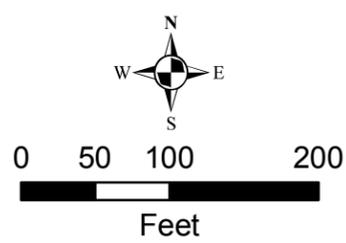


Figure 2. Biological Communities within the Study Area

DJP 2nd and Walpert  
Alameda County, California



Date: October 2014  
Map By: DC  
Base Source: ESRI World Imagery (2010)

*This page intentionally left blank.*

## Development (Urban/Landscaping)

Development areas consist of all portions of the Study Area not mapped as a natural community type, and include commercial and residential uses, roads, and other areas dominated by human uses. Much of these developed areas contain planted exotic vegetation and casually- to intensively-maintained landscaping. Scattered native trees, primarily coast live oak (*Quercus agrifolia*), persist in residential yards.

Urban development and landscaping covers approximately 0.76 acre of the Study Area, and these areas are not likely to provide habitat for special-status plant species due to the presence of invasive plants and the high level of disturbance. The primary habitat value of these areas for wildlife species lies in the trees, which may be utilized by both birds and bats. Species that may be found here include rock dove, European starling (*Sturnella vulgaris*), house sparrow (*Passer domesticus*), Yuma myotis (*Myotis yumanensis*), and roof rat (*Rattus rattus*).

### 4.1.2 Sensitive Biological Communities

#### Waters

Approximately 1,026 linear feet of non-wetland waters are present in the Study Area comprised primarily of Ward Creek, a perennial stream. Most of the creek was still flowing with several inches of water at the time of the assessment visit, which was conducted in early summer following a historically dry winter season. The creek is generally two to eight feet wide with a gravelly substrate. Many fish barriers and other structures that reduce wildlife habitat values are present, especially to the west of the Study Area where most non-wetland waters flow through an underground culvert.

#### Riparian Forest

Riparian forest lines Ward Creek along the southern perimeter of the Study Area and contains a mix of urban plantings with invasive and native trees. Riparian forest within the Study Area is dominated by coast live oak and California bay, with scattered big leaf maple (*Acer macrophyllum*) and blue gum (*Eucalyptus globulus*). These forests are typical of oak/bay forests in the San Francisco Bay Area, and are similar to the coast live oak forest and southern coast live oak riparian forest communities described by Holland (1986) and the coast live oak series and California bay series described by Sawyer (2009). A dense tree canopy results in minimal understory vegetation, including scattered toyon, snowberry (*Symphoricarpos albus*), and poison oak (*Toxicodendron diversilobum*). The riparian forest observed within the Study Area has moderate infestations of invasive plants such as English ivy (*Hedera helix*), Himalayan blackberry (*Rubus discolor*), and cape ivy (*Delairea odorata*) along the stream banks. A homeless encampment was observed within the riparian forest of the Study Area, although it did not appear to currently be in use.

Riparian forest (approximately 2.69 acres) within the Study Area provides the remaining native plant habitat and wildlife corridors that connect to larger natural areas to the east and south. Riparian forest was mapped based on aerial imagery (Google Earth 2015) and field observations during the site visit. All contiguous forest canopies on the steep slopes lining perennial and seasonal creeks were considered riparian forest, although the actual delineation

of riparian corridors under the jurisdiction of CDFW may result in narrower corridors more directly influenced by the creek channels. Wildlife species that may be found in riparian forest include black-tail deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), lesser goldfinch (*Carduelis psaltria*), spotted towhee (*Pipilo maculatus*), and chorus frog (*Pseudacris regilla*).

### Oak Woodland

Oak woodland is present in a disturbed, remnant patch of the Study Area, adjacent to more intact riparian forested corridors. This community is similar to the coast live oak woodland community described by Holland (1986) and the coast live oak series described by Sawyer (2009). This community is typically dominated by coast live oak with an understory of non-native annual grasses and both native and non-native shrubs. It is found generally on steep slopes, raised stream banks, and stream terraces.

Within the Study Area, oak woodland persists in a small remnant patch, surrounded by areas of graded, disturbed soils and ruderal vegetation or non-native annual grassland species. Many of the oak woodland areas appear to be regularly mowed, grazed, or disced. The native species diversity in this community type is lower than most riparian forest in the Study Area.

The oak woodland community type covers approximately 0.31 acre within the Study Area, and is considered sensitive for the purposes of this report because of the concentration of native oak trees protected by local tree ordinances. However, these areas are mostly very disturbed and fragmented compared to a typical coast live oak woodland community in less urban areas. They are not as valuable as the riparian forest within the Study Area in terms of habitat, total acreage, or connectivity to other native habitats in the vicinity. However, given that the oak woodland is adjacent to riparian forest, it may provide the valuable habitat and enhance wildlife corridors and transitional habitats between forest and grassland areas. Wildlife species that may utilize these areas include Northern Flicker (*Colaptes auratus*), Western Scrub-Jay (*Aphelocoma californica*), fox squirrel (*Sciurus niger*), and raccoon (*Procyon lotor*).

## **4.2 Special-Status Species**

### *4.2.1 Plants*

Based upon a review of the resources and databases given in Section 3.2.1, 14 special-status plant species have been documented in the vicinity of the Study Area. Plant species occurrences documented in the CNDDDB within two miles of the Study Area are shown in Figure 3. The Study Area has the potential to support two of these species: western leatherwood (*Dirca occidentalis*) and Diablo helianthella (*Helianthella castanea*). Appendix B summarizes the potential for occurrence for each special-status plant species occurring in the Hayward USGS 7.5 minute quadrangle. No special-status plant species were observed in the Study Area during the assessment site visit, nor are any known to have been observed in previous studies.

The remaining species documented to occur in the vicinity of the Study Area are unlikely or have no potential to occur, as the natural areas within the Study Area are highly disturbed by historic uses, grazing, discing, mowing, homeless encampments, and surrounding urban development. The site assessment occurred during the blooming period of nine of the 14 special-status plant species documented to occur in the greater vicinity of the Study Area; none of these potentially blooming species were observed during the site visit. However, the

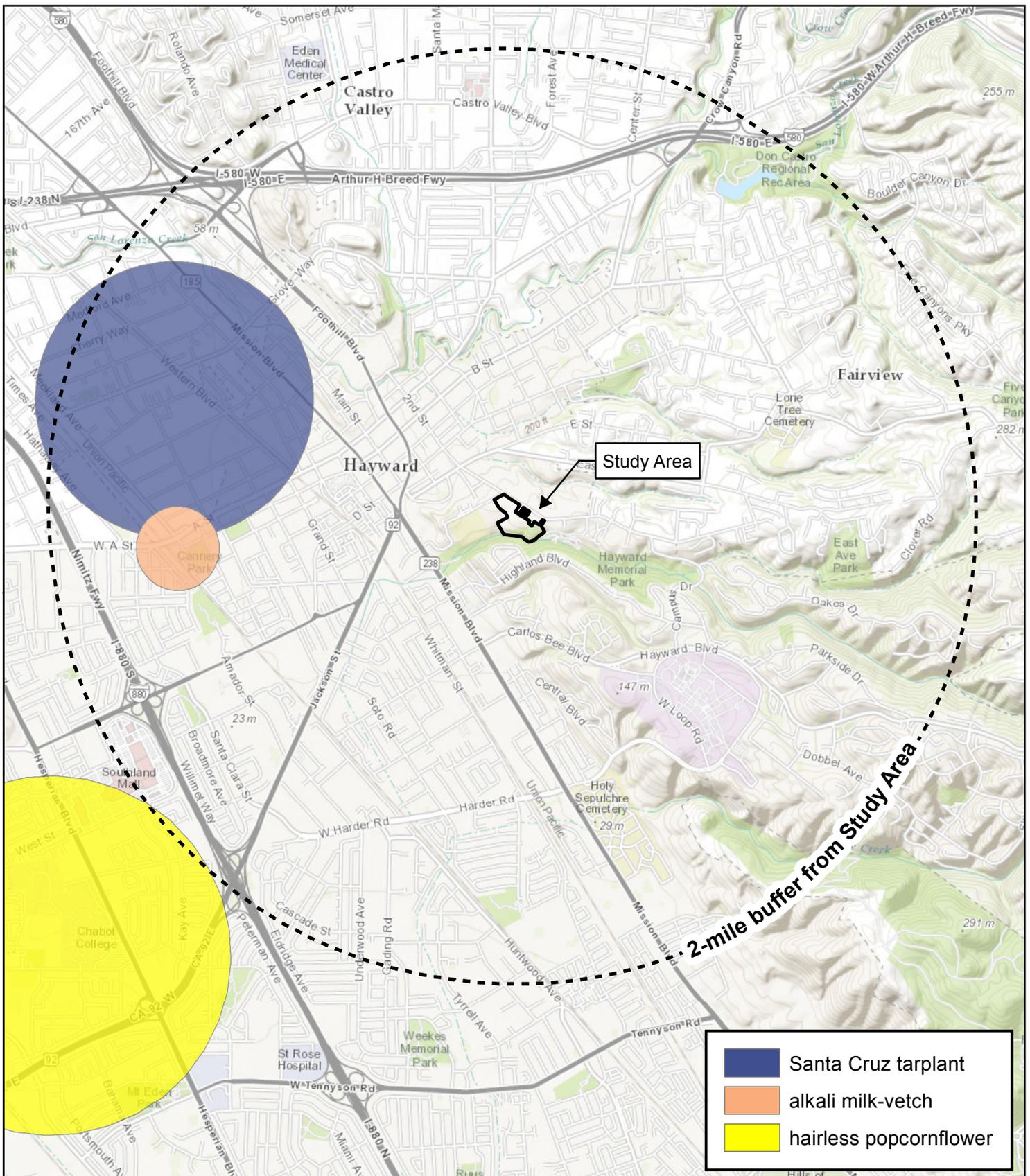
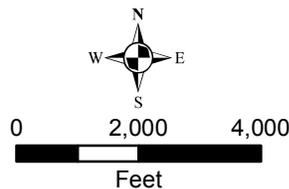


Figure 3. Special Status Plant Species within 2 miles of the Study Area

DJP 2nd and Walpert  
Alameda County, California



Date: September 2014  
Map By: DC  
Map Source: CNDDB

*This page intentionally left blank.*

assessment was not a protocol-level rare plant survey, so presence of any special-status species cannot be ruled out. Plants observed during this reconnaissance-level survey were identified to the species level when possible, and are listed in Appendix A.

Three species documented to occur within 2 miles of the Study Area (Figure 3) have unlikely potential to occur within the Study Area including: Santa Cruz tarplant (*Holocarpha macradenia*), alkali milk-vetch (*Astragalus tener* var. *tener*), and hairless popcorn-flower (*Plagiobothrys glaber*). All three of these species prefer alkaline substrates in more coastal habitats, including valley and foothill grasslands; however, as stated above, grassland habitat within the Study Area is heavily disturbed through discing, mowing, and recreational use.

