APPENDIX C

Biological Resources Evaluation

Biological Resources Evaluation for the Renfree Field Renovation Project, Sacramento, Sacramento County, California

JULY 2023

PREPARED FOR

City of Sacramento

PREPARED BY

SWCA Environmental Consultants

BIOLOGICAL RESOURCES EVALUATION FOR THE RENFREE FIELD RENOVATION PROJECT, SACRAMENTO, SACRAMENTO COUNTY, CALIFORNIA

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List of Abbreviated Terms

°F	Fahrenheit
AMM	Avoidance and Minimization Measure
BRE	Biological Resources Evaluation
BSA	Biological Survey Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
City	City of Sacramento
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of Sacramento
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships Program
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FP	Fully Protected
GPS	Global Positioning System
IPaC	Information for Planning and Consultation
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NPPA	Native Plant Protection Act

NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
PRC	Public Resources Code
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
State Water Board	California State Water Resources Control Board
UCB	University of California, Berkeley
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
WDR	waste discharge requirement
WGS84	World Geodetic System 1984
WOTUS	waters of the United States

1 INTRODUCTION

This Biological Resources Evaluation (BRE) has been prepared by SWCA Environmental Consultants (SWCA), at the request of the City of Sacramento (City), to identify sensitive biological resources that may be impacted by the Renfree Field Renovation Project (project). This BRE describes the regulatory setting for the project, the Biological Study Area (BSA), the methods and results of the background research and field surveys, a discussion of the possible permitting implications of the project, and recommended measures to avoid and minimize project impacts. SWCA anticipates that this BRE will be used along with a separate aquatic resources delineation report to support environmental permitting.

2 PROJECT DESCRIPTION

2.1 Location

The proposed project is located within the larger Del Paso Regional Park in the northwest portion of the city of Sacramento, Sacramento County, California. Del Paso Regional Park is an approximately 630-acre multi-use park and includes Harry Renfree Field (Renfree Field). The park is bounded by Park Road to the north, the on- and off-ramps to Highway 244 to the east, Auburn Boulevard to the south, and Watt Avenue to the west. (Appendix A: Figures 1 and 2). The project site occurs on the Rio Linda, California U.S. Geological Survey (USGS) 7.5-minute quadrangle (T9N, R5E). The geographic coordinates of the centroid of the BSA are 38.64041° north, 121.37691° west (World Geodetic System 1984 [WGS84]), and the Universal Transverse Mercator (UTM) coordinates are 641,288 m east, 4,277,953 m north, Zone 10S (WGS84) (USGS 2022).

2.2 Project Overview

The proposed project includes the replacement of the current Renfree Field baseball facilities with two side-by-side baseball fields (Field 1 and Practice Field 2) with overlapping outfield areas and a new soccer field. Baseball Field 1 would be located on roughly the same footprint as the existing Renfree Field, be oriented similarly, and have 30-foot-tall backstop fencing. Practice Field 2 and its 30-foot-tall backstop fencing would be located on the southeast portion of the site, north of the play structure and eastern parking lot and adjacent to the existing walking paths/equestrian trails. A 210-foot by 330-foot soccer field would be striped in the outfield area(s) of the proposed new ballfields on the north portion of the existing Renfree Field. Infrastructure associated with the existing Renfree Field such as bleachers, bullpens, shaded dugouts, lighting, and connecting sidewalks would be replaced. New bleachers, bullpens, and shaded dugouts would be developed for Practice Field 2. All proposed project improvements are shown in Figure 3 (see Appendix A).

The northern portion of the western parking lot would be redesigned to include a full-sized asphalt basketball court and four pickleball courts with benches and fencing. The southern portion of the existing western parking lot would be redesigned to accommodate an approximately 77-space vehicle parking lot with two-way access via Bridge Road. A parking gate would be placed at the entry and a bioswale would provide stormwater filtration prior to entering the storm drain.

The proposed sidewalk improvements would extend west from the edge of the existing parking lot across Bridge Road and along the north side of Auburn Boulevard to the edge of the Owl Creek Terrace and would connect the new and existing park features. The proposed project would also include new lighting for the walkway, parking lot, sports courts, and baseball fields. New lighting for the baseball fields would replace the existing light towers and be oriented along the perimeter of the field to accommodate lighting

for the two baseball fields and soccer field. There would be eight new approximately 60-foot-tall light towers, which are the same number and height as the existing light towers that would be removed.

Redevelopment of Renfree Field and the western parking lot to accommodate additional ballfields and sports courts and construction of 75 linear feet of new 5-foot-wide sidewalk along Auburn Boulevard on the southern perimeter of site would not increase the amount of impervious surfaces on the project site compared to existing conditions. Grading of the Owl Creek Terrace and subsequent hydroseeding with a pre-selected herbaceous mix would occur immediately west of Bridge Road, where excess soil was placed as part of the development of the 21-space parking lot on the east side of project site.

