Biological Resources Assessment

Creekside at Woodlake

Sacramento County, California
September 2024

MADRONE ECOLOGICAL CONSULTING

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1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) conducted for the Creekside at Woodlake Project proposed for the 1976 Edgewater Road Property (Study Area) (**Figure 1**). The approximately 7.3-acre Study Area is located south of Southgate Road and east of 1976 Edgewater Road in the City of Sacramento, Sacramento County, California. The Study Area is located in a portion of the Del Paso Land Grant, Township 9 North, Range 5 East (MDB&M) of the "Sacramento East, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021).

1.1 Project Description

The Proposed Creekside at Woodlake Project (Project) is a mixed density residential subdivision, which will include single-family homes, attached and detached accessory dwelling units, and duplexes. A road will be developed through the center of the site and requires a clear span crossing over Ice House ditch. Stormwater containment basins will be installed east and west of Ice House Ditch to provide post construction water quality and flood control. Offsite improvements are limited to utility connections to the existing City of Sacramento (City) utilities within the existing footprint of Edgewater Road and Southgate Road. The current site plan is included as **Attachment A**.

2.0 REGULATORY SETTING

This section describes federal, state and local laws and policies that are relevant to this assessment of biological resources.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized "take" of listed wildlife species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized "take." In addition, FESA prohibits malicious damage or destruction of listed plant species on federal lands or in association with federal actions, and the removal, cutting, digging up, damage, or destruction of listed plant species in violation of state law. FESA does not afford any protections to federally-listed plant species that are not also included on a state endangered species list on private lands with no associated federal action.

2.1.2 Clean Water Act, Section 404

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of dredged or fill material into waters of the United States, including some wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental Protection Agency. As of the date of this document, waters of the United States (waters of the U.S.) are defined as follows (40 CFR 120.2):

1. Waters which are:
    i. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    ii. The territorial seas; or
    iii. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under item (5) below;
3. Tributaries of waters identified in items (1) or (2) above that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    i. Waters identified in item (1) of this section; or
    ii. Relatively permanent, standing or continuously flowing bodies of water identified in items (2) or (3) above and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in items (1) or (3) above.

Under the current definition of waters of the U.S., "adjacent" means *having a continuous surface connection*.

Waters subject to regulation under Section 404 are referred to as "jurisdictional waters".

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11.). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter,

transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. The USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

2.2 State Regulations

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the California Department of Fish and Game (2009) as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g. tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e. that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code Section 2081).

2.2.3 California Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code, § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

2.2.4 California Species of Special Concern

The Species of Special Concern (SSC) are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered or meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with habitats that are threatened. Project-related impacts to SSC, state-threatened or endangered species are considered "significant" under CEQA.

2.2.5 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW

for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.6 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

2.2.7 California Water Code, Porter-Cologne Act

Waters that are not considered waters of the U.S. may be considered waters of the State of California (waters of the State) under the Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne, from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). Waters of the State are defined as any surface water or groundwater, including saline waters, within the boundaries of the state of California.

2.2.8 California Fish and Game Code, Section 1600 – Streambed and Lake Alteration

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams and lakes include those that are dry for periods of time as well as those that flow year-round. If notification is required, and CDFW believes the proposed activity is likely to substantially adversely affect fish and wildlife resources, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

2.2.9 California Fish and Game Code, Section 3503.5 - Raptor Nests

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

2.3 Local Regulations

2.3.1 City of Sacramento 2040 General Plan

The 2040 General Plan (General Plan) for the City of Sacramento (City of Sacramento 2024a) has established citywide goals and policies to guide the location, design, and quality of development to protect biological resources. Specific policies have been developed to regulate and guide the following:

ERC-1.1 Clean Water Programs
ERC-1.2 Clean Watershed
ERC-2.1 Conservation of Open Space Areas
ERC-2.2 Biological Resources
ERC-2.4 Native and Climate-Adapted Plants
ERC-2.6 Wetland Protection
ERC-2.7 Annual Grasslands
ERC-2.8 Wildlife Corridors
ERC-2.9 Habitat Assessments
ERC-2.10 Agency Coordination
ERC-1.3 Runoff Contamination
ERC-6.3 Floodplain Capacity
LUP-1.11 Coordinate to Protect Farmland

As a component of the General Plan a Master Environmental Impact Report (MEIR) was prepared (City oof Sacramento reference 2024b)

2.3.2 City of Sacramento Tree Preservation Ordinance

The City of Sacramento Tree Ordinance (City Code 12.56) specifies that a permit is required to perform regulated work on "City Trees" or "Private Protected Trees". City trees are trees partially or completely located in a City park, on City-owned property, or on a public right-of-way, including any street, road, sidewalk, park strip, mow strip or alley. Private protected trees are defined as trees designated to have special historical value, special environmental value, or significant community benefit, and that are located on private property. Private protected trees are:

- All native trees at 12-inch diameter standard height (DSH). Native trees include Coast, Interior, Valley and Blue Oaks, CA Sycamore and Buckeye.
- All trees at 32-inch DSH with an existing single-family or duplex dwelling.

- All trees at 24-inch DSH on undeveloped land or any other type of property such as commercial, industrial, and apartments.

Permits are required prior to removal of protected trees, or work on or within the root zone of protected trees. Removal of private protected trees typically requires replacement or payment of on-lieu fees.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDB) (CNDDB 2024) query of the Study Area and all areas within 5 miles of the Study Area (**Figure 3**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2024a) query for the Study Area (**Attachment B**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2024) query of the "Sacramento East, California" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment C**); and
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2017).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches were also analyzed for their potential to occur within the Study Area.

The *Aquatic Resources Delineation Report for 1976 Edgewater Road* (Madrone 2024a) and the *2023-2024 Dry-Season & Wet-Season Branchiopod Survey 90-Day Report, 1976 Edgewater Road (#RP-Edgewater-2023-1220)*. (Madrone 2024b) were reviewed and incorporated into this document as appropriate.

For the purposes of this Biological Resources Assessment, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG (WBWG 2017); and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:
    - CRPR 1A: Plants presumed extinct.
    - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
    - CRPR 2A: Plants extirpated in California, but common elsewhere.

- CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
- CRPR 3: Plants about which the CNPS needs more information – a review list.

3.2 Field Surveys

Madrone senior biologist Bonnie Peterson conducted field surveys of various portions of the Study Area on 16 March and 3 August 2023, and 17 May 2024 to assess the suitability of habitats on-site to support special-status species. Meandering pedestrian surveys were performed on foot throughout the Study Area. Vegetation communities were classified in accordance with *The Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf and Evens 2009), primarily accessed online (CNPS 2024), and plant taxonomy was based on the nomenclature in the Jepson eFlora (Jepson Flora Project 2024). A list of all wildlife species observed during field surveys is included as **Attachment D**.

The results of several additional surveys were also incorporated into this report:

- An aquatic resources delineation conducted by Madrone (Madrone 2024a),
- Wet-season and dry-season vernal pool branchiopod surveys conducted by Madrone (Madrone 2024b).

4.0 EXISTING CONDITIONS

The Study Area is an infill site located in the City of Sacramento, comprised primarily of non-native annual grasslands, which are disked annually, interspersed with mixed oak woodland. A vegetable garden is located in the eastern portion of the Study Area adjacent to Edgewater Road. The Study Area is relatively flat and bisected by Ice House Ditch, which flows north to south. There are no structures within the Study Area, however, there are existing man holes in the center of the site adjacent to Ice House Ditch. Additionally, existing asphalt and disturbed areas encroach into the Study Area at various boundaries. A single seasonal wetland is located east of Ice House ditch within the annual grassland areas.

The Study Area is an infill parcel surrounded primarily by existing residential development to the west, north and east and Highway 160 to the South. The Study Area is relatively flat, ranging between 23 and 30 feet above mean sea level. The eastern portion of the Study Area is primarily non-native annual grassland, while the west is mixed oak woodland. The Study Area is comprised primarily of non-native annual grassland. This community is dominated by soft brome (*Bromus hordeaceus*), wild oat *(Avena fatua*), annual rygrass (*Festuca perennis*), Johnson grass (*Sorghum halepense*), bermudagrass (*Cynodon dactylon*), filaree (*Erodium botrys*), prickly lettuce (*Lactuca serriola*), wild radish (*Raphanus sp*.) and common fiddleneck (*Amsinckia intermedia*). Non-native annual grassland is disked annually for fire control and adjacent residents mow under the oaks along the north west boundary. The remainder of the Study Area is comprised of mixed oak woodland. Vegetation types within the Study Area are illustrated in **Figure 4.**

A drainage ditch (Ice House Ditch) flows north to south through the center of this Study Area. The ditch is primarily fed by discharge from a number of City of Sacramento storm drain outfalls. South of the Study

Area, Ice House ditch flows to the City of Sacramento Sump 151 facility. The sump consists of an enclosed vault and pipes that penetrate the American River levee. The sump discharges through the levee into the American River floodplain. The Study Area also contains approximately 0.053 acre of seasonal wetland (**Figure 5**). The seasonal wetland ponds water seasonally during the wet season and support a variety of plant species typical of vernal pools including Mediterranean barley (*Hordeum marinum ssp. gussoneanum*), Carter's buttercup (*Ranunculus bonariensis*), slender popcorn flower (*Plagiobothrys stipitatus var. micranthus*), and unidentified seedlings.

4.1 Terrestrial Vegetation Communities

4.1.1 Non-native Annual Grassland

Approximately 4.6-acres of non-native annual grassland is interspersed throughout the Study Area. This community is dominated by soft brome (*Bromus hordeaceus*), wild oat *(Avena fatua*), annual rygrass (*Festuca perennis*), Johnson grass (*Sorghum halepense*), bermudagrass (*Cynodon dactylon*), filaree (*Erodium botrys*), prickly lettuce (*Lactuca serriola*), wild radish (*Raphanus sp*.) and common fiddleneck (*Amsinckia intermedia*). Other species occurring frequently in this vegetation community include English plantain (*Plantago lanceolata*), turkey mullein (*Croton setiger*), curly dock (*Rumex crispus*), slender tarweed (*Holocarpha virgata*), vetch (*Vicia* sp.), yellow star-thistle (*Centaurea solstitialis*), Italian thistle (*Carduus pycnocephalus*), Canadian horseweed (*Erigeron canadensis*), bindweed (*Convolvulus arvensis*), purple sand-spurrey (*Spergularia rubra*), hedge parsley (*Torilis arvensis*), and cleavers (*Galium sp.*). Areas directly adjacent to Ice House Ditch are managed for vegetation control and dominated by non-native annual grassland, but also support sandbar willow (*Salix exigua*) saplings that are frequently trimmed and disked. The remainder of the uplands in the Study Area is comprised of mixed oak woodland.