**Western leatherwood (*Dirca occidentalis*). CNPS List 1B. Moderate.** Western leatherwood is a deciduous shrub in the Mezereum family (Thymelaeaceae) that typically occurs in riparian areas in broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and mesic riparian woodland from 50 to 410 meters in elevation. The species is known from the San Francisco Bay Area and blooms from January to March. The closest proximate documented occurrence is from 1991, located approximately 5.5 miles north in Chabot Regional Park. The vegetative form of this species was not observed during the site visit.

**Diablo helianthella (*Helianthella castanea*). CNPS List 1B. Moderate.** Diablo helianthella is a perennial herb in the sunflower family (Asteraceae) that occurs over a very limited geographic area, primarily in Contra Costa and Alameda counties. It occurs in a variety of habitats including broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland, at elevations from 60 to 1,300 meters. Diablo helianthella blooms from March to June. Populations in the vicinity of the Study Area are located primarily in the Oakland Hills within 3 to 4 miles in the north, northeast, and southwest. Based on the presence of this species within similar adjacent habitat in the Oakland Hills, this species has been determined to have a moderate potential to occur in the Study Area.

#### 4.2.2 Wildlife

Fifty-six special-status wildlife species have been recorded in the vicinity of the Study Area. Appendix B summarizes the potential for each of these species to occur in the Study Area. Wildlife species occurrences documented in the CNDDDB within five miles of the Project Area are shown in Figure 4. One special-status wildlife species was observed in the Study Area during the site assessment. Two special-status wildlife species have a high potential to occur in the Study Area, and six special-status wildlife species have a moderate potential to occur in the Study Area. Special-status wildlife species that were observed or have a high or moderate potential to occur in the Study Area are discussed below. In addition, federal-listed species are discussed that are documented in the vicinity of the Study Area but are unlikely to occur. Impacts to wildlife species likely to occur within the Study Area can be avoided by following the precautionary measures outlined in Section 5.3

#### Species Observed within the Study Area

**Nuttall's woodpecker (*Picoides nuttalli*). USFWS Bird of Conservation Concern. Present.** Nuttall's woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian

*This page intentionally left blank.*

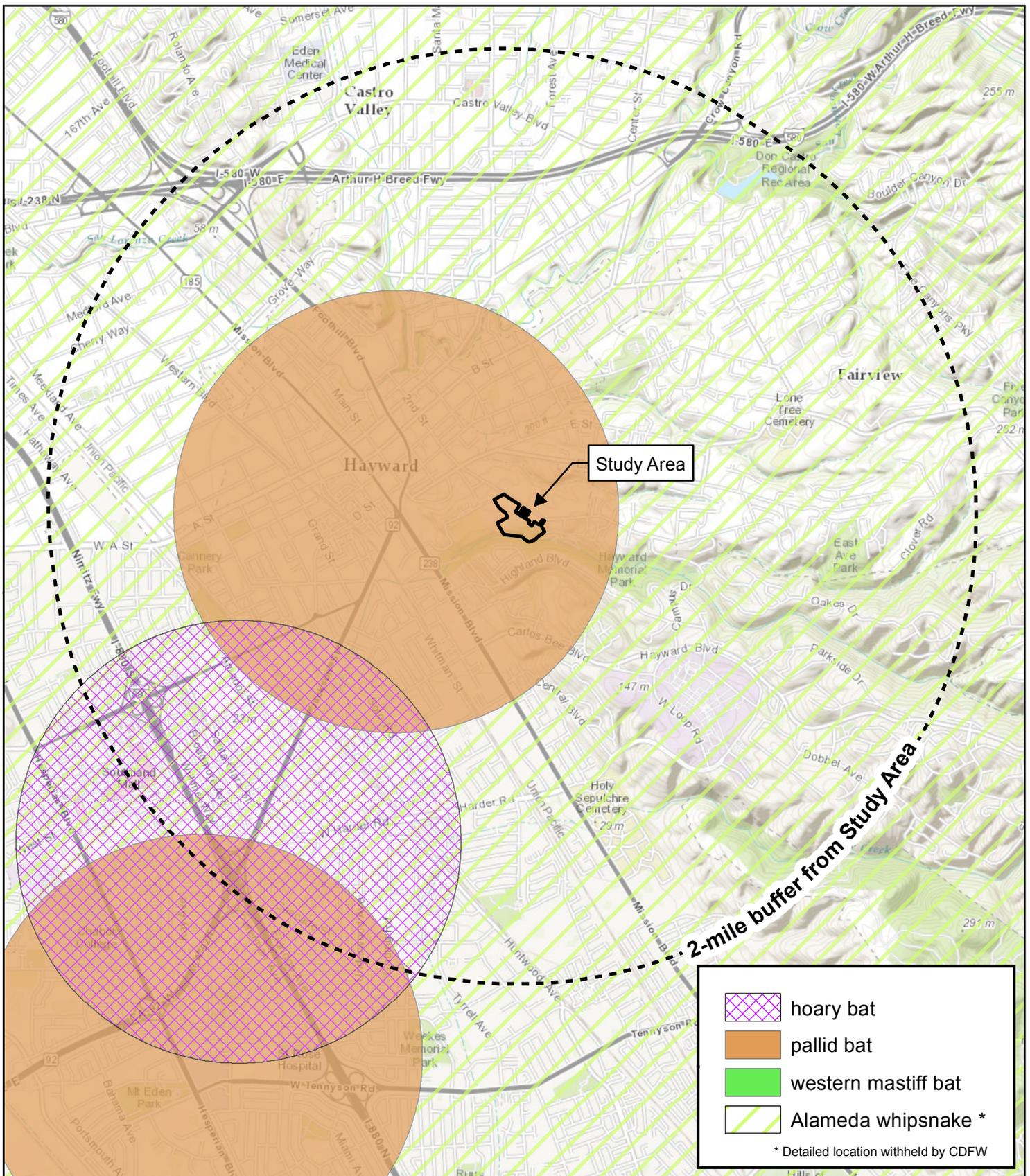
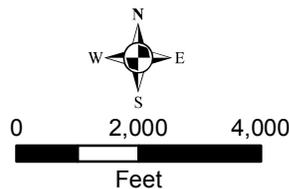


Figure 4. Special Status Wildlife Species within 2 miles of the Study Area

DJP 2nd and Walpert  
Alameda County, California



Date: September 2014  
Map By: DC  
Map Source: CNDDB

*This page intentionally left blank.*

areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. This species forages on a variety of arboreal invertebrates. This species was observed within the riparian forest habitat during the June 26, 2014 site visit.

#### Species with a High Potential to Occur within the Study Area

**White-tailed kite (*Elanus leucurus*), CDFW Fully Protected Species. High Potential.** Kites occur in low elevation grassland, agricultural, wetland, oak woodland, and savannah habitats. Riparian zones adjacent to open areas are also used. Vegetative structure and prey availability seem to be more important than specific associations with plant species or vegetative communities. Lightly grazed or ungrazed fields generally support large prey populations and are often preferred to other habitats. Kites primarily feed on small mammals, although, birds, reptiles, amphibians, and insects are also taken. Nest trees range from single isolated trees to trees within large contiguous forests. Preferred nest trees are extremely variable, ranging from small shrubs (less than 10 ft. tall), to large trees (greater than 150 ft. tall) (Dunk 1995). Grassland communities within the Study Area provide foraging habitat for this species, and trees within the grassland and riparian communities provide suitable nesting habitat.

**Oak Titmouse (*Baeolophus inornatus*), USFWS Bird of Conservation Concern. High Potential.** Oak titmouse occurs in open woodlands of oak, pine and oak, and juniper and oak. The nest is built in woodpecker holes and natural cavities; titmice sometimes partially excavate their own cavity. This species is likely to use the riparian communities and oak trees within the Study Area for foraging and nesting.

#### Species with a Moderate Potential to Occur within the Study Area

**Pallid bat (*Antrozous pallidus*), CDFW Species of Special Concern, WBWG High Priority. Moderate Potential.** Pallid bat is found in a variety of low elevation habitats throughout California. It selects a variety of day roosts including rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are usually found under bridges, but also in caves, mines, and buildings. Pallid bats are sensitive to roost disturbance. Unlike most bats, pallid bats primarily feed on large ground-dwelling arthropods, and many prey are taken on the ground (Zeiner, et al. 1990). CNDDDB records show an occurrence of this species that covers the central Hayward area (CDFW 2014). Suitable roost habitat is present throughout the site in tree cavities and vacant buildings. Foraging habitat is available in the Study Area in the open grassland habitat and woodlands near Ward Creek. Presence of this species may also indicate suitable habitat for other sensitive bats including such species as Townsend's big-eared bat (*Corynorhinus townsendii*).

**Townsend's Big-Eared bat, (*Corynorhinus townsendii*), State Candidate (Threatened), CDFW Species of Special Concern, WBWG High Priority. Moderate Potential.** This species ranges throughout western North America, from British Columbia to central Mexico. They are typically associated with caves, but are also found in man-made structures, including mines and buildings. While many bats wedge themselves into tight cracks and crevices, big-eared bats hang from walls and ceilings in the open. Males roost singly during the spring and summer months while females aggregate in the spring at maternity roosts to give birth. Females roost with their young until late summer or early fall, until young become independent, flying and foraging on their own. Hibernation roosts tend to be made up of small aggregations of individuals in central and southern California (Pierson and Rainey 1998). Foraging occurs in

open forest habitats where they glean moths from vegetation. This species may roost in vacant buildings with entrance access within the Study Area, and foraging habitat is available around Ward Creek and the surrounding riparian corridor.

**Western Red bat (*Lasiurus blossevillii*), CDFW Species of Special Concern, WBWG High Priority.** This species is highly migratory and broadly distributed, reaching from southern Canada through much of the western United States. They are typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas possibly in association with riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2010). This species may use the trees within the riparian and grassland communities within the Study Area for roosting, and may forage throughout the Study Area.

**Loggerhead shrike (*Lanius ludovicianus*), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential.** A common resident of lowlands and foothills throughout California, loggerhead shrike prefers open habitats with scattered trees, shrubs, posts, fences, utility lines, or other perches. Nests are usually built on a stable branch in a densely-foliaged shrub or small tree. This species is found most often in open-canopied valley foothill hardwood, conifer, pinyon-juniper, or desert riparian habitats. While this species eats mostly arthropods, it also takes amphibians, small reptiles, small mammals or birds, and is also known to scavenge on carrion. Loggerhead shrike may forage in the grassland communities within the Study Area and there is a moderate potential for this species to nest in trees and shrubs in the grassland and riparian vegetation.