3 ENVIRONMENTAL SETTING

3.1 Existing conditions

The BSA comprises the entirety of Renfree Field and adjacent areas of Del Paso Park, covering a total area of 12.87 acres, and is divided by Bridge Road running north to south through the western half of the project site. Renfree Field currently contains a public park with a baseball field, a playground, and two parking lots. The project area contains two sections of the trail system that loops through Del Paso Park. West of Bridge Road, the BSA is undeveloped and contains a cleared field bounded by a chain-link fence on the south and west sides. Arcade Creek is located north of the BSA and runs through the Del Paso Park from west to east, dividing the park into a smaller northern portion that is largely maintained as a natural area and larger southern portion that contains a mix of natural areas and park improvements, such as playing fields, playgrounds, and parking lots.

Existing vegetation is predominantly composed of areas of landscape plants and shade trees around the parking lots and throughout the playground area and turf grass on the baseball fields. The northern and eastern perimeter of Renfree Field is surrounded by natural areas consisting of Valley Oak Woodland with a grass understory.

3.2 Topography

The BSA is situated within the Sacramento Valley at an elevation of approximately 68 feet above mean sea level. The topography of the project site is generally flat and gently slopes to the northwest (see Appendix A: Figure 1). The project site is located in the Arcade Creek watershed (hydrologic unit code 180201110302; U.S. Environmental Protection Agency [USEPA] 2022).

3.3 Climate

The BSA experiences a Mediterranean climate characterized by hot, dry summers and cool, wet winters. Temperatures in Sacramento range from an average high of 92 degrees Fahrenheit (°F) in July to an average low of 39°F in January. The average annual precipitation from 1981 to 2010 in Sacramento was 18.52 inches (U.S. Climate Data 2022).

3.4 Soils

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2022), soils in the BSA consist of two soil types—Liveoak sandy clay loam and San Joaquin Urban Land complex soil series (see Appendix A: Figure 4). The Liveoak series

consists of very deep, moderately well-drained soils formed in loamy alluvium from mixed sources. This soils type occurs mainly along the eastern and southeastern part of the Sacramento Valley. The San Joaquin series consists of moderately deep to a duripan, well- and moderately well-drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources. This soils type occurs mainly along the eastern side of the Sacramento and San Joaquin Valleys.

4 REGULATORY SETTING

4.1 Federal

4.1.1 *Clean Water Act*

The Clean Water Act (CWA) is the primary federal law regulating water quality. The implementation of the CWA is the responsibility of the USEPA; however, the USEPA depends on other agencies, such as the U.S. Army Corps of Engineers (USACE) and individual states to assist. The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Sections 404 and 401 of the CWA apply to activities that would impact waters of the United States (WOTUS). The USACE enforces Section 404 of the CWA, and the California State Water Resources Control Board (State Water Board) enforces Section 401, as well as state water laws.

4.1.1.1 SECTION 404

Section 404 of the CWA prohibits the discharge of dredged or fill material into WOTUS without formal consent from the USACE. On August 31, 2021, the Navigable Waters Protection Rule, which defined WOTUS, was vacated and remanded. In accordance with the current guidance from the USEPA and USACE, WOTUS should be interpreted as consistent with the pre-2015 regulatory regime until further notice (USEPA 2021), which is defined as follows:

- All waters currently or previously susceptible to use in interstate foreign commerce;
- All interstate waters, including interstate wetlands;
- Waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as WOTUS under this definition;
- Tributaries of waters identified in the bullet points above;
- The territorial sea; and
- Wetlands adjacent to waters identified in the preceding bullet points.

Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3(b)).

Projects that minimally affect WOTUS may meet the conditions of one of the existing Nationwide Permits, provided that certain conditions are satisfied. Substantial impacts to WOTUS may require an Individual Permit, which, among other requirements, involves an alternatives analysis to demonstrate why

impacts cannot be avoided. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions.

4.1.1.2 SECTION 401

Any application for a federal permit to impact WOTUS under Section 404 of the CWA, including Nationwide Permits where preconstruction notification is required, must also provide to the USACE a certification or waiver from the State of California. The "401 Certification" is provided by the State Water Board through the local Regional Water Quality Control Board (RWQCB).

The RWQCB issues and enforces permits for discharge of treated water, landfills, storm-water runoff, filling of any surface waters or wetlands, dredging, agricultural activities, and wastewater recycling. The RWQCB recommends the 401 Certification application be made at the same time that any applications are provided to other agencies, such as the USACE, U.S. Fish and Wildlife Service (USFWS), or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). The application is not final until completion of environmental review under California Environmental Quality Act (CEQA). The application to the RWQCB must include:

- a description of the habitat that is being impacted,
- how much habitat is being impacted temporarily and permanently,
- a description of how the impact is proposed to be minimized, and
- mitigation measures with goals, schedules, and performance standards. Mitigation must include a replacement of functions and values, and replacement of wetland. The RWQCB looks for mitigation that is on-site and in-kind, with functions and values as good as or better than the water-based habitat that is being removed.