4.1.2 Oak Woodland

Approximately 1.9-acres of oak woodland occurs within the Study Area. The oak woodland has a primarily closed canopy that is comprised of interior live oak (*Quercus wislizeni*), Valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*). Occasional Chinese tallow tree (*Triadica sebifera*), olive (*Olea europaea*), black walnut (*Juglans hindsii*), and common fig (*Ficus carica*) also occur. The shrub layer is sparse in most areas, but where present includes Himalayan blackberry (*Rubus armeniacus*) and blue elderberry (*Sambucus mexicana*). The herbaceous understory is comprised of species typical of the non-native annual grassland described above.

4.1.3 Disturbed/ Developed

Disturbed or developed areas occur along the fringes of the Study Area, including a vegetable garden in the west, roadways and sidewalks, and unpaved road shoulders. Most of these areas are unvegetated, with the exception of the garden which is dominated by domestic annual and perennial vegetables.

4.2 Aquatic Resources

A protocol-level aquatic resources delineation was conducted and a report submitted to the USACE for an approved jurisdictional determination by Madrone (Madrone 2024a). Aquatic resources mapped within the Study Area are depicted in **Figure 5**. A total of 0.273 acres of aquatic resources were mapped within the Study Area (**Table 1**) (Madrone 2024a). A description of each of the aquatic resource types is included below.

Table 1. Aquatic Resources Mapped within the Study Area

Resource Type	Acreage
Wetlands	
Seasonal Wetland	0.053
Other Waters	
Ice House Ditch	0.220
Total	**0.273**

4.2.1 Seasonal Wetland

One seasonal wetland was delineated within the Study Area. Seasonal wetlands are depressional wetlands that pond water seasonally. Within the Study Area, this feature is occupied by a mix of facultative and wetland plant species. This feature is disked annually; however, it still exhibits a wetland dominance with dominant plant species being comprised of Mediterranean barley (*Hordeum marinum ssp. gussoneanum*)(FACW), Carter's buttercup (*Ranunculus bonariensis*)(OBL), slender popcorn flower (*Plagiobothrys stipitatus var. micranthus*) (OBL), and hyssop loosestrife *(Lythrum hyssopifolia*) (OBL).

Wetland hydrology indicators observed in the seasonal wetland swales during the field survey included biotic crust (in the form of algal matting) and oxidized rhizospheres along live roots. Soils within the seasonal wetlands were considered to be hydric based on the presence of field indicators F6 F3 (reduced matrix). Visual ponding was observed within this feature throughout the 2023-2024 rainy season with surface water present from early January to early March. There was no evidence of surface or subsurface water connectivity between this seasonal wetland and Ice House Ditch and it is likely an isolated wetland not subject to USACE jurisdiction. This seasonal wetland would be regulated by the State under Porter-Cologne.

4.2.2 Ice House Ditch

Approximately 0.220 acre of Ice House ditch was mapped within the Study Area. Ice House ditch is an ephemeral stormwater ditch that flows north to south through the Study Area. Ice House ditch is comprised entirely of stormwater flows and surface runoff from adjacent development. The City's enclosed storm drain system discharges into Ice House ditch in various locations, upstream, downstream, and within the Study Area. Ice House ditch flows south offsite to the City Sump 151. Sump 151 is a storm drainage facility consisting of an enclosed vault and pipes that penetrate the American River levee, and discharge to the American River flood channel.

Ice House ditch in an incised, unlined feature, and exhibits an ordinary high-water mark, including exposed roots, shifts in vegetation, and water staining. The southern portion of the ditch is generally unvegetated, while the north portion includes emergent wetland vegetation dominated by cattails (*Typha sp.*) and including rice cutgrass *(Leersia oryzoides*), knot grass (*Paspalum distichum*), willow weed (*Persicaria lapathifolia)*, floating water primrose (*Ludwigia peploides),* and sandbar willow (*Salix exigua*).

The USACE is currently determining jurisdiction of Ice House ditch. This feature is regulated by the RWQCB under Porter-Cologne and and likely by CDFW under Section 1600 of the Fish and Game Code.

4.3 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2023), four soil mapping units occur within the Study Area (**Figure 6**): (117) Columbia sandy loam, drained, 0 to 2% slopes (161) Jacktone clay, drained, 0 to 2% slopes, (211) San Joaquine fine sandy loam, 0 to 3% slopes, and (220) San Joaquine-Urban land complex, 0 to 3% slopes.

Colombia sandy loam is a hydric soil and Jacktone clay is a partially hydric soil. Hydric soils are poorly or very poorly drained under natural conditions and saturated or inundated enough to support wetland vegetation. These soils form under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil. However, it should be noted that hydric soil indicators remain even after soils are artificially drained or hydrology has been altered in an area.

5.0 RESULTS

Table 2 provides a list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. The following set of criteria was used to determine each species' potential for occurrence on the site:

- Present: Species occurs on the site based on CNDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat or the species was not observed during protocol-level surveys conducted on-site.
- Absent/No Habitat Present: The site does not contain suitable habitat for the species, the species was not observed during protocol-level floristic surveys conducted on-site, or the site is outside the known range of the species.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Plants				
Astragalus tener var. ferrisiae Ferris' milk-vetch	--	CRPR 1B.1	Occurs in meadows, foothill and valley grasslands. Usually found in dry adobe soils (elevation 5'-245').	**No Habitat Present.** The Study Area is outside the documented range of the species and lacks subalkaline or dry adobe soils.
Carex comosa Bristly sedge	--	CRPR 2B.1	Occurs in coastal prairie, margins of marshes and swamps, and valley and foothills grasslands (elevation 0'-2,050').	**No Habitat Present.** The Study Area lacks freshwater marshes or swamps.
Centromadia parryi ssp. *parryi* Pappose tarplant	--	CRPR 1B.2	Found on alkaline soils in coastal prairie, meadows, seeps, coastal salt marshes, and valley/foothill grasslands (elevation 0'-1,380').	**No Habitat Present.** Alkaline soils are not present within the Study Area.
Cuscuta obtusiflora var. glandulosa Peruvian dodder	--	CRPR 2B.2	Freshwater marshes and swamp (elevation 50'-920').	**No Habitat Present.** The Study Area lacks freshwater marshes or swamps.
Downingia pusilla Dwarf downingia	--	CRPR 2B.2	Mesic areas in valley and foothill grassland, and vernal pools (elevation 3' – 1,460').	**No Habitat Present.** The Study Area does not support vernal pools. The on-site seasonal wetland is potential habitat for this species. However, annual disking during the peak blooming season for this species reduces habitat suitability.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Gratiola heterosepala Boggs Lake hedge-hyssop	--	CE, CRPR 1B.2	Vernal pools and margins of lakes/ponds on clay soils (elevation 35' - 7,790').	**No Habitat Present.** The seasonal wetland on-site does not have a sufficient hydroperiod to support this species.
Hibiscus lasiocarpos var. occidentalis Woolly rose-mallow	--	CRPR 1B.2	Occurs in freshwater wetlands/marshes including edges. Often in riprap on sides of levees (elevation 0'-395').	**Low.** Ice House Ditch represents extremely marginal habitat for the species.
Juncus leiospermus var. ahartii Ahart's dwarf rush	--	CRPR 1B.2	Occurs along edges of vernal pool and other seasonally ponded features (elevation 100'-750').	**No Habitat Present.** The Study Area does not support vernal pools. The seasonal wetland supports suitable habitat but is disked annually during the blooming season. The Study Area is below the documented elevation range of this species.
Lasthenia chrysantha Alkali-sink goldfields	--	CRPR 1B.1	Alkaline vernal pools (elevation 0' - 655').	**No Habitat Present.** Alkaline soils do not occur within the Study Area.
Legenere limosa Legenere	--	CRPR 1B.1	Occurs in vernal pools (elevation 5'-2,885').	**No Habitat Present.** The seasonal wetland on-site does not have a sufficient hydroperiod to support this species.
Lepidium latipes var. heckardii Heckard's pepper-grass	--	CRPR 1B.2	Prefers alkaline flats within valley and foothill grasslands (elevation 5'-655').	**No Habitat Present.** No alkaline flats are present in the Study Area.
Lilaeopsis masonii Mason's lilaeopsis	--	Rare, CRPR 1B.1	Prefers brackish or freshwater swamps, intertidal marshes, and riparian scrub (elevation 0'-35').	**No Habitat Present.** No brackish or freshwater swamps, marshes or riparian scrub are present in the Study Area.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Orcuttia tenuis Slender Orcutt grass	FT	CE, CRPR 1B.1	Occurs in vernal pools and other seasonally ponded features (elevation 115'-5,775').	**No Habitat Present.** The seasonal wetland on-site does not have a sufficient hydroperiod to support this species.
Orcuttia viscida Sacramento Orcutt grass	FE	CE, CRPR 1B.1	Occurs in vernal pools (elevation 100'-330').	**No Habitat Present.** The seasonal wetland on-site does not have a sufficient hydroperiod to support this species.
Sagittaria sanfordii Sanford's arrowhead	--	CRPR 1B.2	Occurs in emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches (elevation 0' - 2,135').	**High.** Suitable habitat is present in Ice House Ditch and the species is known to occur upstream of the Study Area.
Symphyotrichum lentum Suisun Marsh aster	--	CRPR 1B.2	Occurs in fresh and salt water marshes, often associated with blackberries, cattails, and bulrush (elevation 0'-10').	**No Habitat Present**. Outside the known range for this species**.** No marshes occur within the Study Area.
Trifolium hydrophilum Saline clover	--	CRPR 1B.2	Grows in marshes, swamps, and vernal pools with alkaline soils (elevation 0'-985').	**No Habitat Present.** Study Area does not support marshes, swamps or vernal pools and lacks alkaline soils.
Invertebrates				
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	Occurs in vernal pools.	**Not Present.** Not present during USFWS protocol level wet and dry season surveys conducted in 2024.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Danaus plexippus Monarch butterfly	FC	--	Migratory species; most prevalent in the Central Valley in summer and early fall. Dependent upon milkweed (*Asclepias* species) plants as their exclusive larval host.	**No Habitat Present.** The Study Area lacks substantial populations of milkweed that could support this species.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Dependent upon elderberry (*Sambucus* species) plant as primary host species.	**High.** Three elderberry shrubs are present on-site, all with stems greater than 1" diameter and in proximity to Ice House Creek. While no exit holes were observed during initial surveys these shrubs may support VELB now or in the future.
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	Occurs in vernal pools.	**Not Present.** Not present during USFWS protocol level wet and dry season surveys conducted in 2024.
Fish				