**Allen's hummingbird (*Selasphorus sasin*), USFWS Bird of Conservation Concern. Moderate Potential.** Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast, and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Mitchell 2000). This species feeds on nectar, as well as insects and spiders. There are a variety of suitable habitats for this species throughout much of the Study Area; areas most likely to be utilized for breeding include riparian corridors interfacing with scrub habitats and planted tree groves. There is a moderate potential for this species to nest within the riparian communities within the Study Area.

#### Federal Listed Species Unlikely to Occur within the Study Area

Nine federal listed wildlife species documented in the vicinity of the Study Area are unlikely to occur within the Study Area. These species are listed and briefly discussed below.

- California tiger salamander (*Ambystoma californiense*)
- California red-legged frog (*Rana draytonii*)
- Alameda whipsnake (*Masticophis lateralis euryxanthus*)
- Chinook salmon (*Oncorhynchus tshawytscha*)
- Coho salmon (*Oncorhynchus kisutch*), Sacramento River winter run and Central Valley spring run ESUs
- Steelhead (*Oncorhynchus mykiss*), Central Valley and central California coast ESUs
- Longfin smelt (*Spirinchus thaleichthys*)

- Green sturgeon (*Acipenser medirostris*)
- Vernal pool fairy shrimp (*Branchinecta lynchi*)

No vernal pools or other habitats that could hold water for a sufficient length of time to support breeding California tiger salamander were observed within the Study Area. Repeated disking of the grasslands within the Study Area over the past decade has removed any suitable estivation habitat for this species. The nearest recorded occurrence of this species is over 5 miles from the Study Area, and extensive development surrounding the Study Area makes it unlikely this species will move into the area (CDFW 2014).

No aquatic features that could hold water for a sufficient length of time to support breeding in California red-legged frog were observed within the Study Area. While Ward Creek and the adjacent riparian and upland habitats could constitute aquatic non breeding, dispersal, and upland estivation habitats, the expanse of developed lands surrounding the Study Area are significant barriers to dispersal for this species, likely precluding colonization of the Study Area (aerial photography). The nearest potential breeding habitat for this species is Don Castro Reservoir, 1.75 miles northeast of the Study Area and separated from the Study Area by development. Lastly, red-legged frog is unlikely to be found in Ward Creek because it is an incised, linear corridor and is approximately 4 miles away from the nearest CNDDDB occurrence (CDFW 2014).

Alameda whipsnake has been documented to occur near the Study Area and critical habitat for this species is located 2.5 miles to the east (CDFW 2014). However, the Study Area is unsuitable for this species. The grassland habitats within the Study Area appear to be regularly disced, and the Study Area has been surrounded by development for at least 20 years, limiting the potential for this species to disperse through or colonize the Study Area (aerial photography).

The five fish species listed above are unlikely to be found within the Study Area due to development. Although these species may have historically inhabited Ward Creek (Leidy et al 2005), the creek is now culverted for several miles downstream of the Study Area. Fish attempting to enter the Creek would not be able to swim past the extensive culverts, thus precluding access to the creek by anadromous or other fish from San Francisco Bay (Tillinger and Stein 1996).

Vernal pool fairy shrimp are unlikely to occur within the grassland communities of the Study Area. No seasonal wetland depressions were observed within the Study Area. The grasslands have been repeatedly disked over the past decade, repeatedly eliminating any areas that could hold standing water to support this species. Furthermore, the Study Area has been surrounded by development for at least 20 years; dramatically reducing the chance this species could colonize the site.

## 5.0 SUMMARY AND RECOMMENDATIONS

Three sensitive biological community types were identified within the Study Area including oak woodland, riparian forest, and non-wetland waters. Two special-status plant species and nine special-status wildlife species have a moderate or high potential to occur, or are present, within the Study Area. Potential impacts to sensitive biological communities and special-status

species within the Study Area were evaluated using the latest project plans from KTG Y Group, Inc. (2015). The following sections present recommendations for future studies and/or measures to avoid or reduce impacts to these species and sensitive habitats.

## 5.1 Biological Communities

Most of the Study Area is comprised of urban development, and non-native annual grassland, which are not sensitive biological communities. However, the Study Area contains approximately 1,026 linear feet of non-wetland waters associated with a perennial creek that is potentially within the jurisdiction of the Corps under Section 404 of the Clean Water Act, RWQCB under the Porter Cologne Act and Section 401 of the Clean Water Act, and CDFW under Section 1602 of the FGC. The Study Area also contains 2.69 acres of riparian oak/bay forest, some or all of which is potentially within the jurisdiction of CDFW under Section 1602 of the FGC.

Based on Project plans (KTGY 2015), and as shown on Figure 5, grading is expected to extend into the riparian corridor (2.69 acres; 0.04 acres of anticipated impacts), which will result in impacts. CDFW may claim jurisdiction over area mapped as riparian forest; if so, activities impacting riparian vegetation would require a permit from CDFW. Regardless of whether jurisdiction is claimed, the project should implement the mitigation measures identified in Section 5.1.1 to reduce impacts to a less than significant level under the CEQA. Additionally, a 1602 Streambed Alteration Agreement (SAA) is required from CDFW for impacts to creeks, creek banks, and riparian areas, including removal of riparian vegetation. Mitigation plans including success criteria and long-term monitoring requirements will also likely be required.

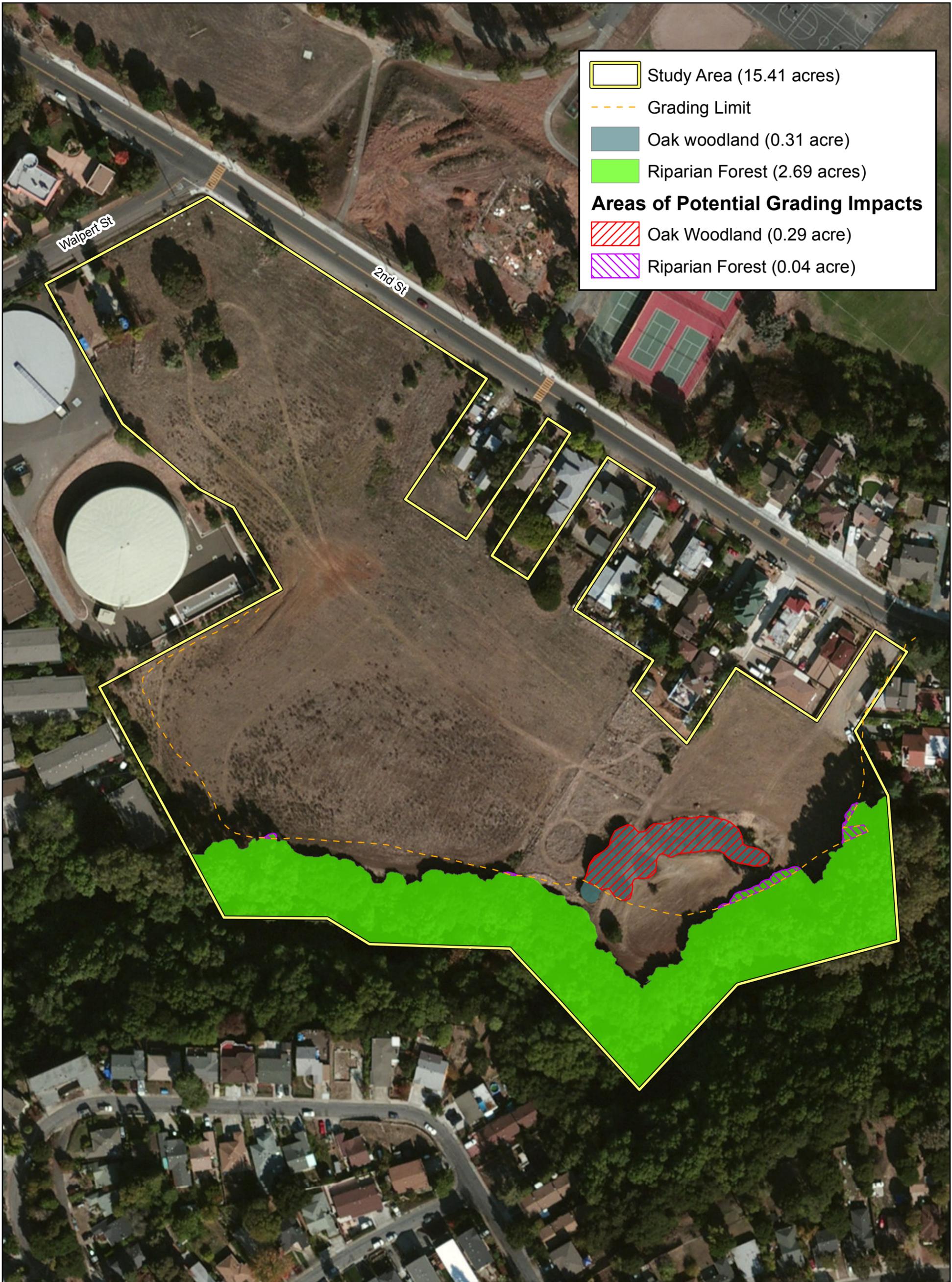
Based on the site visit, and Project plans (KTGY 2015), no impacts to Waters of the U.S. within the Corps-jurisdiction under Section 404 of the Clean Water Act, or Waters of the State within RWQCB jurisdiction under the Porter Cologne Act and Section 401 of the Clean Water Act are anticipated. If Project plans are altered to include more substantial impacts into area mapped as riparian forest or if any impacts to waters associated with Ward Creek are proposed, a jurisdictional wetlands delineation will be necessary. Depending on the proposed impacts, permits may be required from the Corps and RWQCB for impacts to Waters of the U.S.

The Study Area contains approximately 0.31 acres of oak woodland which is considered sensitive under the California Oak Woodlands Conservation Act. Additionally, individual trees within oak woodland and scattered in non-native annual grassland habitat will require tree removal permits pursuant to the Hayward Tree Preservation Ordinance. Anticipated impacts to sensitive biological communities within the Study Area are shown in Figure 5 and are discussed in detail below.

### 5.1.1 Potential Impacts, Avoidance, Minimization, and Mitigation Measures

To reduce the potential for impacts to sensitive communities and special-status species, the following general best management practices (BMPs) are recommended for implementation. Implementation of these general BMPs, in combination with the species- and habitat-specific measures discussed below, is intended to reduce or eliminate construction-related impacts:

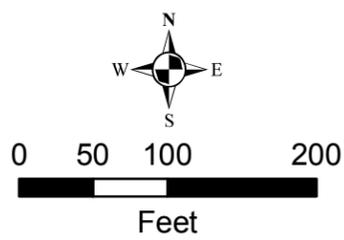
- All access, staging, and work areas shall be delineated with orange construction fencing, or similar, and all work activities shall be limited to these areas.