4.1.2 *Federal Endangered Species Act*

The Federal Endangered Species Act (FESA) of 1973, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the FESA. The FESA has the following four major components: (1) provisions for listing species; (2) requirements for consultation with the USFWS and NOAA Fisheries; (3) prohibitions against "taking" (i.e., harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species; and (4) provisions for permits that allow incidental "take." Recovery plans and the designation of critical habitat for listed species are defined in the FESA.

Under Section 7 of the FESA, any federal agency that is authorizing, funding, or carrying out an action that may jeopardize the continued existence of federally listed threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species must consult with the federal agency that oversees the protection of that species, typically the USFWS and/or NOAA Fisheries, depending on the species that may be affected. Non-federal agencies and private entities can seek authorization for take of federally listed species under Section 10 of the FESA, which requires the preparation of a Habitat Conservation Plan.

4.1.3 *Migratory Bird Treaty Act*

The U.S. Migratory Bird Treaty Act (MBTA; 16 United States Code [USC] Section 703 et seq., 50 CFR Part 10) states it is "unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill; attempt to take, capture or kill; possess, offer for sale, sell, offer to barter, barter, offer to purchase,

purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or in part, of any such bird or any part, nest or egg thereof . . . "

The long-standing interpretation was that take that is incidental to otherwise lawful activities was prohibited in addition to intentional take. In 2017 the U.S. Department of the Interior Solicitor's Office released Opinion M-37050, which opined that the legal scope of the MBTA applies only to intentional take of migratory birds and that the take of birds resulting from an activity is not prohibited when the underlying purpose of that activity is not to take birds. In February 2020, the USFWS published a proposed rule to codify M-37050. In January 2021, after preparing an Environmental Impact Statement and receiving public comments on the proposed rule, the USFWS published the final rule formalizing this interpretation of the MBTA. As a result, the MBTA was limited to purposeful actions, such as directly and knowingly removing a nest to construct a project, hunting, and poaching, and not to actions resulting in incidental take. However, in May 2021, the USFWS proposed to revoke that rule and return to implementing the MBTA as prohibiting incidental take and applying enforcement discretion, consistent with judicial precedent. In July 2021, the USFWS announced that two economic analysis documents associated with the proposed revocation of the rule were open for public review and comment. The comment period closed on August 19, 2021.

4.2 State

4.2.1 *California Endangered Species Act*

The California Endangered Species Act (CESA; California Fish and Game Code [CFGC] 2050 et seq.) generally parallels the FESA. It establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. Section 2080 of the CFGC prohibits the take, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or by the regulations. "Take" is defined in Section 86 of the CFGC as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." This definition differs from the definition of take under the FESA. The CESA, which is administered by the California Department of Fish and Wildlife (CDFW), allows for take incidental to otherwise lawful projects but mandates that state lead agencies consult with the CDFW to ensure that a project would not jeopardize the continued existence of threatened or endangered species.

4.2.2 *California Environmental Quality Act*

CEQA (Public Resources Code [PRC] Sections 21000 et. seq.) requires public agencies to review activities that may affect the quality of the environment so that consideration is given to preventing damage to the environment. When a lead agency issues a permit for development that could affect the environment, it must disclose the potential environmental effects of the project. This is done with an "Initial Study and Negative Declaration" (or Mitigated Negative Declaration) or with an "Environmental Impact Report." Certain classes of projects are exempt from detailed analysis under CEQA.

State CEQA Guidelines Section 15380 defines endangered, threatened, and rare species for purposes of CEQA and clarifies that CEQA review extends to other species that are not formally listed under the FESA or CESA but meet specified criteria. The state maintains a list of sensitive, or "special-status," biological resources, including those listed by the federal or state government or the California Native Plant Society (CNPS) as endangered, threatened, rare or of special concern due to declining populations. During CEQA analysis for a proposed project, the California Natural Diversity Data Base (CNDDB) is

usually consulted. The CNDDB relies on information provided by the USFWS, CDFW, and CNPS, among others. Under CEQA, the lists kept by these and any other widely recognized organizations are considered when determining the impact of a project.

4.2.3 *Native Plant Protection Act*

The Native Plant Protection Act (NPPA) was created in 1977 with the intent to preserve, protect, and enhance rare and endangered plants in California (CFGC Sections 1900–1913). The NPPA is administered by the CDFW, which has the authority to designate native plants as endangered or rare and to protect them from take. The CDFW maintains a list of plant species that have been officially classified as endangered, threatened, or rare. These special-status plants have special protection under California law, and projects that directly impact them may not qualify for a categorical exemption under CEQA guidelines. With regulation promulgated in 2015, the CDFW may permit impacts to plants designated as rare under the NPPA using the same procedures for threatened, endangered, and candidate plant species protected under the CESA.