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Acipenser medirostris Green Sturgeon	FT	--	Green sturgeon live much of each year in ocean waters along the coasts of California, Oregon, and Washinton. In the summer, they often enter bays or brackish estuaries to feed. This anadromous species migrates in March-June from saltwater into the freshwater reaches of larger coastal rivers to spawn. Green Sturgeon spawn in cool, deep, swift flowing river reaches over gravel and cobble bottoms. Juveniles grow rapidly and migrate down-river after about a year, taking up residence in the freshwater region of the estuary.	**No Habitat Present.** No suitable habitat is present within the Study Area, Ice House ditch flows to a City sump which is a physical barrier to fish passage.
Oncorhynchus mykiss irideus Steelhead – Central California Coast Distinct Population Segment (DPS)	FT	--	Anadromous species requiring freshwater water courses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	**No Habitat Present.** Ice House ditch flows to a City sump which is a physical barrier to fish passage.
Oncorhynchus tshawytscha Chinook salmon – Sacramento River fall/spring/winter-run ESU	FE	--	Anadromous species that breeds only in the mainstem of the Sacramento River, just downstream of Keswick Dam. The young remain in freshwater areas before migrating to estuarine and marine environments.	**No Habitat Present.** Ice House ditch flows to a City sump which is a physical barrier to fish passage.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Pogonichthys macrolepidotus Sacramento splittail	--	CSC	Inhabits slow-moving river sections and dead-end sloughs. Requires flooded vegetation for spawning and foraging opportunities for young.	**No Habitat Present.** Ice House ditch flows to a City sump which is a physical barrier to fish passage.
Spirinchus thaleichthys Longfin smelt	FC	CT	Prefers moderately saline water and may be found in major bays and estuaries from San Francisco Bay northward. Inhabits Bay waters throughout the summer, moving into the lower reaches of the rivers that flow into these bays in the fall to spawn.	**No Habitat Present.** No suitable habitat within the Study Area. Ice House ditch flows to a City sump which is a physical barrier to fish passage.
Amphibians				
Ambystoma californiense California tiger salamander	FT	CT	Breeds in ponds or other deeply ponded wetlands and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	**No Habitat Present.** The Study Area does not contain suitable breeding habitat for this species. The Study Area is an infill site and no known breeding habitat is located in the vicinity.
Spea hammondii Western spadefoot	--	CSC	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	**No Habitat Present.** The seasonal wetland provides potential aquatic habitat; however, ongoing disking eliminates necessary foraging and hibernating habitats necessary to support this species.
Reptiles				

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Actinemys marmorata Northwestern pond turtle	FC	CSC	Occurs in ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**Moderate.** Suitable habitat for this species is present in Ice House Ditch, however, frequent disking of adjacent uplands reduces suitability for nesting.
Thamnophis gigas Giant garter snake	FT	CT	Occurs in rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	**No Habitat Present.** The Study Area lacks connectivity to occupied habitat. The closest documented occurrences of this species are from the 1980's along the East Main Drainage canal. While the closest segment of this canal is within a mile of the Study Area, the Study Area is hydrologically isolated from this feature and potential overland routes are developed.
Birds				

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Agelaius tricolor Tricolored blackbird	--	CE, CSC	Colonial nester in cattails (*Typha* species), bulrush (*Schoenoplectus* species), or blackberry (*Rubus* species) associated with marsh habitats. Nesting habitat used by tricolored blackbirds may be as small as 0.01 acres (Airola 2021) adjacent to suitable foraging habitat such as grazed grasslands, irrigated pasture, shallow wetlands, agricultural fields (Crase and DeHaven 1977; Skorupa et al. 1980; Meese 2013; Beedy et al. 2023).	**No Habitat Present.** Emergent vegetation and blackberry habitat along Ice House Ditch is present in sparse disconnected patches that are insufficient to support a nesting colony. The Study Area lacks suitable foraging habitat for this species.
Athene cunicularia Burrowing owl	--	CSC	Nests in abandoned ground squirrel (*Otospermophilus beecheyi*) burrows associated with open grassland habitats.	**Low.** Annual disturbance, including disking, combined with a lack of ground squirrel burrows or other burrow habitat and the close proximity of domestic pets reduces habitat suitability for this species. No Burrowing owl, sign, or habitat was observed during multiple site visits conducted during the breeding and non-breeding season.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Buteo swainsoni Swainson's hawk	--	CT	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	**Present.** On and off-site trees provide suitable nesting habitat, and the annual grassland is suitable foraging habitat. A Swainson's hawk nest was observed perched in a tree during the spring of 2024.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT	CE	Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, adjacent to slow-moving waterways, backwaters, or seeps.	**No Habitat Present.** The Study Area lacks extensive or dense riparian habitat.
Elanus leucurus White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	**Moderate.** The trees on-site are suitable nesting habitat, and the annual grassland is suitable foraging habitat.
Melospiza melodia mailliardi Song sparrow "Modesto" population	--	CSC	Nests in emergent freshwater marshes dominated by bulrush and cattails as well as riparian willow (*Salix* species) thickets. This species also nests in riparian forests of valley oak (*Quercus lobata*) with a blackberry (*Rubus* species) understory, along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites (Shuford and Gardali 2008).	**No Habitat Present.** Emergent vegetation and blackberry habitat along Ice House Ditch is marginally suitable nesting habitat for this species but present in small, disconnected patches that are not of sufficient size to provide appropriate cover.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Riparia riparia Bank swallow	--	CT	Colonial nester preferring vertical cliffs and banks with fine textured/sandy soils associated with riparian zones along streams, rivers, and lakes.	**No Habitat Present.** Cliffs or banks with fine-textured/sandy soils are not present within the Study Area.
Progne subis Purple martin	--	CSC	Nests in tall bridges and overpasses near water and open areas.	**No Habitat Present.** No tall bridges or overpasses are present within the Study Area.
Vireo bellii pusillus Bell's least vireo	FE	FE	Strongly associated with riparian corridors. Generally restricted to southern California along lowland willow-dominated riparian areas. In the Sacramento Valley, the species occurs as a vagrant during the breeding season.	**No Habitat Present.** The Study Area does not contain suitably willow-dominated riparian habitat, and available riparian habitat within the off-site portions of the Ice House Ditch corridor is minimal due to maintenance of the ditch and surrounding development.
Mammals				
Taxidea taxus American badger	--	CSC	This species prefers dry open fields, grasslands, and pastures.	**No Habitat Present.** The Study Area is an infill site with lacks suitable habitat patch size to support this species. No suitable badger dens were located within the Study Area.
Lasiurus cinereus Hoary bat	--	WBWG M	Roosts primarily in foliage of both coniferous and deciduous trees at the edges of clearings (WBWG 2024).	**High.** Trees scattered throughout the site are suitable roosting habitat for this species.

Table 2. Special-Status Species with Potential to Occur within the Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence

[1] *Status Codes:*

CC - CDFW Candidate for Listing *CE - CDFW Endangered* *CFP - CDFW Fully Protected* *CRPR - California Rare Plant Rank* *CR - California Rare*

CSC - CDFW Species of Concern *CT - CDFW Threatened* *FE - Federally Endangered* *FT - Federally Threatened* *FC - Federal Candidate for Listing*

WBWG H - Western Bat Working Group High Threat Rank *WBWG M - Western Bat Working Group Medium Threat Rank*

Figure 3 shows CNDDB occurrences within five miles of the Study Area. Below is a discussion of all special-status plant and animal species with potential to occur on the site.

5.1 Plants

5.1.1 Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow-moving water into early summer. This perennial rhizomatous species blooms from May to October, and occurs from sea level to approximately 2,000 feet (CNPS 2024).

This species has been documented within Ice House Ditch upstream of the Study Area and the segment of Ice House Ditch within the Study Area provides suitable habitat for this species.

5.1.2 Woolly rose-mallow

Woolly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*) is not state or federally listed, but it is classified as a CRPR List 1B.2 plant. This perennial rhizomatous herb typically occurs in shallow freshwater marshes and swamp habitats and is strongly associated with the Delta watershed. Woolly rose-mallow often occurs in riprap on sides of levees. This species is found at elevations from sea level to approximately 395 feet and blooms from June to September (CNPS 2023).

Ice House Ditch represents potential habitat for this species. The closest known occurrence is CNDDB occ. 319 from 1946 located approximately 5.8 miles northeast of the Study Area.

5.2 Invertebrates

5.2.1 Valley Elderberry Longhorn Beetle

The Valley elderberry longhorn beetle is listed as threatened pursuant to the federal Endangered Species Act. The historic range of this beetle is limited to moist Valley oak woodlands along margins of rivers and streams in the lower Sacramento and lower San Joaquin Valleys (USFWS 1980). At the time of its listing, the beetle was known from less than 10 localities in Merced, Sacramento, and Yolo Counties (USFWS 1984). Its current distribution is patchy throughout California's Central Valley and associated foothills (USFWS 1999).

The Valley elderberry longhorn beetle is completely dependent on its host plant, elderberry (Sambucus species), which occurs in riparian and other woodland communities in California's Central Valley and the associated foothills (USFWS 1999). Female beetles lay their eggs in crevices on the stems or on the leaves of living elderberry plants. When the eggs hatch, larvae bore into the stems. The larval stages last for one to two years. The fifth instar larvae create emergence holes in the stems and then plug the holes and remain

in the stems through pupation (Talley 2003). Adults emerge through the emergence holes from late March through June. The short-lived adult beetles forage on leaves and flowers of elderberry shrubs.

Three elderberry shrubs are present in the oak woodland in the northwestern portion of the Study Area (**Figure 5**). Each shrub has numerous stems with a diameter of one inch or greater, but no exit holes were observed. The shrubs are not located in a riparian area. There are numerous VELB occurrences documented within a mile of the Study Area along the American River Floodplain and the on-site shrubs provide suitable habitat for this species.

5.3 Reptiles

5.3.1 Western Pond Turtle

The western pond turtle (*Emys marmorata*) is not federally or state listed, but is a CDFW species of special concern. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites (Jennings and Hayes 1994). Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks (Jennings and Hayes 1994).

Ice House Ditch provides suitable habitat for western pond turtle. Western pond turtle has been documented at Bushy Lake along the American River approximately 2 miles south east of the Study Area, as well as approximately 4 miles north of the Study Area (CNDDB 2024)

5.4 Birds

5.4.1 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species that is not federally listed, but is listed as threatened by CDFW. Breeding pairs typically nest in tall trees associated with riparian corridors, and forage in grassland, irrigated pasture, and cropland with a high density of rodents (Shuford and Gardali 2008). The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter (Shuford and Gardali 2008).

The non-native annual grasslands throughout the Study Area represent suitable foraging habitat for Swainson's hawk, and the trees within the Study Area provide suitable nesting habitat. Swainson’s hawk was observed on-site during May 2024 (B. Peterson personal obs.) The nearest documented Swainson’s hawk nest that is considered extant is CNDDB Occurrence #2756, which is a nest in a cottonwood tree along the American River Parkway last observed in 2017 (CNDDB 2024).

5.4.2 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not federally or state listed, but is a CDFW fully protected species. This species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands (Shuford and Gardali 2008). White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008).

The non-native annual grasslands throughout the Study Area represent suitable foraging habitat for white-tailed kite, and the trees within the Study Area provide suitable nesting habitat. The nearest documented occurrence of white-tailed kite in the CNDDB is Occurrence #142, which is located approximately 0.6 miles southeast of the Study Area along the American River Parkway (CNDDB 2024).