	Study Area (15.41 acres)
	Grading Limit
	Oak woodland (0.31 acre)
	Riparian Forest (2.69 acres)
<b>Areas of Potential Grading Impacts</b>	
	Oak Woodland (0.29 acre)
	Riparian Forest (0.04 acre)

Figure 5. Potential Impacts to Sensitive Biological Communities within the Study Area

DJP 2nd and Walpert  
Alameda County, California



Date: October 2014  
Map By: DC  
Base Source: ESRI World Imagery (2010)

*This page intentionally left blank.*

- All access, staging, and work areas shall be the minimum size necessary to conduct the work.

All staging, maintenance, and storage of construction equipment shall be performed in a manner to preclude any direct or indirect discharge of fuel, oil, or other petroleum products into the Project Area. No other debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete or washings thereof, or other construction-related materials or wastes will be allowed to enter into or be placed where they may be washed by rainfall or runoff into the basin or other aquatic features. All such debris and waste shall be picked up daily and shall be properly disposed of at an appropriate facility.

- Disturbance or removal of vegetation will not exceed the minimum necessary to conduct the work.
- Areas of ground disturbance shall be revegetated using an appropriate erosion control seed mix (for both sensitive and non-sensitive habitats) or will be covered with rock, wood chips, or other suitable erosion control materials as appropriate (for non-sensitive habitats only).
- Appropriate erosion control measures shall be installed around any stockpiles of soil or other materials which could be transported by rainfall or other flows.
- Stockpiles of soil or other materials that can be blown by wind shall be covered when not in active use.
- All trucks hauling soil, sand, and other loose materials shall be covered.

#### *5.1.2 Wetlands and Non-Wetland Waters*

Based on Project plans, there are no anticipated impacts to Waters of the U.S. or Waters of the State. If Project plans are altered to include more substantial impacts into area mapped as riparian forest or to waters associated with Ward Creek, the following measures may be necessary to mitigate for temporary or permanent impacts federal-protected non-wetland waters:

- Temporary and permanent impacts to federal-protected non-wetland waters in the Study Area will require a Corps Section 404 Nationwide Permit, a RWQCB Section 401 Water Quality Certification, and a CDFW 1602 Stream and Lake Alteration Agreement.
- BMPs should be used to lessen potential impacts to sensitive habitats. This includes the use of silt fencing, wattles, and other appropriate stormwater pollution prevention measures.
- Permitting agencies may require a mitigation and monitoring plan to restore or replace temporarily impacted wetland communities.

#### *5.1.3 Riparian Habitat*

Potential impacts to riparian vegetation could occur directly through riparian vegetation removal, trimming, or project-related encroachment into riparian habitat. Indirect impacts to riparian

vegetation could occur due to the proposed alteration of the existing site hydrology. The Project includes a bioretention basin, which is a requirement of the Alameda County Municipal Regional Permit (MRP; Order No. R2-2009-0074), for stormwater discharge, and is designed to capture stormwater runoff from newly constructed impervious surfaces to ensure that post-project peak flows do not exceed pre-project peak flows in the event of a 10 to 100-year storm event. Although project plans will potentially alter the amount of generalized site surface flows by directing runoff into the bioretention basin, it is not expected to result in significant impacts to the nearby edge of the riparian forest. The existing pre-project watershed is relatively small compared to the greater Ward Creek watershed, and the proposed changes will not significantly change the amount of water flowing to Ward Creek. Based on Project plans, there is a sufficient buffer between impervious surfaces and the riparian forest which will allow for localized infiltration to the root zone of the riparian trees. Moreover the trees that make up the outer edge of the riparian canopy are predominantly (approximately 86 percent; WRA 2015) composed of coast live oak, a deeply rooted, drought-resistant species that is adapted to annual fluctuations in precipitation (Steinberg 2002).

If work will occur within the vicinity of riparian habitat, the following avoidance and minimization measures are recommended:

- To ensure that potential impacts to riparian vegetation are avoided, or minimized exclusion and/or silt fencing should be placed outside of the dripline of all riparian vegetation that will be preserved and this fencing shall remain in place for the duration of construction. If removal of riparian vegetation is proposed, a Section 1602 Lake and Streambed Alteration Agreement from CDFW will be needed.
- Any work, including but not limited to grading or placement of fill, within the dripline of any trees associated with the riparian canopy or below TOB will require a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

### *5.1.3 Oak Woodland*

Oak woodland within the Study Area is considered sensitive under the California Oak Woodland Conservation Act. The Project activities proposed for the Study Area are anticipated to impact approximately 0.31 acres of oak woodland. Per the California Oak Woodland Conservation Act, the significance of an impact to oak woodland is ultimately determined by the County of Alameda. If impacts to oak woodland from project related activities are considered significant, the following mitigation measures may be required:

- Conservation of oak woodlands, through the use of conservation easements.
- Restoration of former oak woodlands or establishment of new oak woodlands through planting an appropriate number of replacement trees, including maintenance, monitoring, and replacement of failed plantings for a period of seven years. This mitigation requirement cannot account for more than one half of the mitigation pursuant to the California Oak Woodland Conservation Act.
- Contribution of funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the FGC.

Additional information regarding protected trees with the Study Area is discussed in The Arborist Survey Letter Report (WRA 2014), and Protected Tree Appraisal Report (WRA 2015), and discussed further in section 5.4 below.

## **5.2 Special-Status Plant Species**

Of the 14 special-status plant species known to occur in the vicinity of the Study Area, only two species, western leatherwood and Diablo helianthella, were determined to have a moderate potential to occur in the Study Area. Eleven species were determined to have a low potential to occur, and one was determined to have no potential. Riparian forest corridors provide the most intact native habitat remaining in the Study Area that could support special-status plants. Oak woodland within the Study Area is small and fragmented, and non-native grasslands have heavily disturbed vegetation and soils due to grazing, mowing, discing, and surrounding urban development, and are less likely to support special-status plants. The extent of the riparian canopy where Project related impacts are anticipated to occur consists of a small area along the fringe of the riparian canopy. This area borders the non-native annual grassland and is comprised of mainly non-native annual grasses and forbs. Additionally, this area was surveyed at the time of the site visit and no special-status species were observed. No further surveys are recommended for special-status plant species. However, if project plans are subject to change, and more extensive impacts to the riparian forest are proposed, special status plant surveys will be recommended.

### *5.2.1 Avoidance and Minimization Measures*

If special-status plant species are observed in the Study Area, they should be avoided during project activities, if possible. If avoidance is not possible, or if altered hydrologic conditions will affect the species, measures such as transplanting individuals to suitable undisturbed habitat may need to be developed in consultation with CDFW.

## **5.3 Special-Status Wildlife Species**

The Study Area is predominantly surrounded by development and human activities, and grassland habitat is regularly disced, reducing the likelihood of a number of special-status wildlife species to utilize this area for foraging, nesting, estivating, etc. However, several special-status wildlife species still have potential to occur within the riparian and grassland communities, as well as unused buildings within the Study Area. Potential impacts to special-status wildlife species that could occur as a result of development within the Study Area can be summarized as follows:

- Nesting birds, including a number of special-status birds, may be impacted by construction during the breeding season from February to August.
- Bats, including some special-status bats, may be impacted by construction activity during critical life stages from April to August, as well as by building demolition throughout the year.

Nesting birds protected by the MBTA and FGC may be impacted by construction during the breeding bird season from February 1 to August 31. Ideally, the clearing of vegetation and the

initiation of construction can be done in the non-breeding season between September and January. If these activities cannot be done in the non-breeding season, a qualified biologist shall perform pre-construction nesting bird surveys within 14 days of the onset of construction or clearing of vegetation. If nesting birds are discovered in the vicinity of planned development, it will likely be necessary to establish buffer areas around the nest until the nest is vacated. The size of the buffer would be dependent on the particular species of nesting bird.

Disturbance of trees and buildings in the Study Area may impact bat roosts. As with birds, bat roost sites can change from year to year, so pre-construction surveys are usually necessary to determine the presence or absence of bat roost sites in a given area. Preconstruction surveys for bats shall take place during the maternity roosting season from April 1 through August 31. Surveys should be conducted by a qualified biologist prior to removal of trees, snags, or buildings within the project area. Ultrasonic acoustic surveys and/or other site appropriate survey method should be performed to determine the presence or absence of bats utilizing the project site as roosting or foraging habitat. If special-status bat species are detected during surveys, appropriate, species and roost specific mitigation measures will be developed. Such measures may include postponing removal of trees, snags or structures until the end of the maternity roosting season or construction of species appropriate roosting habitat within, or adjacent to the project site.

Trees, snags, and buildings may be removed outside of the maternity roosting season without performing preconstruction bat surveys. However, if buildings are to be demolished, internal entrance surveys shall be performed by a qualified bat biologist prior to demolition to determine if buildings currently or previously support roosting bats. If bats are determined to be present, appropriate methods should be used to exclude bats from the building. Such methods may include installation of one way "valves" to allow bats to exit, but not allow them to reenter the building. Species and roost appropriate mitigation measures will be developed based on the results of the survey in consultation with CDFW.

Recommendations to avoid impacting special-status wildlife can be summarized as follows:

- To avoid disturbance to breeding birds, perform tree and brush clearing from September to February, or have a qualified biologist perform surveys within 14 days of work.
- To avoid disturbance of bats, perform work that disturbs trees, rock outcrops, bridges, buildings, and other structures from September to March, or have a qualified biologist perform surveys within prior to the commencement of work. Regardless of the time of year, any demolition of buildings shall have preconstruction surveys conducted prior to demolition.

#### **5.4 Protected Trees**

Trees protected per the City of Hayward Tree Preservation Ordinance occur in the Study Area, in areas mapped as oak woodland, riparian forest and scattered throughout non-native annual grassland. Based on the most recent project plans (KTTY 2015), the Project proposes to remove 57 protected trees within non-native annual grassland and oak woodland. The project also proposes to retain six of the largest, most significant trees within the Study Area, and to plant 186 replacement trees. If protected tree removal occurs, the following measure may be required:

- If the Project proposes to remove, destroy, cut branches over one-inch diameter, or disfigure any protected trees within the Study Area, a tree removal permit through the City of Hayward, tree protection measures, and appropriate tree replacement will likely be required.

Additional information regarding protected trees with the Study Area is discussed in the Arborist Survey Letter Report (WRA 2014), and Protected Tree Appraisal Report (WRA 2015). Additional tree protection measures, tree replacement plans and mitigation measures for the proposed project are provided in tree mitigation and planting plans from Golden Associates (2015), section L of the Project Plans (KTYG 2015).