4.2.4 *California Fish and Game Code Sections 1600 through 1607*

Sections 1600 through 1607 of the CFGC require that a Notification of Lake or Streambed Alteration Agreement (LSAA) application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions in the application and, if necessary, prepares an LSAA that includes measures to protect affected fish and wildlife resources, including mitigation for impacts to bats and bat habitat.

4.2.5 *California Fish and Game Code Sections 3503 and 3513*

Nesting birds, including raptors, are protected under CFGC Section 3503, which reads, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." In addition, under CFGC Section 3503.5, "it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Passerines and non-passerine land birds are further protected under CFGC Section 3513. As such, the CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered take by the CDFW.

4.2.6 *California Fish and Game Code Sections 3511, 4700, 5050, and 5515*

The classification of California fully protected (FP) species was the CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for birds, mammals, amphibians and reptiles, and fish. Most of the species on these lists have subsequently been listed under the FESA and/or CESA. The CFGC (Sections 3511 for birds, 4700 for mammals, 5050 for amphibian and reptiles, and 5515 for fish) deals with FP species and state that these species ". . . may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species." Take of these species may be authorized for necessary scientific research. This language makes the FP designation the strongest and most restrictive regarding the take of these species. In 2003 the code

sections dealing with FP species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

4.2.7 California Fish and Game Code Sections 4150 through 4155

Sections 4150 through 4155 of the CFGC protect non-game mammals, including bats. Section 4150 states "A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A non-game mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission." The non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. Bats are classified as a non-game mammal and are protected under the CFGC.

4.2.8 Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is to protect water quality and the beneficial uses of water, and it applies to both surface and ground water. Under this law, the State Water Board develops statewide water quality plans and the RWQCBs develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter-Cologne Act, referred to as "waters of the State," include isolated waters that are not regulated by the USACE. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, any person discharging, or proposing to discharge, waste (e.g., dirt) into waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

4.3 Local

4.3.1 Sacramento City Code

Sacramento City Code Chapter 12.56 Tree Planting, Maintenance, And Conservation ordinances concerning the planting, maintenance and conservation of trees within city limits. Section 12.56.020 outlines definitions as follows: "City Trees" are characterized as 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.

Section 12.56.030 outlines the Inspection, Maintenance, and Removal of trees by the City.

A. The director may plant, inspect, perform regulated work on, or perform routine maintenance on city trees.

B. No person shall interfere or cause any other person to interfere with any tree related work performed pursuant to this code by any city employee or any city contractor.

C. Removal of city trees.

    1. If the director intends to remove a city tree, the director shall post notice of the intent to remove the city tree for 15 days in a conspicuous place on or in proximity to the tree.

2. Within the 15-day notice period, any person may file a written objection with the director requesting a meeting with the director with the meeting to occur within 30 days after filing the written objection.
3. The director shall provide a written decision on the objection within 10 days after the meeting. The director's decision shall be final.

5 METHODS

The 12.87-acre BSA consists of Renfree Field and adjacent areas of Del Paso Park, including an approximately 80-foot buffer surrounding the proposed project footprint, as illustrated in Figure 5 (see Appendix A).

5.1 Definitions

5.1.1 *Special-Status Plant Species*

For the purposes of this BRE, special-status plant species are defined as the following:

- Plants listed or proposed for listing as threatened or endangered under the FESA
- Plants listed, proposed, or candidate for listing as threatened or endangered under the CESA
- Plants considered by the CNPS to be "rare, threatened, or endangered" in California (California Rare Plant Ranks [CRPR] 1A, 1B, 2A, 2B, and 3)
- Plants listed under the NPPA

5.1.2 *Special-Status Wildlife Species*

For the purposes of this BRE, special-status wildlife species are defined as the following:

- Wildlife listed or proposed for listing as threatened or endangered under the FESA
- Wildlife that are candidates for listing as threatened or endangered under the FESA
- Wildlife listed, proposed, or candidate for listing as threatened or endangered under the CESA
- CDFW Species of Special Concern (SSC)
- California FP species

5.1.3 *Sensitive Natural Communities*

For the purposes of this BRE, sensitive natural communities are defined as the following:

- Aquatic (wetland, water, and riparian) communities protected under federal and/or state regulatory programs
- Vegetation alliances and associations with a California State Rarity Rank (S) of S1, S2, or S3 (considered sensitive by CDFW)

5.1.4 *Species Potential to Occur*

The likelihood that a particular special-status species occurs in the BSA was determined based on natural history parameters, including, but not limited to, the species' range, habitat, foraging needs, migration routes, and reproductive requirements. The following definitions apply:

- **Present:** The species has been documented within the BSA by a reliable observer during recent surveys and habitat has not significantly degraded since the observation (e.g., no habitat removal associated with a development).
- **Likely to occur:** The species has a reasonable to strong likelihood to be present in the BSA as indicated by factors such as habitat quality, proximity to known records, presence of suitable dispersal corridors, etc. The BSA contains suitable habitat and is located within the elevational and geographic ranges of the species.
- **Unlikely to occur:** The species is not likely to occur in the BSA. Potentially suitable habitat is present. The BSA may be outside of the species' elevational and/or geographic ranges, contain substantially degraded or fragmented habitat, lack recent (i.e., within the last 10 years) occurrence records within dispersal distance, occur in an area isolated from known populations by barriers to migration/dispersal, and/or contain predators or invasive species that inhibit survival or occupation.
- **No potential:** The species is not expected to occur in the BSA due to absence of potentially suitable habitat, the location of the BSA substantially outside of the species' elevational and/or geographic ranges, or the species is restricted to or known to be present only within a specific area outside of the BSA.
- **Absent:** The species was not detected during focused or protocol-level surveys for the project.

5.2 Background Research

SWCA performed a literature and database review to identify potential sensitive biological resources that have the potential to occur in the BSA. The database review consisted of a CNDDB record search for special-status species within nine USGS 7.5-minute quadrangles surrounding the BSA (CDFW 2022a), a CNPS Rare Plant Program Inventory of Rare and Endangered Plants of California record search of the nine USGS 7.5-minute quadrangles surrounding the project site (CNPS 2022), and a query of the USFWS Information for Planning and Consultation (IPaC) (USFWS 2022a). The results of these database queries are included in Appendix B.

Other sources reviewed included the following:

- USDA NRCS Web Soil Survey (NRCS 2022)
- USFWS National Wetland Inventory (NWI) (USFWS 2022b)
- The California Natural Communities List (CDFW 2022b)
- eBird (Cornell Lab of Ornithology 2023)

5.3 Field Survey

On December 7, 2022, SWCA Staff Biologist Alec Villanueva conducted a survey of the BSA to evaluate the presence or absence of sensitive biological resources, including suitable habitat for special-status species determined to have the potential to occur in the BSA, sensitive natural communities, and

potentially jurisdictional wetland features. The biologists walked the BSA and documented suitable habitat (e.g., burrows) and active bird nests observed with a sub-meter accurate Global Positioning System (GPS) unit. Wildlife and plant species observed during the survey were recorded. Vegetation was classified and mapped to the alliance or association level using *A Manual of California Vegetation Online* (CNPS 2022). Plant species were identified on sight or with the aid of dichotomous keys in the Jepson eFlora (University of California, Berkeley [UCB] 2022). A list of plant and wildlife species observed during the field survey are included in Appendix C, and representative photographs depicting existing conditions are in included in Appendix D.

6 RESULTS

6.1 Special-Status Species

6.1.1 *Plants*

The background research resulted in 12 special-status plants that have potential to occur in the nine quadrangles surrounding the BSA, as described in Table E-1 in Appendix E. As described in the table, none of these species are likely to occur in the BSA based on on-site conditions, habitat suitability, proximity of recent occurrences, species' geographic ranges, and field observations. Special-status plants will not be discussed further in this document.

6.1.2 *Wildlife*

Based on a CNDDB query and a review of existing literature, 28 special-status wildlife species were identified within the nine quadrangles surrounding the project, as described in Table E-2 in Appendix E. Of the 28 special-status wildlife species evaluated, only white-tailed kite (*Elanus leucurus*) and purple martin (*Progne subis*) were determined to likely have potential to occur on-site. The BSA also contains suitable nesting trees for Swainson's hawk (*Buteo swainsoni*); however, this species was determined to be unlikely to occur due to the lack of suitable foraging habitat within the BSA as well as the presence of more favorable habitat within the vicinity of the BSA. No special-status wildlife were observed during the December 2022 field survey.

The remaining 27 species were determined to be unlikely or have no potential to occur in the BSA due to a lack of suitable foraging and/or breeding habitat, aestivating habitat, and/or other biotic considerations, or the BSA is outside of the species' current known range. These species will not be discussed further in this document. The special-status wildlife species that are present, or that have potential to occur, are discussed in the following sections.

6.1.2.1 WHITE TAILED KITE

White-tailed kite is a state FP species (CDFW 2022c) that is a common to uncommon yearlong resident of coastal and valley lowlands in cismontane California and is absent from the higher elevations in the Sierra Nevada, the Modoc Plateau, and from most desert regions (California Wildlife Habitat Relationships Program [CWHR] 2022). White-tailed kite occurs in the herbaceous and open stages of most habitats in cismontane California. This species is rarely found away from agricultural areas and forages in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands. White-tailed kite preys mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians (CWHR 2022). Substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting. Nests are made of loosely piled sticks and twigs and lined with grass, straw, or rootlets.