5.4.3 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or Federal Endangered Species Acts; however, it is designated as a species of special concern by the CDFW. This species typically inhabits dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. It typically uses burrows created by fossorial mammals, most notably the California ground squirrel (*Otospermophilus beecheyi*), but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (CDFW 1995). The breeding season extends from February 1 through August 31 (CBOC 1993, CDFW 2012).

Non-native grassland habitats may be utilized by burrowing owl, however, the Study Area lacks typical nesting burrows or ground squirrel complexes. The closest known occurrence is approximately 33miles southeast of the Study Area (CNDDB Occ. 21626).

5.5 Mammals

5.5.1 Hoary Bat

The hoary bat (*Lasiurus cinereus*) is not federally or state listed, but is classified by the WBWG as a Medium priority species. It is considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile and Argentina as well as Hawaii (WBWG 2017). Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches at the edge of a clearing (WBWG 2017). This species may also occasionally roost in caves, beneath a rock ledge, in a woodpecker hole, in a grey squirrel nest, under a wood plank, or clinging to the side of a building (WBWG 2017).

Trees within the oak woodland represent suitable roosting habitat for hoary bat. The closest documented occurrence is CNDDB occ 139 observed in West Sacramento in 1991 (CNDDB 2024).

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details potential impacts to the biological resources discussed above associated with construction of the Project, as discussed in **Section 1.1** and shown in **Attachment A. Figure 7** shows habitats to be impacted by the Project (Project Area).

6.1 Aquatic Resources

Of the approximately 0.273 acres of aquatic resources mapped within the Study Area, 0.053 acre of seasonal wetland occur within the Project Area and will be filled by the Project. Ice House Ditch (0.220 acre) will not be directly impacted; however, construction will include the excavation of additional flood control capacity adjacent to the ditch as well as a clear span road crossing over the ditch. Work adjacent to Ice House Ditch could result in water quality impacts if appropriate runoff, erosion, and sediment control Best Management Practices (BMPs) area not implemented during and after construction. The City General Plan (PFS-3.16 Stormwater Design in Private Development) requires that new developments adhere to stormwater design requirements and incorporate measures, including "green infrastructure", Low Impact Development (LID) techniques, stormwater treatment, and, if applicable, trash capture devices, to prevent on- or off-site flooding and improve runoff water quality. As such no indirect impacts are expected due to the implementation of the Project.

6.2 Special-Status Plant Species

Ice House ditch is a suitable habitat for Stanford's arrowhead, and this species has been documented in off-site portions of the ditch. The Project has been designed to avoid direct impacts to Ice House Ditch. Therefore, no impacts to special-status plant species are anticipated for the Project.

6.3 Valley Elderberry Longhorn Beetle

Three elderberry shrubs with stems greater than 1 inch in diameter were mapped on-site (**Figure 5**), and represent potential habitat for VELB. All of the shrubs will be avoided by the Project by at least 20 feet, therefore, no impacts to VELB are anticipated as a result of the Project.

6.4 Western Pond Turtle

Ice House Ditch within the Study Area provides suitable habitat for western pond turtle, but is not proposed for direct impact by the Project. Due to the level of ongoing disturbance within the adjacent uplands, suitable nesting habitat is not present. Ice House Ditch will not be impacted by construction. If western pond turtles are present in adjacent uplands during construction, individual turtles could be injured or killed, though no impact to nesting or aquatic habitat is anticipated.

6.5 Nesting Raptors and Songbirds

Swainson's hawk, white-tailed kite, and burrowing owl have potential to nest within both the Project Area, as do other more common bird species protected by the MBTA. If they were nesting on-site, removal of the nests would impact these species. Furthermore, birds nesting in avoided areas adjacent to construction could be disturbed by construction, which could result in nest abandonment.

6.6 Foraging Raptors

The non-native annual grassland within the Project Area provides suitable foraging habitat for Swainson's hawk and white-tailed kite. Approximately 4.6 acres of non-native annual grassland will be impacted during Project implementation.

6.7 Hoary Bat

Trees throughout the Project Area provide potential habitat for Hoary Bat and other common bats species. If special-status bats were roosting in trees to be removed by Project construction they could be injured or killed during the removal.

6.8 Protected Tree Impacts

A number of native oaks are large enough to qualify as protected by the City of Sacramento and Project implementation would result in the destruction of these trees. If any trees meet the City's definition of protected trees, a Tree Permit Application will need to be processed and approved by the City's Urban Forestry office. The City may require the following information with the application:

- Arborist report
- Landscape or tree planting plan
- Tree protection plan
- Site map
- Authorization of the property owner
- Tree replacement plan
- Proof of CA State License Board compliance
- Any other information as deemed necessary

7.0 MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The following are mitigation measures that are often required by CEQA lead agencies for impacts to sensitive biological resources that may be associated with construction of the Project.

7.1 Aquatic Resources

- If the USACE determines that any of the aquatic resources within the Study Area are jurisdictional under Section 404 of the Clean Water Act, the Project Applicant shall apply for a Department of the Army permit for impacts to waters of the U.S. (waters). Waters that will be impacted shall be replaced or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE.
- The Applicant shall apply for a Section 401 water quality certification from the RWQCB, and adhere to the certification conditions; however, if the USACE does not assert jurisdiction over aquatic resources present, the Project Applicant will prepare a Report of Waste Discharge Requirements, as aquatic resources present would be considered Waters of the State.
- It is likely that an LSAA would be required for the clear-span crossing of Ice House Ditch as well as flood capacity creation adjacent to the ditch. However, the only mechanism to formally determine whether an LSAA is required is to submit a notification form and associated fee to CDFW. Should CDFW assert jurisdiction, an LSAA would be issued. If they do not assert jurisdiction, CDFW would state such and return fees paid.

7.2 Water Quality

The Project will minimize impacts to water quality through the implementation of appropriate BMPs during construction, which may include the following:

- All exposed soils and other fills will be permanently stabilized at the earliest practicable date with the use of hydroseeding and/or other means of revegetation or erosion control.
- The applicant will need to apply for a Clean Water Act Section 401 water quality certification from the Central Valley Regional Water Quality Control Board (RWQCB) and will comply with the terms and conditions (including erosion and sediment controls) specified by the RWQCB.
- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) will be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place during the winter and spring months.
- A spill prevention and countermeasure plan shall be developed which would identify proper storage, collection and disposal measures for potential pollutants used onsite. The plan will also require the proper storage, handling, use, and disposal of petroleum products.
- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Soil conservation practices shall be completed during the fall or winter to reduce erosion during spring runoff. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.
- Surface water runoff shall be controlled by directing flowing water away from critical areas and by reducing runoff velocity. Diversion structures such as terraces, dikes, and ditches shall collect and direct runoff water around vulnerable areas to protect drainage outlets. Surface roughening, berms, check dams, hay bales, or similar devices shall be used to reduce runoff velocity and erosion.

- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. The applicant will store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.
- Topsoil removed during construction shall be carefully stored. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events.
- Fuel and vehicle maintenance areas will be established away from all drainage courses and will be designed to control runoff.
- Disturbed areas shall be revegetated after completion of construction activities.

7.3 Valley Elderberry Longhorn Beetle

All elderberry shrubs (which are defined for the purposes of this section as those with stems greater than 1 inch in diameter) shall be avoided completely during Project construction with a buffer of at least 20 feet, and the following avoidance and minimization measures [as outlined in the Framework for *Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017b)] shall be implemented for all work within 165 feet of a shrub:

- All areas to be avoided during construction activities will be fenced and/or flagged as close to construction limits as feasible.
- Activities that could damage or kill an elderberry shrub (e.g., trenching, paving, etc.) shall receive an avoidance area of at least 20 feet from the drip-line.
- A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.
- A qualified biologist will monitor the work area at project appropriate intervals to assure that all avoidance and minimization measures are implemented.
- As much as feasible, all activities within 165 feet of an elderberry shrub will be conducted between August and February.
- Elderberry shrubs will not be trimmed.
- Herbicides will not be used within the drip-line of the shrub. Insecticides will not be used within 100 feet of an elderberry shrub.
- Mechanical weed removal within the drip-line of the shrub will be limited to the season when adults are not active (August - February) and will avoid damaging the elderberry.

If either a 20-foot diameter avoidance area around any elderberry shrub is found later to not be feasible or an elderberry shrub must be removed to accommodate construction, then the applicant shall notify the City and implement additional mitigation measures required by the City based on the Framework (USFWS 2017b) after consultation with USFWS.

7.4 Western Pond Turtle

A western pond turtle survey shall be conducted within Ice House ditch and upland habitat within 150 feet within 48 hours prior to construction. If no western pond turtles or nests are found, no further mitigation is necessary. If a western pond turtle is observed within the proposed impact area, a qualified biologist shall relocate the individual to suitable habitat outside of the proposed impact area prior to construction. If a western pond turtle nest is observed within the proposed impact area, the nest shall be fenced off and avoided until the eggs hatch. A qualified biologist shall monitor to ensure that hatchlings do not disperse into the construction area. Relocation of hatchlings will occur as stipulated above, if necessary.

7.5 Nesting Raptors and Other Birds

The following nest survey requirements apply if construction activities take place during the typical bird breeding/nesting season (typically February 15 through September 1).

7.5.1 Swainson's Hawk

A targeted Swainson's hawk nest survey shall be conducted throughout all accessible areas within ¼ mile of the proposed construction area no later than 14 days prior to construction activities. If active Swainson's hawk nests are found within ¼ mile of a construction area, construction shall cease within ¼ mile of the nest until a qualified biologist (Project Biologist) determines that the young have fledged or it is determined that the nesting attempt has failed. If the applicant desires to work within ¼ mile of the nest, the applicant shall consult with CDFW and the City to determine if the nest buffer can be reduced. The Project applicant, the Project biologist, the City and CDFW shall collectively determine the nest avoidance buffer, and what (if any) nest monitoring is necessary. If an active Swainson's hawk nest is found within the Project site prior to construction and is in a tree that is proposed for removal, then the Project applicant shall implement additional mitigation recommended by a qualified biologist based on CDFW guidelines and obtain any required permits from CDFW.

7.5.2 Burrowing Owl

A targeted burrowing owl nest survey shall be conducted of all accessible areas within 500 feet of the proposed construction area within 15 days prior to construction activities utilizing 60 foot transects as outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) (Staff Report). If an active burrowing owl nest burrow (i.e., occupied by more than one adult owl, and/or juvenile owls are observed) is found within 250 feet of a construction area, construction shall cease within 250 feet of the nest burrow until the Project Biologist determines that the young have fledged or it is determined that the nesting attempt has failed. If the applicant desires to work within 250 feet of the nest burrow, the applicant shall consult with CDFW and the County to determine if the nest buffer can be reduced.