## 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.
- California Department of Fish and Wildlife (CDFW), Biogeographic Data Branch 2014. California Natural Diversity Database (CNDDB). Sacramento.
- California Department of Fish and Game (CDFG). 2009. List of California Vegetation Alliances. Biogeographic Data Branch. Vegetation Classification and Mapping Program, Sacramento, CA.
- California Department of Fish and Game 2006. Special Animals. Available online at: [www.dfg.ca.gov/bdb/pdfs/SPAnimals.pdf](http://www.dfg.ca.gov/bdb/pdfs/SPAnimals.pdf), Accessed July 2014.
- California Department of Fish and Game (CDFG). 2007. List of California Vegetation Alliances. Biogeographic Data Branch. Vegetation Classification and Mapping Program, Sacramento, CA.
- California Department of Fish and Game (CDFG). 2003. List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database Wildlife and Habitat Data Analysis Branch. Vegetation Classification and Mapping Program, Sacramento, CA.
- California Department of Fish and Game (CDFG), Environmental Services Division (ESD). 1994. A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Game Code.
- California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Vascular Plants (online edition, v7-07c). California Native Plant Society, Sacramento, California. Available online: <http://www.cnps.org/inventory>
- California Department of Transportation (Caltrans). 2000. Final Environmental Impact Statement/Report and Final Section 4(f) Evaluation, Proposed Route 238 Hayward Bypass Project, from Industrial Parkway to the Route 238/I-580 Interchange in the City of Hayward and in unincorporated areas of Alameda County, California. May. Available online: <http://www.dot.ca.gov/dist4/envdocs.htm>
- California Soil Resource Lab (CSRL). 2014. SoilWeb: An Online Soil Survey Browser. University of California at Davis. Online at: <http://casoilresource.lawr.ucdavis.edu/gmap/> Accessed June 2014.
- Dunk, J. R. 1995. White-tailed Kite (*Elanus leucurus*). In The Birds of North America, No. 178 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Department of the Army, Waterways Experiment Station, Vicksburg, Mississippi 39180-0631.
- Erikson, C.H. and D. Belk. 1999. Fairy Shrimps of California's Puddles, Ponds and Playas. Mad River Press, Inc., Eureka, California.
- Golden Associates. 2015. Tree Mitigation Plan, Ward Street Cottages, Hayward, CA. Section L1.0-3.4. 4400 Market Street, Oakland, CA. June 15.
- Google Earth. 2015. Aerial Imagery 1993-2014. Most recently accessed: June 2015.
- Hafner, D.J., Yensen, E. and Kirkland, Jr., G.L. (compilers and editors) 1998. North American Rodents: Status Survey and Conservation Action Plan. IUCN/SSC Rodent Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.
- Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Prepared for the California Department of Fish and Game, Sacramento, California.
- Jennings, M. R. and M. P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. Contract No. 8023.
- 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.
- KTGY Group, Inc. (KTGY). 2015. Ward Creek Cottages Project Plans. Prepared for AMG & Associates, LLC, Encino, CA.
- Leidy, R.A., G.S. Becker, and B.N. Harvey. 2003. Historical Distribution and Current Status of Steelhead (*Oncorhynchus mykiss*), Coho Salmon (*O. kisutch*), and Chinook Salmon (*O. tshawytscha*) in Streams of the San Francisco Estuary, California. US EPA and Center for Ecosystem Management and Restoration.
- Leidy, R.A., G.S. Becker, B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, CA.
- Linsdale, J.M. and L.P Tevis Jr. 1951. The dusky-footed wood rat: a record of observations made on the Hastings Natural History Reservations. University of California, Berkeley.
- Lowther, P. E., C. Celada, N. K. Klein, C. C. Rimmer and D. A. Spector. 1999. Yellow Warbler (*Dendroica petechia*), 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/454>

- Mitchell, Donald 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>
- National Oceanic and Atmospheric Administration (NOAA). National Marine Fisheries Service distribution maps for California Salmonid species. September 2007. Available online: <http://www.nwr.noaa.gov/ESA-Salmon-Listings/Salmon-Populations/Maps/Index.cfm> Accessed August 2014.
- Natural Resources Conservation Service (NRCS). 2010. Field Indicators of Hydric Soils in the United States, version 7.0. In cooperation with the National Technical Committee for Hydric Soils, Fort Worth, TX.
- NRCS. 2014. Web Soil Survey: Alameda County, California, Western Part soil maps version 8, Nov 27, 2013. Available online: <http://websoilsurvey.nrcs.usda.gov/>.
- Oak Woodland Conservation Act. 2004. State of California Public Resources Code, Division 13, Chapter 2.6, Section 21083.4.
- Pierson, E. D. And W. E. 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.
- Richmond, B., H. Green, and D.C. Rice. 2011. Alameda County Breeding Bird Atlas. Golden Gate Audubon Society and Ohlone Audubon Society. Dakota Press, San Leandro, CA.
- Sawyer, J, T Keeler-Wolf and J Evens. 2009. A Manual of California Vegetation. California Native Plant Society, Berkeley, 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, California, and CDFG, Sacramento.
- Stebbins, RC. 2003. A Field Guide to Western Reptiles and Amphibians, third edition. The Peterson Field Guide Series, Houghton Mifflin Company, NY
- Steinberg, Peter D. 2002. *Quercus agrifolia*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. Available online at: <http://www.fs.fed.us/database/feis/plants/tree/queagr/all.html>. Accessed August 2015.
- Tillinger, T. and O. Stein. 1996. Fish passage through culverts in Montana: A preliminary investigation. Montana Department of Transportation. Online at: [http://www.mdt.mt.gov/other/research/external/docs/research\\_proj/final\\_report\\_fishculverts.pdf](http://www.mdt.mt.gov/other/research/external/docs/research_proj/final_report_fishculverts.pdf) .Accessed July 2014.

- U.S. Army Corps of Engineers (Corps). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2013. Web Soil Survey. Online at <http://websoilsurvey.nrcs.usda.gov>
- United States Fish and Wildlife Service (USFWS). 2014. Species List. Sacramento Fish and Wildlife Service [http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists-form.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm) Accessed June 2014
- United States Geological Survey (USGS). 1993. Hayward. 7.5 minute topographic map.
- Western Bat Working Group (WBWG). 2014. Species accounts. Online at [http://www.wbwg.org/speciesinfo/species\\_accounts/species\\_accounts.html](http://www.wbwg.org/speciesinfo/species_accounts/species_accounts.html) Accessed July 2014.
- WRA, Inc (WRA). 2014. Arborist Letter Report for the 2<sup>nd</sup> and Walpert Study Area.
- WRA. 2015. Protected Tree Appraisal Report for the 2<sup>nd</sup> and Walpert Study Area.
- Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White. 1990. California's Wildlife, Volume I-III: Amphibians and Reptiles, Birds, Mammals. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento.

*This page intentionally left blank.*

## **Appendix A**

### **List of Observed Plant and Animal Species**

*This page intentionally left blank.*

**Appendix A.** Plant and wildlife species observed by WRA in the Study Area during an assessment conducted on June 26, 2014.

<b>Common Name</b>	<b>Scientific Name</b>
<b>Plants</b>	
Big leaf maple	<i>Acer macrophyllum</i>
Oats	<i>Avena</i> sp.
Coyote brush	<i>Baccharis pilularis</i> ssp. <i>pilularis</i>
Black mustard	<i>Brassica nigra</i>
Ripgut brome	<i>Bromus diandrus</i>
Soft chess	<i>Bromus hordeaceus</i>
Deodar cedar	<i>Cedrus deodara</i>
Chicory	<i>Cichorium intybus</i>
Field bindweed	<i>Convolvulus arvensis</i>
Japanese cedar	<i>Cryptomeria japonica</i>
Bermuda grass	<i>Cynodon dactylon</i>
Variable flatsedge	<i>Cyperus difformis</i>
Cape ivy	<i>Delairea odorata</i>
Redstem stork's bill	<i>Erodium cicutarium</i>
Blue gum	<i>Eucalyptus globulus</i>
Yellow Gum	<i>Eucalyptus leucoxydon</i>
Italian rye grass	<i>Festuca perennis</i>
English ivy	<i>Hedera helix</i>
Bristly ox-tongue	<i>Helminthotheca echioides</i>
Toyon	<i>Heteromeles arbutifolia</i>
Wall barley	<i>Hordeum murinum</i> ssp. <i>murinum</i>
Common mallow	<i>Malva neglecta</i>
Bur medic	<i>Medicago polymorpha</i>
Pricklypear	<i>Opuntia</i> sp.
Lombardy poplar	<i>Populus nigra</i>
Coast live oak	<i>Quercus agrifolia</i> var. <i>agrifolia</i>

<b>Appendix A.</b> Plant and wildlife species observed by WRA in the Study Area during an assessment conducted on June 26, 2014.	
Canyon live oak	<i>Quercus chrysolepis</i>
Blue oak	<i>Quercus douglasii</i>
Valley oak	<i>Quercus lobata</i>
Wild radish	<i>Raphanus sativus</i>
Himalayan blackberry	<i>Rubus armeniacus</i>
Peruvian peppertree	<i>Schinus molle</i>
Common sow thistle	<i>Sonchus oleraceus</i>
Poison oak	<i>Toxicodendron diversilobum</i>
Rose clover	<i>Trifolium hirtum</i>
California bay	<i>Umbellularia californica</i>
<b>Mammals</b>	
Feral and domestic cat	<i>Felis domesticus</i>
Black-tailed deer	<i>Odocoileus hemionus</i>
<b>Birds</b>	
Turkey vulture	<i>Cathartes aura</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Red-shouldered hawk	<i>Buteo lineatus</i>
Wild turkey	<i>Megeagris gallopavo</i>
Mourning dove	<i>Zenaida macroura</i>
Rock dove (feral pigeon)	<i>Columba livia</i>
Anna's hummingbird	<i>Calypte anna</i>
Nuttall's Woodpecker	<i>Picoides nuttallii</i>
Pacific slope flycatcher	<i>Empidonax difficilis</i>
Hutton's Vireo	<i>Vireo huttoni</i>
White-breasted nuthatch	<i>Sitta carolinensis</i>
American robin	<i>Turdus migratorius</i>
Western scrub-jay	<i>Aphelocoma californica</i>
American crow	<i>Corvus brachyrhynchos</i>

**Appendix A.** Plant and wildlife species observed by WRA in the Study Area during an assessment conducted on June 26, 2014.

Common raven	<i>Corvus corax</i>
Chestnut-backed chickadee	<i>Poecile rufescens</i>
Brown creeper	<i>Certhia americana</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
California towhee	<i>Pipilo crissalis</i>
Dark-eyed junco	<i>Junco hyemalis</i>
House finch	<i>Carpodacus mexicanus</i>
Bushtit	<i>Psaltriparus minimus</i>

*This page intentionally left blank.*

## **Appendix B**

### **Potential for Special-Status Species to Occur in the Study Area**

*This page intentionally left blank.*

**Appendix B.** Potential for special-status species to occur in Study Area. List compiled from June 2014 searches of California Department of Fish and Game Natural Diversity Database (CDFG 2014), U.S. Fish and Wildlife Service Species Lists (USFWS 2014), and the California Native Plant Society Electronic Inventory (CNPS 2014) for the Hayward USGS 7.5' quadrangle, and a review of other CDFW lists and publications (Jennings and Hayes 1994, Zeiner et al. 1990, Shuford and Gardali 2008, Richmond et al. 2011, WBWG 2010, Stebbins 2003, Erikson and Belk 1991).