Nests are typically located near the top of dense oak, willow, or other tree stands from 20 to 100 feet above the ground and are often located near an open foraging area (CWHR 2022).

The many large oak trees in the BSA may provide potential nesting habitat for white-tailed kite; however, this species was not observed on-site during the field survey. Although marginally suitable foraging habitat may be present within adjacent areas of Del Paso Park, the remaining areas surrounding the BSA are largely urbanized developed and do not provide optimal foraging conditions for this species. Ten CNDDB occurrences of this species within 5 miles of the BSA; however, most of these occurrences are found along larger river systems adjacent to agricultural field and undisturbed grassland habitat suitable for foraging (CDFW 2022a). Given the presence of more suitable habitat for this species in the vicinity of the BSA, and based on the above information, white-tailed kite is unlikely to occur within the BSA.

6.1.2.2 PURPLE MARTIN

Purple martin is a CDFW SSC (CDFW 2022c) that is a summer resident in North America. The wintering grounds of this species are savannas and agricultural fields in Bolivia, Brazil, and elsewhere in South America (Audubon 2022).

Purple martin nests are often within woodpecker holes in mountain forests or woodlands; in low-elevation coniferous forest of Douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), and Monterey pine (*Pinus radiata*); and located in tall, isolated trees and snags. (CDFW 2022a). Purple martin readily nests in birdhouses, as well as gourds, dead trees, saguaro cactus, buildings, cliffs, and sometimes in other structures like traffic lights, streetlamps, dock pilings, or oil pumps. This species forages over towns, cities, parks, open fields, dunes, streams, wet meadows, beaver ponds, and other open areas (Audubon 2022).

There are three CNDDB occurrences within 5 miles of the BSA (CDFW 2022a). The many large oak trees in the BSA may provide potential nesting habitat for purple martin. This species was not observed on-site during the field survey. Based on the above information, purple martin is likely to occur within the BSA.

6.1.2.3 SWAINSON'S HAWK

Swainson's hawk is a state threatened species (CDFW 2022c) that occurs primarily as a spring and summer resident in California. In the autumn, this species migrates to South America for the winter. Swainson's hawk is typically found in open desert habitat, grassland habitat, or cropland containing scattered, large trees or small groves. Swainson's hawk typically hunts for small mammals and reptiles by flying over open habitat and scanning the ground but will also catch insects in flight. Individuals will typically roost in large trees adjacent to open habitats but will also roost on the ground if there are no trees available. Swainson's hawk will often nest peripheral to riparian systems but will also use lone trees in agricultural fields or pastures and roadside trees when available and adjacent to suitable foraging habitat (Audubon 2022). In the Central Valley, Swainson's hawk usually nests in large native trees such as valley oak (*Quercus lobata*), cottonwood (*Populus fremontii*), walnut (*Juglans hindsii*), and willow (*Salix* spp.), and occasionally in nonnative trees such as eucalyptus (*Eucalyptus* spp.).

Suitable large oak trees for nesting are present within the BSA; however, the BSA does not contain suitable foraging habitat for this species. Although marginally suitable foraging habitat may present within adjacent areas of Del Paso Park, the remaining areas surrounding the BSA are largely urbanized developed and do not provide optimal foraging conditions for this species. Five CNDDB occurrences of this species have been recorded within 5 miles of the BSA; however, most of these occurrences are located along large river systems in proximity to agricultural areas and undisturbed grassland habitat

(CDFW 2022a). Given the presence of more suitable habitat for this species within the vicinity of the BSA, Swainson's hawk is unlikely to occur within the BSA.

6.2 Nesting Migratory Birds/Raptors

The BSA contains suitable nesting and foraging habitat for avian species protected under the MBTA and CFGC Sections 3503 and 3513 during the typical nesting season (February 15–September 15). Suitable nesting and forging habitats would include the grassland areas, shrubs, and trees within and adjacent to the project laydown area. Nesting is unlikely outside of the typical nesting season, although some avian species may forage year-round near the site. SWCA biologists reviewed bird observation data from eBird (Cornell Lab of Ornithology 2023) (see Appendix B) to determine which species have potential to occur on-site. Avian species protected by the MBTA and CFGC that were observed in the BSA during the August 2022 field survey included:

- California scrub jay (*Aphelocoma californica*)
- Oak titmouse (*Baeolophus inornatus*)
- Cedar waxwing (*Bombycilla cedrorum*)
- Anna's hummingbird (*Calypte anna*)
- Northern flicker (*Colaptes auratus*)
- House finch (*Haemorhous mexicanus*)
- Wild turkey (*Meleagris gallopavo*)
- Yellow-billed magpie (*Pica nutalli*)
- Black phoebe (*Sayornis nigricans*)
- Yellow-rumped warbler (*Setophaga coronata*)
- Lesser goldfinch (*Spinus psaltria*)

Several yellow-billed magpie nests were observed within the light poles and large oak trees surrounding the baseball field that cover much of the BSA.