If construction begins during the non-nesting season, (September 1 through the 14 February), the applicant shall conduct a survey for burrows or debris that represent suitable nesting habitat for burrowing owls

within areas of proposed ground disturbance. If overwintering owls are located and cannot be avoided, the applicant may exclude any burrowing owls observed and collapse any burrows or remove the debris in accordance with the methodology outlined in the Staff Report. In accordance with the Staff Report, prior to burrow exclusion and/or closure, a Burrowing Owl Exclusion Plan must be developed and approved by CDFW. As outlined in the Staff Report, components of this plan shall include but not be limited to:

- Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;
- Type of scope and appropriate timing of scoping to avoid impacts;
- Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily and monitored for evidence that owls are inside and can't escape i.e., look for sign immediately inside the door).
- How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow);
- Removal of other potential owl burrow surrogates or refugia on site;
- Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;
- Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take; and
- How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.

If any nesting burrowing owls are found during the breeding season pre-construction survey mitigation for the permanent loss of burrowing owl foraging habitat (defined as all areas of suitable habitat within 250 feet of an active nest burrow) shall be accomplished at a 1:1 ratio. The mitigation provided shall be consistent with recommendations in the CDFW 2012 Staff Report or if the Project Biologist and the City determine that the area is suitable. The Staff Report recommendations for mitigation land for burrowing owls are as follows:

- Where habitat will be temporarily disturbed, restore the disturbed area to pre-project condition including decompacting soil and revegetating. Permanent habitat protection may be warranted if there is the potential that the temporary impacts may render a nesting site (nesting burrow and satellite burrows) unsustainable or unavailable depending on the time frame, resulting in reduced survival or abandonment. For the latter potential impact, see the permanent impact measures below.
- Mitigate for permanent impacts to nesting, occupied and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the information provided in Appendix A. Note: A minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-

specific analysis and discounting the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area.

- Mitigate for permanent impacts to nesting, occupied and satellite burrows and burrowing owl habitat with (a) permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals. The mitigation lands may require habitat enhancements including enhancement or expansion of burrows for breeding, shelter and dispersal opportunity, and removal or control of population stressors. If the mitigation lands are located adjacent to the impacted burrow site, ensure the nearest neighbor artificial or natural burrow clusters are at least within 210 meters (Fisher et al. 2007).
- Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission, for the purpose of conserving burrowing owl habitat and prohibiting activities incompatible with burrowing owl use. If the project is located within the service area of a Department approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits.
- Develop and implement a mitigation land management plan to address long-term ecological sustainability and maintenance of the site for burrowing owls (see Management Plan and Artificial Burrow sections below, if applicable).
- Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.
- Habitat should not be altered or destroyed, and burrowing owls should not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to Department-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
- Mitigation lands should be on, adjacent or proximate to the impact site where possible and where habitat is sufficient to support burrowing owls present. Where there is insufficient habitat on, adjacent to, or near project sites where burrowing owls will be excluded, acquire mitigation lands with burrowing owl habitat away from the project site. The selection of mitigation lands should then focus on consolidating and enlarging conservation areas located outside of urban and planned growth areas, within foraging distance of other conserved lands. If mitigation lands are not available adjacent to other conserved lands, increase the mitigation land acreage requirement to ensure a selected site is of sufficient size. Offsite mitigation may not adequately offset the biological and habitat values impacted on a one to one basis. Consult with the Department when determining offsite mitigation acreages.
- Evaluate and select suitable mitigation lands based on a comparison of the habitat attributes of the impacted and conserved lands, including but not limited to: type and structure of habitat being impacted or conserved; density of burrowing owls in impacted and conserved habitat; and significance of impacted or conserved habitat to the species range-wide. Mitigate for the highest

quality burrowing owl habitat impacted first and foremost when identifying mitigation lands, even if a mitigation site is located outside of a lead agency's jurisdictional boundary, particularly if the lead agency is a city or special district.

- Select mitigation lands taking into account the potential human and wildlife conflicts or incompatibility, including but not limited to, human foot and vehicle traffic, and predation by cats, loose dogs and urban-adapted wildlife, and incompatible species management (i.e., snowy plover).
- Where a burrowing owl population appears to be highly adapted to heavily altered habitats such as golf courses, airports, athletic fields, and business complexes, permanently protecting the land, augmenting the site with artificial burrows, and enhancing and maintaining those areas may enhance sustainability of the burrowing owl population onsite. Maintenance includes keeping lands grazed or mowed with weedeaters or push mowers, free from trees and shrubs, and preventing excessive human and human-related disturbance (e.g., walking, jogging, off-road activity, dog-walking) and loose and feral pets (chasing and, presumably, preying upon owls) that make the environment uninhabitable for burrowing owls (Wesemann and Rowe 1985, Millsap and Bear 2000, Lincer and Bloom 2007). Items 4, 5 and 6 also still apply to this mitigation approach.
- If there are no other feasible mitigation options available and a lead agency is willing to establish and oversee a Burrowing Owl Mitigation and Conservation Fund that funds on a competitive basis acquisition and permanent habitat conservation, the project proponent may participate in the lead agency's program.

7.5.3 Other Birds

A pre-construction nesting bird survey shall be conducted by a qualified biologist on the project site and within a 500-foot radius of proposed construction areas, where access is available, no more than three (3) days prior to the initiation of construction. If there is a break in construction activity of more than two (2) weeks then subsequent surveys shall be conducted.

If active raptor nests, not including Swainson's hawk, are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced if a smaller buffer is proposed by the Project Biologist and approved by the City after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (are there visual or acoustic barriers between the proposed activity and the nest). A qualified biologist can visit the nest as needed to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

7.5.4 Survey Report

A report summarizing the survey(s), including those for Swainson's hawk and burrowing owls, shall be provided to the City within 30 days of the completed survey and is valid for one construction season. If no nests are found, no further mitigation is required.

7.6 Loss of Foraging Habitat

7.6.1 Swainson's Hawk

Approximately 4.6 acres of potential Swainson's hawk foraging habitat will be impacted during Project implementation. CDFG's *Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California (1994)* outlines mitigation measures that have been reviewed and are considered adequate to reduce impacts to Swainson's hawk to a less then significant level under CEQA. These pre-approved measures are outlined below; however, the Project may also choose to negotiate project specific mitigation measures which differ:

Prior to Project construction, a qualified biologist shall conduct a review of Swainson's hawk nest data available in the CNDDB and contact CDFW to determine if they have any additional nest data. If desired by the Project proponent, the biologist may conduct a survey of these nests to determine if they are still present. The biologist shall provide the County with a summary of his/her findings. If it is determined that the project site is within 10 miles of an active Swainson's hawk nest (an active nest is defined as a nest with documented Swainson's hawk use within the past 5 years), the applicant will mitigate for the loss of suitable Swainson's hawk foraging habitat by implementing one of the below measures:

- Active nest identified within 1 mile of the project site: One acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the County.
- Active nest identified within 5 miles (but greater than 1 mile) of the project site: 0.75 acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the County.
- Active nest identified within 10 miles (but greater than 5 miles) of the project site: 0.5 acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the County.

7.7 Roosting Bats

A qualified biologist shall conduct a bat habitat assessment of all potential roosting trees within the proposed impact footprint. This habitat assessment shall identify all potentially suitable roosting habitat and may be conducted up to one year prior to the start of construction. If no roosting habitat is found, no additional mitigation is necessary.

If potential roosting habitat is identified (cavities in trees) within the areas proposed for impact, the biologist shall survey the potential roosting habitat during the active season (generally April through October or from January through March on days with temperatures in excess of 50 degrees F) to determine presence of roosting bats. These surveys are recommended to be conducted utilizing methods that are considered

acceptable by CDFW and bat experts. Methods may include evening emergence surveys, acoustic surveys, inspecting potential roosting habitat with fiberoptic cameras or a combination thereof.

If roosting bats are identified within any of the trees proposed for removal, or if presence is assumed, the trees shall be removed outside of pup season only on days with temperatures in excess of 50 degrees F. Pup season is generally during the months of May through August. Two-step tree removal shall be utilized under the supervision of the qualified biologist. Two-step tree removal involves removal of all branches of the tree that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Additionally, it is recommended that all other tree removal and/or structure demolition be conducted from January through March on days with temperatures in excess of 50 degrees F to avoid potential impacts to foliage-roosting bat species.

7.8 Protected Trees

The Project may require the removal of trees protected by the City of Sacramento's Tree Preservation Ordinance. The Project Applicant will have the Project Area surveyed for protected trees and acquire a tree removal permit prior to the start of construction. The Tree Ordinance requires the Project Applicant to obtain a Tree Permit from the City prior to Improvement Plan approval if Protected Trees will be impacted by the Project. The Tree Permit Application will be accompanied by a Tree Replacement Plan, which "must provide for the replacement of trees at a ratio of one inch DSH of tree replaced for each inch DSH of tree removed (1:1 ratio)." Replacement options include on-site or off-site replacement, payment of an in-lieu fee, or credit for existing trees that will be preserved. Tree replacement equivalents outlined in the Tree Ordinance are summarized in Table 3 below, and the current in-lieu fee is $325 per DSH inch. The City shall review the permit application as well as the final site improvement plans and determine the precise mitigation requirement at that time.

Table 3. Tree Replacement Equivalency

Replacement Tree Size	DSH Equivalency
15-gallon container or smaller tree	1-inch DSH
24-inch box tree	2-inch DSH
36-inch box tree	3-inch DSH