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
<b>Plants</b>				
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	Rank 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. 3-500 meters (m). Blooms March-June.	<b>Unlikely.</b> Recently disked grassland and woodland habitat available, but there are very few recorded occurrences in the Study Area vicinity or in Alameda County.	No further surveys are recommended.
alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	Rank 1B.2	Playas, valley and foothill grassland (adobe clay), vernal pools/alkaline. 1-60 m. Blooms March-June.	<b>Unlikely.</b> Areas that would support appropriate seasonal wetland/alkaline habitat are disked or otherwise heavily disturbed.	No further surveys are recommended.
big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/ sometimes serpentine. 90-1,400 m. Blooms March-June.	<b>Unlikely.</b> While grassland and woodland habitats available, the grassland in the Study Area was recently disked and largely lacks native herbaceous or grassland species; further, the woodland does not contain suitable elevations. No serpentine present in the Study Area.	No further surveys are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Oakland star-tulip <i>Calochortus umbellatus</i>	Rank 4.2	Often on serpentine soils in broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland. 100-700 m. Blooms March-May.	<b>Unlikely.</b> Recently disked grassland and woodland habitat available; however, woodland habitat does not contain suitable elevations for this species.	No further surveys are recommended.
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	Rank 1B.1	Valley and foothill grassland (alkaline). 1-230 m. Blooms May-October.	<b>Unlikely.</b> Areas that would support appropriate grassland habitat are disked and have been recently heavily disturbed.	No further surveys are recommended.
western leatherwood <i>Dirca occidentalis</i>	List 1B.2	Broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland/ mesic. 50-395 m. Blooms January-March.	<b>Moderate Potential.</b> Riparian forest within the Study Area may contain suitable habitat for this species. The closest proximate documented occurrence is from 1991, located approximately 5.5 miles north in the Chabot Regional Park.	The vegetative form of this species was not observed during the September site visit. No further surveys are recommended.
fragrant fritillary <i>Fritillaria liliacea</i>	List 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland/ often serpentine. 3 -410 m. Blooms February-April.	<b>Unlikely.</b> Disturbed grassland and oak/bay woodland habitat available, but no serpentine areas.	No further surveys are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Diablo helianthella <i>Helianthella castanea</i>	List 1B.2	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. 60-1,300 m. Blooms March-June.	<b>Moderate Potential.</b> Several occurrences in the vicinity, but typically found in chaparral-associated habitat not present within Study Area. Study Area oak/bay riparian woodlands do not have ideal characteristics for this species because of dense forest canopy or disturbance by invasives. Further, the field visit was conducted during the blooming period and this species was not observed. The closest occurrence is located approximately 3 miles southwest of the Study Area, from 2002.	No further surveys are recommended.
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT, SE, List 1B.1	Occurs often on clay, sandy substrates in coastal prairie, coastal scrub, and valley and foothill grassland. 10-220 m. Blooms June-October.	<b>Unlikely.</b> This species prefers coastal habitats and the grassland habitat within the Study Area is unsuitable due to heavily disturbances from recent discing. Not observed during June site assessment, during peak blooming period.	No further surveys are recommended.
woodland woollythreads <i>Monolopia gracilens</i>	Rank 1B.2	Serpentine substrates in broadleaved upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), and valley and foothill grassland. 100-1,200 m. Blooms February-July.	<b>Unlikely.</b> While the Study Area contains riparian oak/bay woodland and non-native grassland habitats, the grassland was recently disked and the riparian woodland does not contain suitable elevations for this species.	No further surveys are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Michael's rein orchid <i>Piperia michaelii</i>	Rank 4.2	Coastal bluff scrub, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest. 3-915 m. Blooms April-August.	<b>Unlikely.</b> While the Study Area contains woodland habitat within suitable elevations, this species was misreported by CNPS for having a documented occurrence within Hayward 7.5 USGS Quadrangle, and the closest documented occurrence occurs over 8 miles north of the Study Area.	No further surveys are recommended.
hairless popcorn-flower <i>Plagiobothrys glaber</i>	List 1A	Meadows and seeps (alkaline), marshes and swamps (coastal salt). 15-180 m. Blooms March-May.	<b>No Potential.</b> No coastal salt marsh or un-disturbed alkaline wetlands are available within the Study Area. Believed to be extirpated from California.	No further surveys are recommended.
Lobb's aquatic buttercup <i>Ranunculus lobbii</i>	Rank 4.2	Mesic substrates in cismontane woodland, north coast coniferous forest, valley and foothill grassland, and vernal pools. 15-470 m. Blooms February-May.	<b>Unlikely.</b> The Study Area contains disked non-native grassland and woodland. While the woodland does not have ideal characteristics for this species because of dense forest canopy, this closest documented occurrence for this species is from 1933, about 5 miles north of the Study Area.	No further surveys are recommended.
most beautiful jewel-flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	List 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/serpentine. 94-1,000 m. Blooms April-September.	<b>Unlikely.</b> Disturbed grassland and oak/bay woodland habitat available, but no serpentine areas.	No further surveys are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
<b>Mammals</b>				
Salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	SSC	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6 to 8 feet above sea level where abundant driftwood is scattered among Salicornia.	<b>No Potential.</b> Salt marsh habitat not present within or adjacent to the Study Area.	No further actions are recommended.
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE, SE, CFP	Found only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but can be found in various types of vegetation with a dense thatch layer. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	<b>No Potential.</b> Salt marsh and associated habitats not present within or adjacent to the Study Area.	No further actions are recommended.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	<b>Unlikely.</b> Potentially suitable riparian habitat within the Study Area is very steep and unsuitable for nest-building. Potentially suitable oak woodland habitat is small and fragmented. No nests were observed during the site visit or subsequent tree survey site visits.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
American badger <i>Taxidea taxus</i>	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.	<b>Unlikely.</b> While the Study Area contains grasslands with friable soils associated with this species, the Study Area is frequently disced, is relatively small in size, is fenced around most of the grassland areas and has been within developed areas for at least 20 years, making it unlikely this species is present or that it would colonize the site (aerial photography).	No further actions are recommended.
Ringtail (ring-tailed cat) <i>Bassariscus astutus</i>	CFP	Is widely distributed throughout most of California, but absent from some portions of the Central Valley and northeastern California. The species is nocturnal, primarily carnivorous and is associated with a mixture of dry forest and shrubland in close association with rocky areas and riparian habitat, using hollow trees and cavities for shelter. Usually not found more than 1 km (0.6 mi) from permanent water (Zeiner et al. 1990)	<b>Unlikely.</b> The Study Area contains riparian habitat, however, the lands surrounding the Study Area have been developed for at least 20 years (aerial photography). The riparian areas within and adjacent to the Study Area are fragmented from larger, continuous habitats to the east.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Pallid bat <i>Antrozous pallidus</i>	SSC, WBWG	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include old ranch buildings, rocky outcrops and caves within sandstone outcroppings. Roosts must protect bats from extreme temperatures. Very sensitive to disturbance of roosting sites.	<b>Moderate Potential.</b> CNDDDB records show this species to be present in the Hayward area. Trees, abandoned buildings, and other structures within the Study Area may provide roosting habitat. Presence of this species may also indicate suitable habitat for other sensitive bats.	If tree or building removal occurs during the bat maternity season (April 1-August 31), a pre-construction roost survey should be conducted.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SC (threatened), SSC, WBWG	Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Females typically form maternity colonies in buildings, caves and mines and males roost singly or in small groups. This species has also been reported to utilize bridges, rock crevices and hollow trees as roost sites. Very sensitive to human disturbance. Foraging occurs in open forest habitats where they glean moths from vegetation.	<b>Moderate Potential.</b> Unoccupied buildings within the Study Area may provide roosting habitat for this species.	If tree or building removal occurs during the bat maternity season (April 1-August 31), a pre-construction roost survey should be conducted.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Western mastiff bat <i>Eumops perotis californicus</i>	SSC, WBWG	Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	<b>Unlikely.</b> Historical records of this species exist near the Study Area. This species migrates through the region. May forage over and rest within the Study Area during migration. No rocky cliffs for roosting present.	No further actions are recommended.
Western red bat <i>Lasiurus blossevillii</i>	SSC, WBWG	This species is typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores).	<b>Moderate Potential.</b> The Study Area contains riparian habitats associated with this species. This species may roost within or adjacent to the riparian areas within the Study Area.	If tree or building removal occurs during the bat maternity season (April 1-August 31), a pre-construction roost survey should be conducted.
<b>Birds</b>				
California brown pelican <i>Pelecanus occidentalis californicus</i>	FD, SD, CFP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.	<b>No Potential.</b> The Study Area is far from potential coastal island habitat or open water foraging habitat.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Golden Eagle <i>Aquila chrysaetos</i>	BCC, CFP	Rolling foothills and mountainous areas, sage-juniper flats, desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	<b>Unlikely.</b> This species is unlikely to nest in the Study Area due to urban development but may forage over the grassland portions of the Study Area although larger, more suitable habitats exist in the foothills east of the Study Area. This species nested 6.5 miles east of the Study Area in 1994 (CNDDDB 2014).	No further actions are recommended.
Bald eagle <i>Haliaeetus leucocephalus</i>	FD, SE, CFP, BCC	Frequents ocean shores, lake margins, and rivers for both nesting and wintering. Requires large bodies of water, or free-flowing rivers with abundant fish and adjacent snags or other perches. Most nests are located within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branchwork. Shows a preference for ponderosa pine. Roosts communally in winter.	<b>Unlikely.</b> The Study Area does not contain any aquatic foraging habitat for this species and does not contain typical nesting habitat. This species may fly over the Study Area.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
<p>Ferruginous Hawk <i>Buteo regalis</i></p>	<p>BCC, SSC</p>	<p>(Wintering) Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys and fringes of pinyon-juniper habitats. Preys on lagomorphs, ground squirrels and mice. Population trends may follow lagomorph population cycles.</p>	<p><b>Unlikely.</b> This species does not nest in the San Francisco Bay Area, but may forage in the East Bay hills and grassland areas within the Study Area during winter months.</p>	<p>No further actions are recommended.</p>
<p>Northern harrier <i>Circus cyaneus</i></p>	<p>SSC</p>	<p>Primarily a year-round resident in the region. Nests and forages in grassland habitats, usually in association with coastal salt and freshwater marshes. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. Preys mostly on small mammals.</p>	<p><b>Unlikely.</b> This species may use the grassland communities within the Study Area to forage; however, repeated disking of the majority of the grasslands within the Study Area likely precludes nesting in this species.</p>	<p>No further actions are recommended.</p>
<p>White-tailed Kite <i>Elanus leucurus</i></p>	<p>CFP</p>	<p>Year-long resident of coastal and valley lowlands; rarely found away from agricultural areas. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians.</p>	<p><b>High Potential.</b> Woodlands and riparian corridors provide suitable nesting habitat. Grasslands and open areas within and adjacent to the Study Area provide suitable foraging habitat.</p>	<p>Breeding bird surveys are recommended within 14 days prior to Project initiation during the breeding bird season (Feb. 1 – August 31). If breeding birds are observed, they will be avoided by the Project by the establishment of a suitable buffer zone.</p>