6.3 Critical Habitat

No critical habitat occurs within the BSA.

6.4 Natural Communities and Other Land Covers

6.4.1 *Natural and Semi-Natural Communities*

6.4.1.1 NONNATIVE GRASSLAND

Nonnative Annual Grassland is the most widespread natural community within BSA, covering 6.80 acres (see Appendix A: Figure 5). This community is not strictly a naturally occurring community as it is dominated by nonnative turf grasses (likely deliberately planted) such as Bermuda grass (*Cynodon dactylon*), annual bluegrass (*Poa annua*), and Kentucky bluegrass (*P. pratensis*). Other nonnative grasses present included slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis* ssp. *rubens*), bristly dogstail grass (*Cynosurus echinatus*),

and crabgrass (*Digitaria sanguinalis*). Many nonnative herbaceous species common in ruderal habitats are also present in this community, including redstem filaree (*Erodium cicutarium*), ribwort (*Plantago lanceolata*), yellow star thistle (*Centaurea solstitialis*), stinkwort (*Dittrichia graveolens*), prickly lettuce (*Lactuca serriola*), Canada horseweed (*Erigeron canadensis*), Turkey-mullein (*Croton setiger*), rose clover (*Trifolium hirtum*), and horse nettle (*Solanum elaeagnifolium*). Isolated trees included some native oaks, and exotic ornamental trees are in this community. Much of the vegetation in this community shows evidence of regular disturbance from mowing. This community meets one or more of the membership rules for the *Cynodon dactylon – Crypsis* spp. – *Paspalum* spp. Herbaceous Semi-Natural Alliance (CNPS 2022). However, it is worth noting that *Crypsis* and *Paspalum* are absent in this community. This community does not have a California State Rarity Rank owing to the dominance of nonnative species in this community (CDFW 2022b).

6.4.1.2 VALLEY OAK WOODLAND

Approximately 0.72 acre (31,363 square feet) of Valley Oak Woodland occurs along the eastern edge of the BSA (see Appendix A: Figure 5). The canopy of this community ranges from continuous to open. Valley oak is dominant in the tree canopy with interior live oak (*Quercus wislizeni*) also present at lower densities. The shrub layer is sparse to open with the understory being dominated by nonnative grasses such as wild oat, bristly dog tail grass, and various species of brome (*Bromus* sp.) grass, as well as herbaceous species such as yellow star thistle. Much of the understory vegetation in this community shows evidence of regular vegetation management, including mowing. This community meets one or more of the membership rules for the *Quercus lobata* Woodland Alliance (CNPS 2022). Vegetation in this community may be further classified as the *Quercus lobata* / grass Association, which has a California State Rarity Rank of S3 (CDFW 2022b). Valley Oak Woodland occurs within valley bottoms and summit valleys with gentle to somewhat steep slopes as well ridgetops. This community thrives within various soil textures, including loams and clays (CNPS 2022). This is a sensitive natural community.

6.4.1.3 VALLEY OAK RIPARIAN WOODLAND

Approximately 1.04 acres of Valley Oak Riparian Woodland occurs along the northern and western edge of the BSA (see Appendix A: Figure 5). The tree canopy of this community is continuous and dominated by valley oak; however, other native tree species, including interior live oak, coast live oak (*Quercus agrifolia*), white alder (*Alnus rhombifolia*), Modesto ash (*Fraxinus velutina*), and Goodding's black willow (*Salix gooddingii*), are present in the tree canopy at lower densities. Nonnative trees, including edible fig (*Ficus carica*) and Chinese elm (*Ulmus parvifolia*), are also present. Much of the understory vegetation in this community shows evidence of regular vegetation management. The understory vegetation present mostly occurs closer to the banks of Arcade Creek and included species such as Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobum*), and California wild grape (*Vitis californica*), as well as grasses such as rabbitsfoot grass (*Polypogon monspeliensis*), Italian rye grass (*Festuca perennis*), and Johnsongrass (*Sorghum halepense*). This community meets one or more of the membership rules for the *Quercus lobata* Riparian Forest & Woodland Alliance (CNPS 2022). Vegetation in this community may be further classified as the *Quercus lobata – Quercus wislizeni* Association, which has a California State Rarity Rank of S3 (CDFW 2022b). Valley Oak Riparian Woodland occurs within valley bottoms, floodplains, creeks, and stream terraces that have seasonally saturated soils and may be intermittently flooded (CNPS 2022). This is a sensitive riparian community.