7.9 Worker Environmental Awareness Training

Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss

the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

8.0 REFERENCES

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Figures

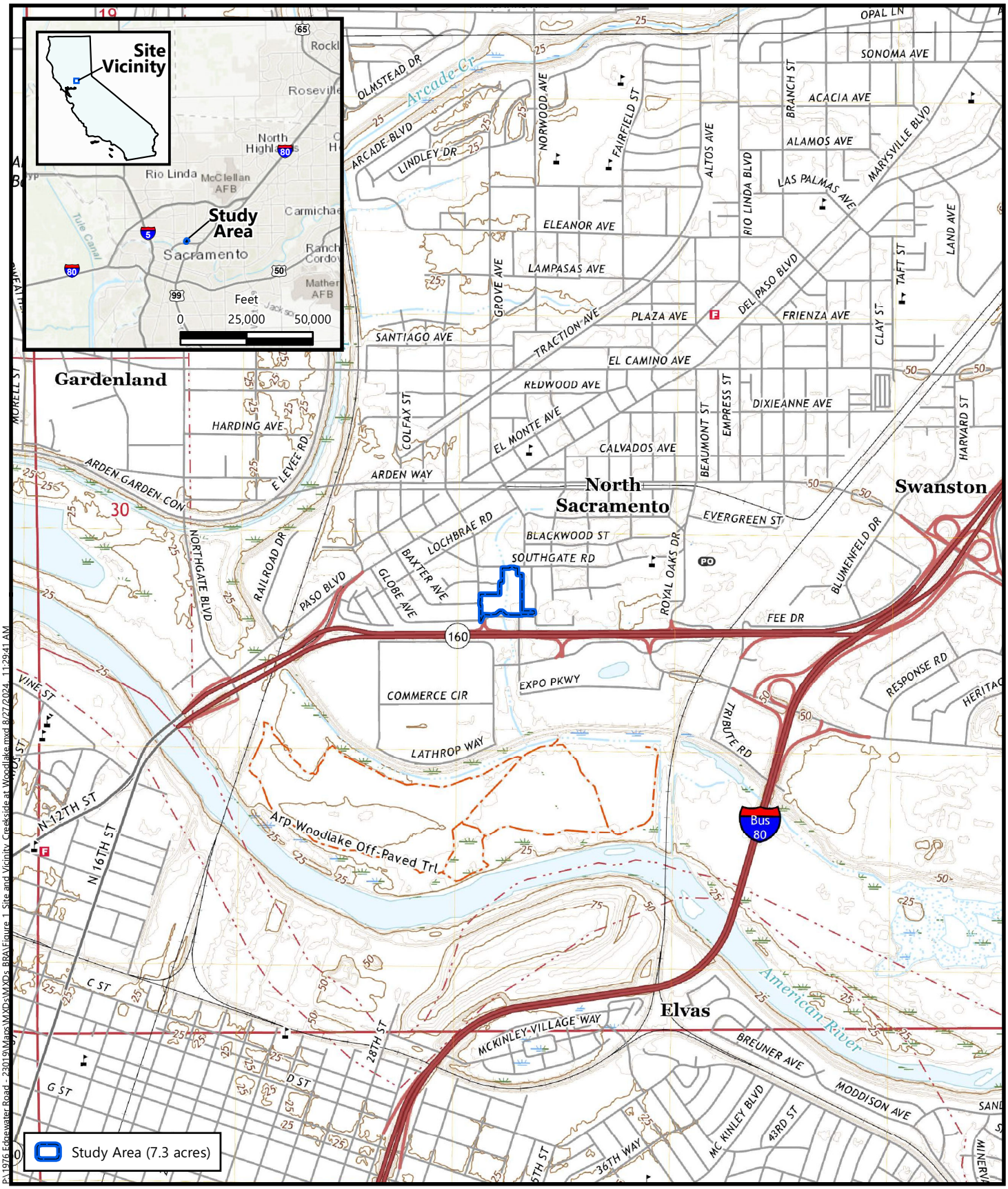

Figure 1
Site and Vicinity

Creekside at Woodlake
Sacramento County, California

Source: United States Geologic Survey, 2021.
"Sacramento East, California" 7.5-Minute Topographic Quadrangle
Del Paso Land Grant
Township 9 North, Range 5 East
Latitude 38.601765, Longitude -121.458615

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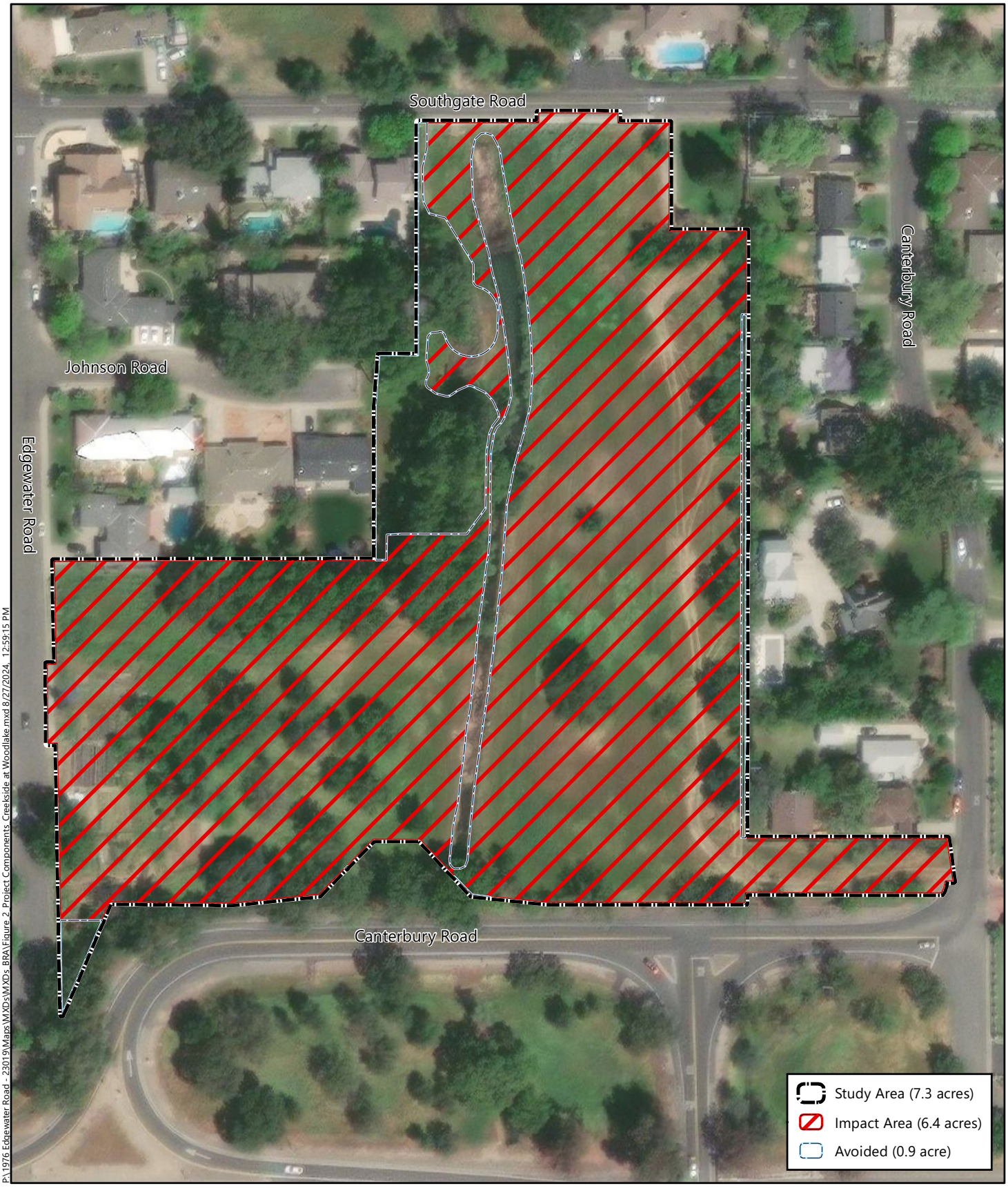

Figure 2
Project Components

Creekside at Woodlake
Sacramento County, California

Note: Small errors may occur due to rounding.
Aerial Source: Maxar, 12 April 2022.

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Study Area (7.3 acres)

5-Mile Radius of Study Area

Critical Habitats

Delta Smelt

Valley Elderberry Longhorn Beetle

Species

Birds

1 - Bank Swallow

2 - Burrowing Owl

3 - Least Bell's Vireo

4 - Purple Martin

5 - Song Sparrow ('Modesto' population)

6 - Swainson's Hawk

7 - Tricolored Blackbird

8 - Western Yellow-Billed Cuckoo

9 - White-Tailed Kite

Fish

10 - Chinook Salmon - Central Valley Spring-run ESU

11 - Chinook Salmon - Sacramento River Winter-Run ESU

12 - Green Sturgeon - Southern DPS

13 - Longfin Smelt

14 - Sacramento Splittail

15 - Steelhead - Central Valley DPS

Invertebrate

16 - Valley Elderberry Longhorn Beetle

17 - Vernal Pool Fairy Shrimp

18 - Vernal Pool Tadpole Shrimp

Mammals

19 - American Badger

20 - Hoary Bat

Plants

21 - Legenere

22 - Sanford's Arrowhead

23 - Woolly Rose-Mallow

Reptiles

24 - Giant Garter Snake

25 - Western Pond Turtle

Study Area

N

0 1 2 Miles

Source: *California Department of Fish and Wildlife*, June 2024

Basemap Source: *National Geographic* and *ESRI*

P:\1976 Edgewater Road - 23019\Maps\MXDs\MXDs\ BRA\Figure 3_CNDDB_Creekside at Woodlake.mxd 8/27/2024, 11:29:54 AM

Figure 3
California Natural Diversity Database Occurrences of Species and Critical Habitats
Creekside at Woodlake
Sacramento County, California

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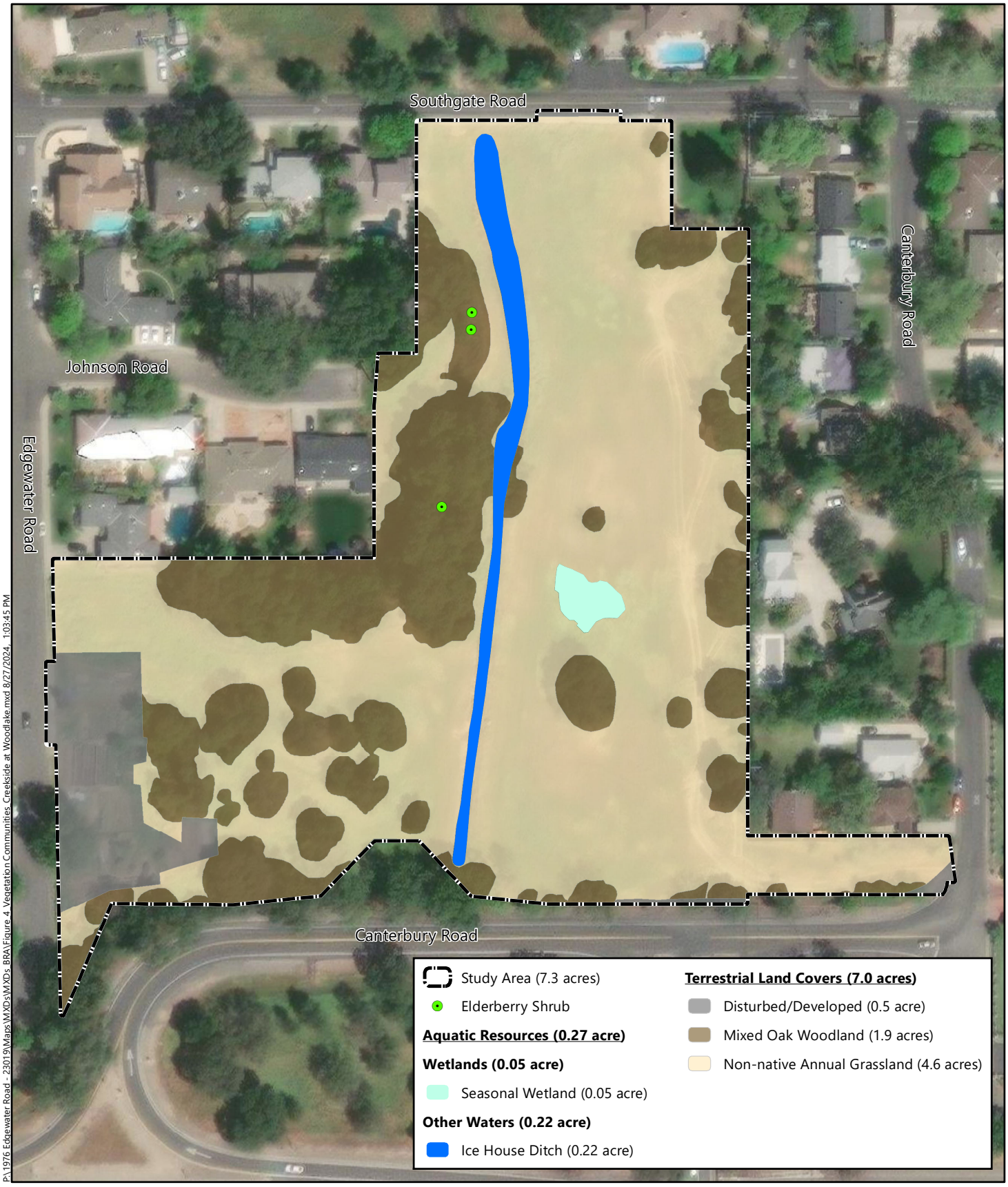

N

Feet
0 60 120

Figure 4
Vegetation Communities

Creekside at Woodlake
Sacramento County, California

Note: Small errors may occur due to rounding.
Aerial Source: Maxar, 12 April 2022.