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
American Peregrine Falcon <i>Falco peregrinus anatum</i>	FD, SD, BCC, CFP	Winters throughout Central Valley. Requires protected cliffs and ledges for cover. Feeds on a variety of birds, and some mammals, insects, and fish.	<b>Unlikely.</b> Cliff habitat suitable for nesting is not present within the Study Area. Species is locally uncommon, but may forage within the Study Area.	No further actions are recommended.
Prairie falcon <i>Falco mexicanus</i>	BCC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	<b>Unlikely.</b> Cliff habitat suitable for nesting is not present within the Study Area. Species is locally uncommon, but may forage within the Study Area.	No further actions are recommended.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST, BCC, CFP	Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh heavily grown to pickleweed; also in fresh-water and brackish marshes, all at low elevation.	<b>No Potential.</b> Salt marsh habitat not present within or adjacent to the Study Area.	No further actions are recommended.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE, SE, CFP	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Require dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	<b>No Potential.</b> Salt marsh habitat not present within or adjacent to the Study Area.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Great blue heron <i>Ardea herodias</i>	None (breeding rookeries protected by CDFW)	Colonial nester in tall trees, cliffs, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	<b>Unlikely.</b> The Study Area did not contain any established rookeries as of the June 2014 site visit. The nearest documented rookery is 5 miles to the north of the Study Area (CDFW 2014). This species may occasionally forage in Ward creek.	No further actions are recommended.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT, SSC, BCC, RP	Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees and shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting.	<b>No Potential.</b> The Study Area is over 4 miles from San Francisco Bay and contains no suitable nesting habitat or open water areas for foraging (CDFW 2014).	No further actions are recommended.
California least tern <i>Sterna antillarum browni</i>	FE, SE, CFP	Nests along the coast from San Francisco Bay south to northern Baja California. Breeding colonies in San Francisco Bay found in abandoned salt ponds and along estuarine shores. Colonial breeder on barren or sparsely vegetated, flat substrates near water.	<b>No Potential.</b> The Study Area is over 4 miles from San Francisco Bay and contains no suitable nesting habitat or open water areas for foraging (CDFW 2014).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Long-eared Owl <i>Asio otus</i>	SSC	Inhabits riparian bottom lands to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Requires adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	<b>Unlikely.</b> This species may be present in the vicinity of the Study Area, although it is unlikely to nest there, as there are few documented occurrences of nesting in Alameda County (Richmond et al. 2011). Marginal habitat for this species is present along isolated, wooded creek corridors.	No further actions are recommended.
Burrowing Owl <i>Athene cunicularia</i>	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.	<b>Unlikely.</b> Regular disking of the grassland habitats within the Study Area has drastically reduced the potential for this species to occur. Burrowing owls are often found in association with ground squirrels, and no ground squirrels or burrows were observed within the Study Area during the June 2014 site visit. The Study Area is surrounded by development and the nearest document occurrence of this species is over 5 miles from the Study Area (CDFW 2014)	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Tricolored Blackbird <i>Agelaius tricolor</i>	BCC, SSC, RP	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	<b>Unlikely.</b> There are no open water habitats in the Study Area to support nesting in this species. This species may occasionally fly over or forage in the grassland habitats within the Study Area.	No further actions are recommended.
Loggerhead Shrike <i>Lanius ludovicianus</i>	BCC, SSC	Inhabits broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	<b>Moderate Potential.</b> Suitable nesting and foraging habitat is found within the grassland communities within the Study Area.	Breeding bird surveys are recommended within 14 days prior to Project initiation during the breeding bird season (Feb. 1 – August 31). If breeding birds are observed, they will be avoided by the Project by the establishment of a suitable buffer zone.
Oak titmouse <i>Baeolophus inornatus</i>	BCC	Oak woodland and savannah, open broad-leaved evergreen forests containing oaks, and riparian woodlands. Associated with oak and pine-oak woodland and arborescent chaparral.	<b>High Potential.</b> The riparian habitats within the Study Area provide suitable nesting habitat for this species.	Breeding bird surveys are recommended within 14 days prior to Project initiation during the breeding bird season (Feb. 1 – August 31). If breeding birds are observed, they will be avoided by the Project by the establishment of a suitable buffer zone.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	SSC, BCC	Frequents low, dense vegetation near water including fresh to saline emergent wetlands. Brushy habitats used in migration. Forages among wetland herbs and shrubs for insects primarily.	<b>Unlikely.</b> The riparian habitats within the Study Area do not contain low, dense vegetation used by this species. This species may temporarily pass through the Study Area but no suitable breeding habitat is present.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Alameda song sparrow <i>Melospiza melodia pusillula</i>	SSC, BCC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits <i>Salicornia</i> marshes; nests low in <i>Grindelia</i> bushes (high enough to escape high tides) and in <i>Salicornia</i> .	<b>No Potential.</b> This species is generally restricted to salt marsh habitat, which is not present within or near the Study Area.	No further actions are recommended.
Bryant's savannah sparrow <i>Passerculus sandwichensis alaudinus</i>	SSC	Resident subspecies, associated with the coastal fog belt. Occupies upper tidally influenced habitats, often found where pickleweed communities merge into grassland. Nests in vegetation on or near the ground, including along roads, levees, and water conveyance canals.	<b>Unlikely.</b> The Study Area does not contain any tidally influenced habitat associated with this species. This species may temporarily pass through the Study Area but no suitable breeding habitat is present.	No further actions are recommended.
Grasshopper sparrow <i>Ammodramus savannarum</i>	SSC	Found in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Loosely colonial when nesting.	<b>Unlikely.</b> Regular disking of the grassland habitats within the Study Area has drastically reduced the potential for this species to occur as it requires intact grassland habitat. Furthermore, the grassland communities within the Study Area are smaller than what is typical for this species and are surrounded by development, likely precluding nesting in this species.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Bank swallow <i>Riparia riparia</i>	ST	Migrant in riparian and other lowland habitats in western California. Colonial nester in riparian areas with vertical cliffs and banks with fine-textured or fine-textured sandy soils near streams, rivers, lakes or the ocean.	<b>Unlikely.</b> This species' breeding distribution within the San Francisco Bay area is very restricted (one portion of coastal San Francisco). May occasionally pass through the Study Area during migration.	No further actions are recommended.
Allen's hummingbird <i>Selaphorus sasin</i>	BCC	Breeds along the California coastline in habitats including mixed evergreen, Douglas fir, redwood and Bishop pine forests, riparian woodlands, nonnative eucalyptus and planted cypress groves, and occasionally live oak woodlands and coastal scrub with at least a scattering of trees, such as on north-facing slopes.	<b>Moderate Potential.</b> The riparian habitats along Ward creek contain suitable habitat used for nesting in this species.	Although riparian communities are not anticipated to be affected by the Project, this species may nest directly adjacent to the Project Area and may be disturbed by project activities. Breeding bird surveys are recommended within 14 days prior to Project initiation during the breeding bird season (Feb. 1 – August 31). If breeding birds are observed, they will be avoided by the Project by the establishment of a suitable buffer zone
Yellow warbler <i>Dendroica petechia brewsteri</i>	BCC, SCC	Frequents riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests.	<b>Unlikely.</b> Although this species is associated with riparian areas, the riparian portions of the Study Area do not contain the preferred dense willow, cottonwood, aspen, or sycamore assemblages for nesting.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Lawrence's goldfinch <i>Carduelis lawrencei</i>	BCC	Resident to nomadic; inhabits oak woodlands, chaparral, riparian woodlands and other areas, often near water. Not known to breed in the vicinity of San Francisco Bay.	<b>Unlikely.</b> This species is rarely observed in the vicinity of San Francisco Bay; this species may occasionally pass through the Study Area, but is unlikely to nest there (Richmond et al. 2011).	No further actions are recommended.
Nuttall's woodpecker <i>Picoides nuttallii</i>	BCC	Resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks.	<b>Present.</b> This species was observed in the riparian habitats within the Study Area during the June 26, 2014 site visit.	Breeding bird surveys are recommended within 14 days prior to Project initiation during the breeding bird season (Feb. 1 – August 31). If breeding birds are observed, they will be avoided by the Project by the establishment of a suitable buffer zone

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
<b>Reptiles and Amphibians</b>				
California tiger salamander <i>Ambystoma californiense</i>	FT/FE, ST, SSC, RP	Populations in Santa Barbara and Sonoma counties currently listed as endangered. Inhabits grassland, oak woodland, ruderal and seasonal pool habitats and spends most of the year underground in mammal burrows. Breeding occurs in vernal pools and other seasonal aquatic features. In the immediate vicinity of San Francisco Bay, occurs only in Fremont.	<b>Unlikely.</b> Suitable breeding locations and upland estivation sites were not observed within the Study Area. The urban, fragmented nature of the Study Area makes it unsuitable as habitat for this species. Repeated disking in grassland areas has removed suitable estivation and refugia sites. Stock ponds and other depressions that hold water for a sufficient length of time to allow breeding were not observed. The nearest CNDDDB occurrence for this species is over 5 miles from the Study Area (CDFW 2014).	No further actions are recommended.
California red-legged frog <i>Rana draytonii</i>	FT, SSC, RP	Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains. Requires 11 to 20 weeks of permanent water for larval development. Must have access to upland estivation and dispersal habitat.	<b>Unlikely.</b> Developed lands surrounding the Study Area constitute significant barriers to dispersal for this species. Also, it is unlikely to be found in such an incised, linear corridor approximately 4 miles away from the nearest CNDDDB occurrence (CDFW 2014). There is no potential breeding habitat for this species within 1.75 miles of the Study Area.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
<p>Foothill yellow-legged frog <i>Rana boylei</i></p>	<p>SSC</p>	<p>Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.</p>	<p><b>Unlikely.</b> Very few occurrence records exist for this species in the East Bay, and it may be locally extirpated. The nearest recorded occurrence of the species is 13 miles from the Study Area in 1997 (CDFW 2014).</p>	<p>No further actions are recommended.</p>
<p>Western pond turtle <i>Actinemys marmorata</i></p>	<p>SSC</p>	<p>A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat for egg-laying.</p>	<p><b>Unlikely.</b> Ward creek contains marginal habitat for this species as there is a full canopy precluding sunlight from reaching the creek. The species has not been documented within 5 miles of the Study Area (CDFW 2014).</p>	<p>No further actions are recommended.</p>

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Coast horned lizard <i>Phrynosoma coronatum frontale</i>	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	<b>Unlikely.</b> The Study Area contains marginal habitat for this species. All of the grassland habitats within the Study Area are regularly disced, and the Study Area has been surrounded by development for at least 20 years, limiting the potential for dispersal or colonization of this species into the Study Area (aerial photography). Occurrence records suggest that this species may be locally extirpated (Jennings and Hayes 1994).	No further actions are recommended.
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	FT, ST	Inhabits chaparral and foothill-hardwood habitats in the eastern Bay Area. Prefers south-facing slopes and ravines with rock outcroppings where shrubs form a vegetative mosaic with oak trees and grasses and small mammal burrows provide basking and refuge.	<b>Unlikely.</b> This species has been recorded to occur near the Study Area and critical habitat for this species is located 2.5 miles to the east. However, the Study Area is unsuitable for this species. All of the grassland habitats within the Study Area are regularly disced, and the Study Area has been surrounded by development for at least 20 years, limiting the potential for dispersal or colonization (aerial photography).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
---------	---------	---------	--------------------------	-----------------

Fishes				
River lamprey <i>Lampetra ayersi</i>	SSC	An anadromous and parasitic fish found from central California to British Columbia. In the San Francisco Bay region, spawns in freshwater tributaries to the Delta and San Pablo and Suisun Bay.	<b>Unlikely.</b> Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.
Green sturgeon <i>Acipenser medirostris</i>	FT, SSC (NMFS)	Anadromous. Spawns in the Sacramento and Klamath River systems. Lingering transients may be found throughout the San Francisco Bay Estuary, particularly juveniles.	<b>Unlikely.</b> While this species is generally treated as potentially present throughout the San Francisco Bay Estuary, Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.
Delta smelt <i>Hypomesus transpacificus</i>	FT, SE, RP	Endemic to the Sacramento-San Joaquin delta area; found in areas where salt and freshwater systems meet. It occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay.	<b>No Potential.</b> The Study Area is outside of this species' range, and Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Longfin smelt <i>Spirinchus thaleichthys</i>	FC, ST, SSC, RP	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.	<b>Unlikely.</b> Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	<b>No Potential.</b> The Study Area is outside the known range for this species, and no suitable habitat is present. This species is believed to be extirpated from San Francisco Bay.	No further actions are recommended.
Steelhead - central CA coast ESU <i>Oncorhynchus mykiss</i>	FT (NMFS)	Anadromous, spending most of life cycle in the ocean. This ESU occurs from the Russian River south to Soquel Creek and Pajaro River, including the San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	<b>Unlikely.</b> Although this species has been recently documented downstream of the Study Area in Alameda Creek, (Leidy et al. 2003), Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Steelhead - Central Valley ESU <i>Oncorhynchus mykiss irideus</i>	FT (NMFS)	The Central Valley ESU includes all naturally spawned populations (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding San Francisco and San Pablo bays and their tributaries. Preferred spawning habitat for steelhead is in cool to cold perennial streams with high dissolved oxygen levels and fast flowing water. Abundant riffle areas for spawning and deeper pools with sufficient riparian cover for rearing are necessary for successful breeding.	<b>No Potential.</b> This ESU does not generally occur in South San Francisco Bay. Furthermore, Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.
Coho salmon - central CA coast ESU <i>Oncorhynchus kisutch</i>	FE, (NMFS)	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	<b>Unlikely.</b> This species was historically found downstream in Alameda Creek (Leidy et al. 2005); however, Coho salmon are considered extirpated in San Francisco Bay and its associated watersheds.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Chinook salmon – Sacramento River winter-run ESU <i>Oncorhynchus tshawytscha</i>	FE, SE, RP (NMFS)	Occurs in the Sacramento River below Keswick Dam. Spawns in the Sacramento River but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 degrees C for spawning. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles typically migrate to the ocean soon after emergence from the gravel.	<b>No Potential.</b> The Study Area is outside the known range for this species, and Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.
Chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i>	FT, ST (NMFS)	Occurs in the Feather River and the Sacramento River and its tributaries, including Butte, Mill, Deer, Antelope and Beegum Creeks. Adults enter the Sacramento River from late March through September. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams from mid-August through early October. Juveniles migrate soon after emergence as young-of-the-year, or remain in freshwater and migrate as yearlings.	<b>Unlikely.</b> Ward Creek is culverted for several miles downstream of the Study Area, precluding anadromous fish from reaching the Study Area from San Francisco Bay (Tillinger and Stein 1996).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
---------	---------	---------	--------------------------	-----------------

Invertebrates				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT, SSI, RP	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	<b>Unlikely.</b> Seasonal wetland depressions and vernal pools required for this species were not observed during site visits. Undisturbed bottom land where such wetlands might form is generally absent within the Study Area, and the site has been repeatedly disked over the past 10 years.	No further actions are recommended.
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT, SSI, RP	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Orthocarpus densiflorus</i> and <i>O. purpurascens</i> are the secondary host plants.	<b>No Potential.</b> Host plants not observed. This species has not been documented to occur in the vicinity (CDFW 2014). Suitable grassland habitat is minimal or nonexistent within the Study Area.	No further actions are recommended.
San Bruno elfin butterfly <i>Incisalia (=Callophrys) mossii bayensis</i>	FE, SSI, RP	Limited to the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on in rocky outcrops and cliffs in coastal scrub habitat on steep, north-facing slopes within the fog belt. Species range is tied to the distribution of the larval host plant, <i>Sedum spathulifolium</i> .	<b>No Potential.</b> Study Area is far outside the accepted range for this species. Host plant not observed.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Monarch butterfly (roosting sites) <i>Danaus plexippus</i>	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.	<b>Unlikely.</b> Suitable roost habitat is not present within the Study Area; the eucalyptus trees near the east end of the Study Area are arranged linearly from north to south and are unlikely to provide the protection from the wind this species seeks when roosting. This species may pass through the Study Area.	No further actions are recommended.

\* Key to status codes:

FE	Federal Endangered
FT	Federal Threatened
FD	Federal Delisted
FC	Federal Candidate
BCC	USFWS Birds of Conservation Concern
MMPA	Species protected under the Marine Mammal Protection Act
NMFS	Species under the Jurisdiction of the National Marine Fisheries Service
SE	State Endangered
ST	State Threatened
SC	State Candidate
SR	State Rare
SSC	CDFG Species of Special Concern
CFP	CDFG Fully Protected Animal
WBWG	Western Bat Working Group (High or Medium) Priority species
CCC	California Coastal Commission
G1, S1	NatureServe:, Globally Imperiled (G1), Statewide Imperiled (S1)

### California Rare Plant Ranks

- Rank 1A CNPS Rank 1A: Plants presumed extinct in California  
Rank 1B CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere  
Rank 2A CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere  
Rank 2B CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere  
Rank 3 CNPS Rank 3: Plants about which CNPS needs more information (a review list)  
Rank 4 CNPS Rank 4: Plants of limited distribution (a watch list)

### Species Evaluations:

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.

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

### References:

[CNPS] California Native Plant Society. 2014. Inventory of Rare and Endangered Plants of California. California Native Plant Society, Sacramento, California. Online at: <http://www.rareplants.cnps.org>; most recently accessed: July 2014.

[CDFW] California Department of Fish and Wildlife. 2014. California Natural Diversity Database, Wildlife and Habitat Data Analysis Branch. Sacramento.

Erikson, C.H. and D. Belk. 1999. Fairy Shrimps of California's Puddles, Ponds and Playas. Mad River Press, Inc., Eureka, California.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. Contract No. 8023.

Richmond, B., H. Green, and D.C. Rice. 2011. Alameda County Breeding Bird Atlas. Golden Gate Audubon Society and Ohlone Audubon Society. Dakota Press, San Leandro, 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, California, and CDFG, Sacramento.
- Stebbins, RC. 2003. A Field Guide to Western Reptiles and Amphibians, third edition. The Peterson Field Guide Series, Houghton Mifflin Company, NY
- Tillinger, T. and O. Stein. 1996. Fish passage through culverts in Montana: A preliminary investigation. Montana Department of Transportation. Online at: [http://www.mdt.mt.gov/other/research/external/docs/research\\_proj/final\\_report\\_fishculverts.pdf](http://www.mdt.mt.gov/other/research/external/docs/research_proj/final_report_fishculverts.pdf) . Accessed July 2014.
- [USFWS] United States Fish and Wildlife Service . 2014. Species List. Sacramento Fish and Wildlife Service. [http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists-form.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm) Accessed September 2014.
- [WBWG] Western Bat Working Group. 2014. Species accounts. Online at: [http://www.wbwg.org/speciesinfo/species\\_accounts/species\\_accounts.html](http://www.wbwg.org/speciesinfo/species_accounts/species_accounts.html) Accessed July 2014.
- Zeiner, D.C., W.F. Laudenslayer, Jr., KE Mayer, and M White. 1990. California's Wildlife, Volume I-III: Amphibians and Reptiles, Birds, Mammals. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, CA.

## **Appendix C**

### **Representative Photographs of the Study Area**

*This page intentionally left blank.*



**Appendix C. Study Area Photographs**

**Top:** View facing south of non-native grassland from Walpert Street entrance.

**Bottom:** View facing west of recently disked field that otherwise would have been non-native grassland with riparian forest in background.

Photographs taken June 30, 2014





**Appendix C. Study Area Photographs**

**Top:** View into riparian canopy of non-wetland waters.

**Bottom:** View south of riparian canopy edge with non-native grassland on the left.

Photographs taken June 30, 2014





**Appendix C. Study Area Photographs**

**Top:** Representative view of riparian habitat with steep banks along Ward Creek.

**Bottom:** Another representative view non-wetland waters of Ward Creek.

Photographs taken June 30, 2014





**Appendix C. Study Area Photographs**

**Top:** View north of disked field with oak trees lining the perimeter in the distance.

**Bottom:** View east of disked field in foreground with developed/disturbed areas lining 2<sup>nd</sup> Street in distance.

Photographs taken June 30, 2014





**Appendix C. Study Area Photographs**

**Top:** View east of diked field in foreground with developed/disturbed areas lining 2<sup>nd</sup> Street.

**Bottom:** View east of non-native grassland in foreground with developed/disturbed area of Study Area in background.

Photographs taken June 30, 2014