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N

Feet

0 60 120

Figure 5
Aquatic Resources and Elderberry Shrubs

Creekside at Woodlake
Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Note: Small errors may occur due to rounding.
Aerial Source: Maxar, 12 April 2022.

N

Feet

0 60 120

Soil Survey Source: *USDA, Soil Conservation Service.*
Soil Survey Geographic (SSURGO) Database for Sacramento County, California
Aerial Source: Maxar, 12 April 2022.

Figure 6
Natural Resources Conservation Service Soils

Creekside at Woodlake
Sacramento County, California

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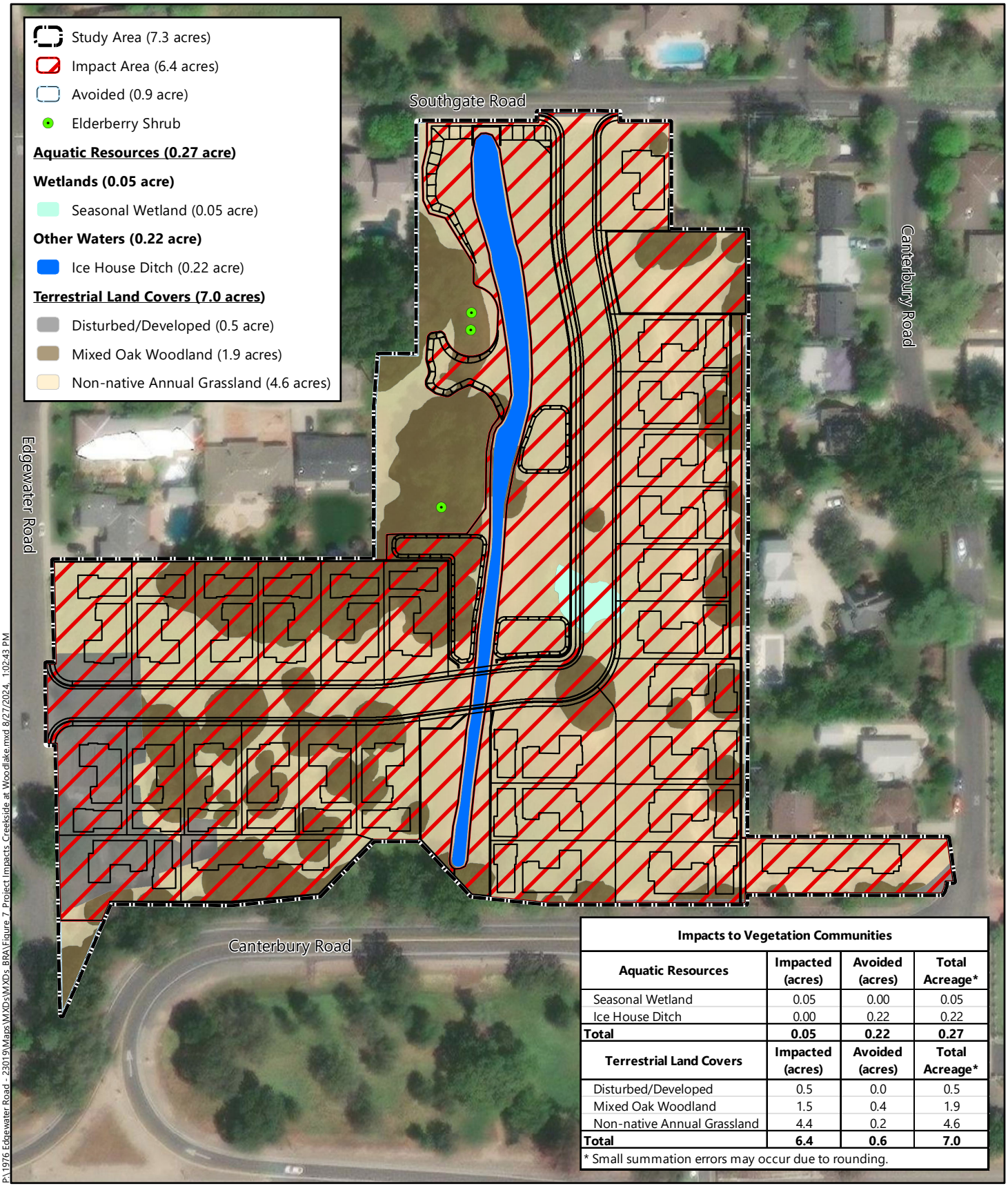


Impacts to Vegetation Communities			
Aquatic Resources	**Impacted (acres)**	**Avoided (acres)**	**Total Acreage***
Seasonal Wetland	0.05	0.00	0.05
Ice House Ditch	0.00	0.22	0.22
Total	**0.05**	**0.22**	**0.27**
Terrestrial Land Covers	**Impacted (acres)**	**Avoided (acres)**	**Total Acreage***
Disturbed/Developed	0.5	0.0	0.5
Mixed Oak Woodland	1.5	0.4	1.9
Non-native Annual Grassland	4.4	0.2	4.6
Total	**6.4**	**0.6**	**7.0**
* Small summation errors may occur due to rounding.			

N

Feet

0 60 120

Figure 7
Impacts to Vegetation Communities

Note: Small errors may occur due to rounding.
Aerial Source: Maxar, 12 April 2022.

Creeksiide at Woodlake
Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Creekside at Woodlake Illustrative Site Plan

Attachment B. IPaC Trust Resource Report for the Study Area

Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Sacramento East, California" USGS Quadrangle and Eight Surrounding Quadrangles

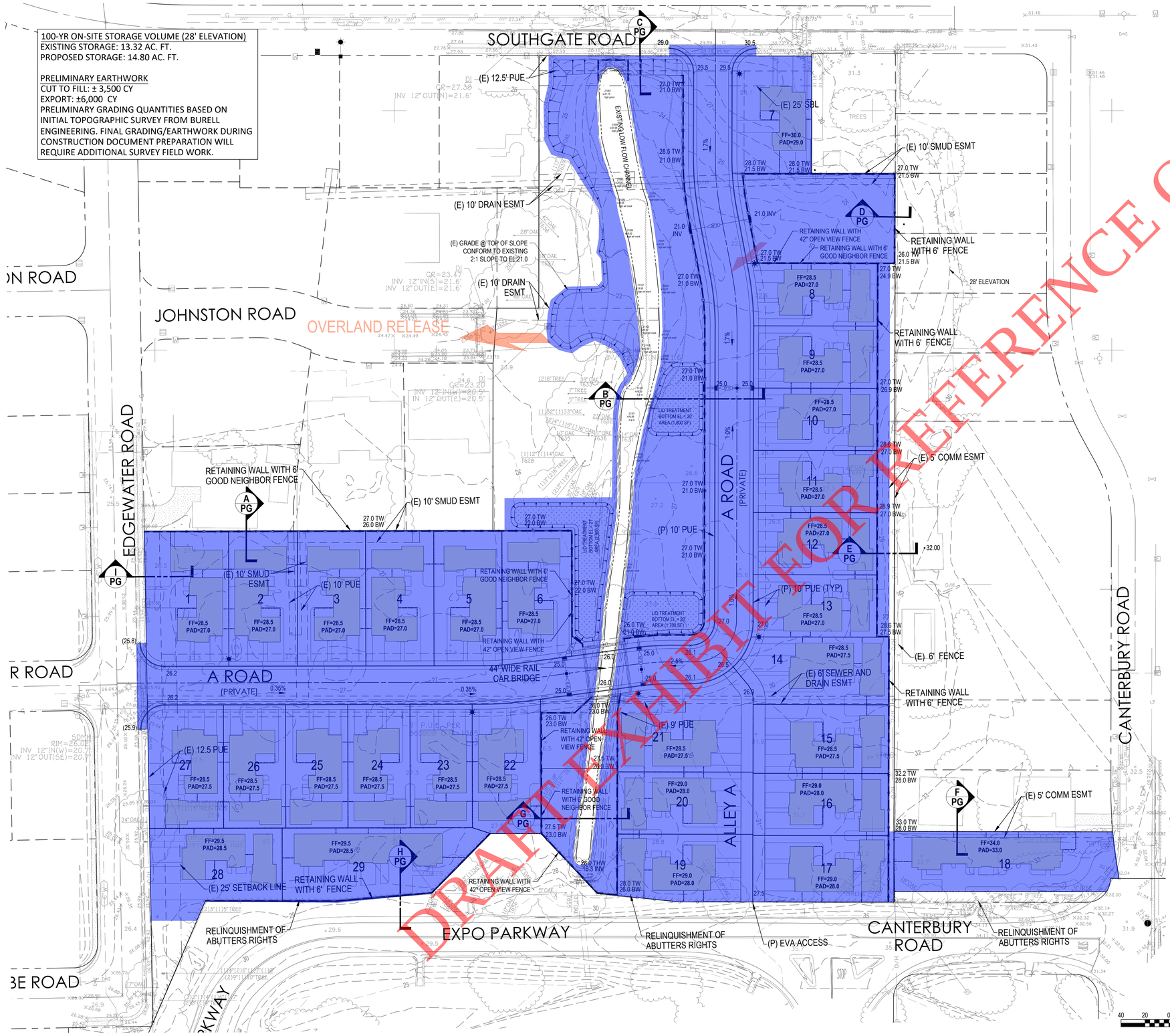
Attachment D. Wildlife List

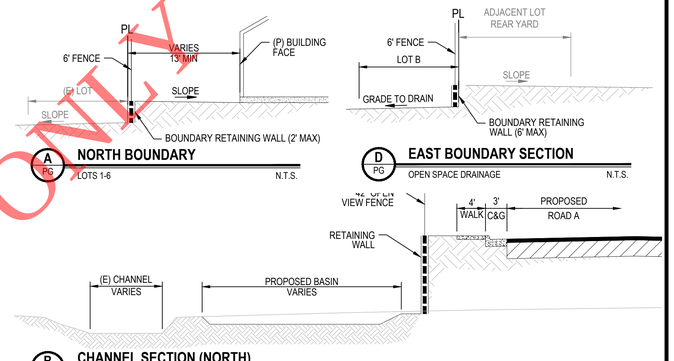
Attachment A

Creekside at Woodlake Illustrative Site Plan

100-YR ON-SITE STORAGE VOLUME (28' ELEVATION)
EXISTING STORAGE: 13.32 AC. FT.
PROPOSED STORAGE: 14.80 AC. FT.

PRELIMINARY EARTHWORK
CUT TO FILL: ± 3,500 CY
EXPORT: ±6,000 CY
PRELIMINARY GRADING QUANTITIES BASED ON INITIAL TOPOGRAPHIC SURVEY FROM BURELL ENGINEERING. FINAL GRADING/EARTHWORK DURING CONSTRUCTION DOCUMENT PREPARATION WILL REQUIRE ADDITIONAL SURVEY FIELD WORK.

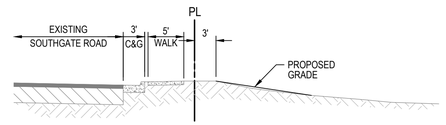




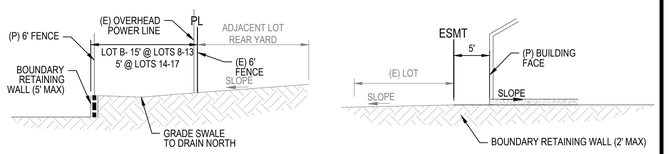
A PG NORTH BOUNDARY — LOTS 1-6 — N.T.S.

D PG EAST BOUNDARY SECTION — OPEN SPACE DRAINAGE — N.T.S.

B PG CHANNEL SECTION (NORTH) — N-S DRAINAGETHRU PROJECT — N.T.S.

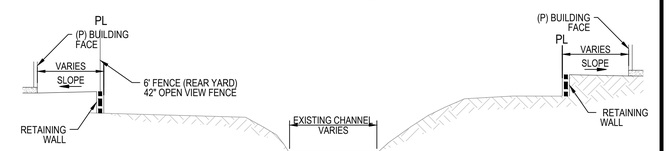


C PG NORTH BOUNDARY SECTION — SOUTHGATE ROAD — N.T.S.

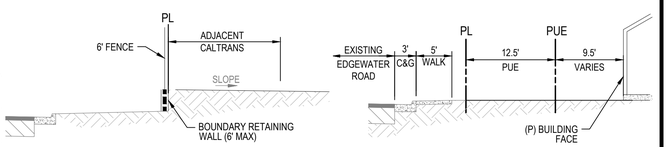


E PG EAST BOUNDARY SECTION — LOTS 8-17 — N.T.S.

F PG NORTH BOUNDARY SECTION — LOT 18 — N.T.S.



G PG CHANNEL SECTION SOUTH — N-S DRAINAGE THROUGHT PROJECT — N.T.S.



H PG SOUTH BOUNDARY SECTION — LOT 29 — N.T.S.

I PG WEST BOUNDARY SECTION — LOT 1 — N.T.S.

CREEKSIDE AT WOODLAKE

PRELIMINARY GRADING PLAN

SHEET 2 of 3

JULY 30, 2024

GRAPHIC SCALE
40 20 0 40 80
1 in = 40 ft

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CIVIL ENGINEERING • LAND PLANNING • LAND SURVEYING
Folsom ✶ Fresno
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Folsom, CA 95630
phone: (916) 984-7621
web: www.mpengr.com

Attachment B

IPaC Trust Resource Report for the Study Area

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Sacramento County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Western Spadefoot Spea hammondii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

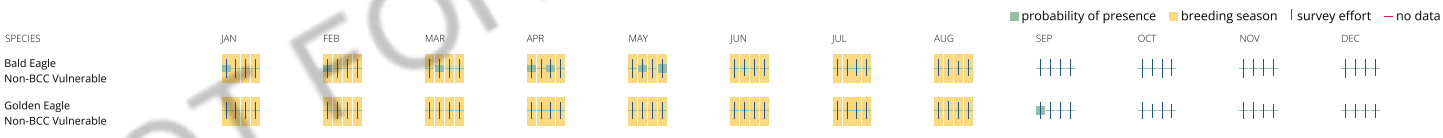
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch *Spinus lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker *Dryobates nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Santa Barbara Song Sparrow *Melospiza melodia graminea* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Tricolored Blackbird *Agelaius tricolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Gull *Larus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 21 to Aug 25
Western Screech-owl *Megascops kennicottii cardonensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jun 30
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie *Pica nuttalli* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

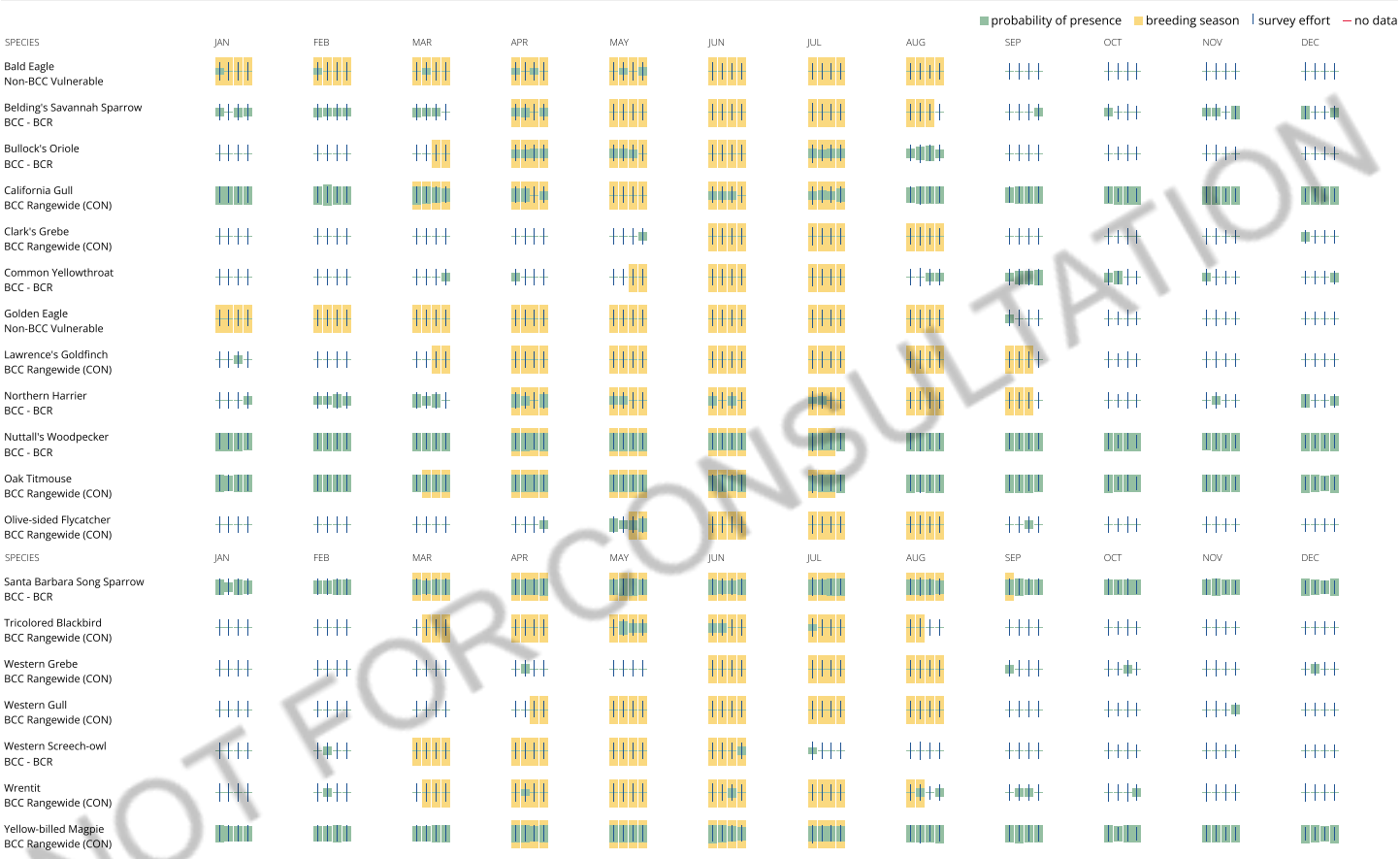
Breeding Season (▮)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

Refuge and fish hatchery information is not available at this time

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment C

CNPS Inventory of Rare and Endangered Plants Query for the "Sacramento East, California" USGS Quadrangle and Eight Surrounding Quadrangles Area

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

22 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812163:3812153:3812143:3812155:3812165:3812164:3812144:3812154:3812145**]

SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	STATE RANK	▲ CA RARE PLANT RANK	DATE ADDED
Astragalus tener var. *ferrisiae*	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	None	None	S1	1B.1	1994-01-01
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	S2	1B.1	2019-09-30
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	S2	1B.1	1974-01-01
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	S2	1B.1	1974-01-01
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	S2	1B.1	1974-01-01
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	S1	1B.1	1974-01-01
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	S2	1B.2	2004-01-01
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	S2	1B.2	1974-01-01
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	S3	1B.2	1974-01-01
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	S1	1B.2	1984-01-01
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	None	None	S1	1B.2	1994-01-01
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	S3	1B.2	1984-01-01
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	None	None	S2	1B.2	1974-01-01
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	S2	1B.2	2001-01-01
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	S2	2B.1	1994-01-01
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	SH	2B.2	2011-08-24

Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	S2	2B.2	1980-01-01
Brodiaea rosea ssp. *vallicola*	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	None	None	S3	4.2	2019-01-07
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	S3	4.2	2007-05-22
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	S3	4.2	1980-01-01
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	S3	4.2	2001-01-01
Navarretia eriocephala	hoary navarretia	Polemoniaceae	annual herb	May-Jun	None	None	S4?	4.3	1974-01-01

Showing 1 to 22 of 22 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 26 August 2024].

Attachment D

Wildlife List

Wildlife Species Observed within the Study Area

Species Name	Common name
Reptiles	
Sceloporus occidentalis	Western fence lizard
Trachemys scripta elegans	Red-eared slider
Birds	
Agelaius phoeniceus	Red-winged blackbird
Anas platyrhynchos	Mallard
Aphelocoma californica	California scrub jay
Ardea alba	Great egret
Ardea herodias	Great blue heron
Branta canadensis	Canada goose
Buteo swainsoni	Swainson's hawk
Cathartes aura	Turkey vulture
Columbia livia	Rock dove
Colaptes auratus	Northern flicker
Charadrius vociferous	Killdeer
Corvus brachyrhynchos	American crow
Euphagus cyanocephalus	Brewer's blackbird
Melanerpes formicivorus	Acorn woodpecker
Mimus polyglottos	Northern mockingbird
Zenaida macroura	Mourning dove
Zonotrichia leucophrys	White-crowned sparrow
Mammals	
Sciurus sp.	Tree squirrel