6.4.1.4 ORNAMENTAL WOODLAND

Ornamental Woodland is not a naturally occurring community but is a vegetation community characterized by a mix of exotic ornamental and native plant species, which is often associated with residential or commercial development. Vegetation density, canopy cover, and species composition will

vary based on purpose and/or design. Such vegetation is often deliberately planted to provide shade and/or aesthetic value, Approximately 1.22 acres of Ornamental Woodland are present in the BSA. The tree species that comprise this community consist of exotics cultivars such as London plane tree (*Platanus x hispanica*), Callery pear (*Pyrus calleryana*), and Idaho locust (*Robinia x ambigua*), as well as native oaks and Modesto ash. This community does not have a California State Rarity Rank owing to the dominance of nonnative species in this community (CDFW 2022b).

6.4.2 *Other Habitats/Land Covers*

6.4.2.1 URBAN/DEVELOPED

The BSA contains approximately 3.09 acres of urban/developed cover type. Disturbed/developed areas are generally characterized by residential or commercial development. Within the BSA, disturbed/developed cover types are paved, graveled, or otherwise covered by humanmade structures. This cover type lacks any vegetation cover, aside from sparse ruderals, and does not support special-status species due to the high level of disturbance and human activity (see Appendix A: Figure 5).

6.5 Essential Fish Habitat

There is no designated essential fish habitat within the BSA.

6.6 Wetlands/Waters

The BSA does not contain any wetlands or waters that could potentially be considered jurisdictional by the USACE, RWQCB or CDFW. However, the BSA contains a sliver of Valley Oak Riparian Woodland along its northern boundary bordering Arcade Creek. Additionally, the BSA borders Owl Creek to the west, which is a tributary to Arcade Creek. Arcade and Owl Creeks are likely jurisdictional WOTUS and waters of the state; therefore, impacts to riparian habitat associated with these features would likely be regulated by the CDFW pursuant to CFGC Sections 1600 through 1607, as described in Section 4.2.4.

6.7 Migratory Corridors

A wildlife corridor is a linear landscape element that serves as a linkage between historically connected habitats or landscapes that are otherwise separated (McEuen 1993) and is meant to provide avenues along which wildlife can travel, migrate, and meet mates; plants can propagate; genetic interchange can occur; and populations can move in response to environmental changes and natural disasters (Beier and Loe 1992). Much of the BSA consist of open fields, paved walkways, and asphalt parking areas that provide little to no cover for terrestrial wildlife. The northern boundary of the BSA intersects the southern edge of the riparian corridor associated with Arcade Creek. This riparian corridor may facilitate the movement of terrestrial and aquatic wildlife. Additionally, the BSA is bordered by oak woodland to the east and by Auburn Boulevard to the south. Other than the wooded areas along its northern and eastern boundaries, the BSA itself contains little valuable habitat that could facilitate movement. Therefore, the BSA does not provide a migratory connection to nearby continuous suitable habitat.

6.8 Protected Trees

An arborist report was prepared for the BSA in November 2022 (Dudek 2023; Appendix F). According to the arborist report, a total of 111 trees are located within or immediately adjacent to the BSA. All 111 trees found within the project area meet the City's criteria for a "City Tree" as defined in Section

12.56.020 of the Sacramento City Code. The City's Municipal Code protects all trees where the trunk is either wholly or partially located on City property or City right-of-way as a "City Tree" (City of Sacramento 2016). Table 1 summarizes the City Trees present within the BSA.

Table 1. BSA Tree Species Composition

Scientific Name	Common Name	Number of Trees
Ailanthus altissima	Tree of heaven	2
Fraxinus velutina 'Modesto'	Modesto ash	6
Gleditsia triacanthos	Honey locust	1
Platanus x hispanica	London plane tree	18
Pyrus calleryana	Callery pear	7
Quercus agrifolia	Coast live oak	7
Quercus lobata	Valley oak	54
Quercus wislizeni	Interior live oak	10
Robinia x ambigua 'Idahoensis'	Idaho locust	5
Washingtonia robusta	Mexican fan palm	1
Total		**111**

Note: X = hybrid cultivar

7 DISCUSSION

7.1 Impacts to Nesting Birds

The oak woodland habitat, many ornamental trees, and light poles present within the BSA all provide suitable nesting habitat for bird species protected under the MBTA and CFGC, including potentially special-status bird species such as white-tailed kite, purple martin and (though unlikely), and Swainson's hawk.

As mentioned, in Section 6.2, several yellow-billed magpie nests were observed within the light poles and large oak trees surrounding the baseball field that covers much of the BSA. A 2021 study found that Renfree Field and Del Paso Park support several yellow-billed magpie colonies and provide nesting and foraging habitat crucial to the local yellow-billed magpie population within the greater Sacramento region (Airola et. al. 2021). Yellow-billed magpies are known to often reuse nests from previous years, especially for within-season re-nesting attempts (Verbeek 1973). Therefore, there is high potential that some if not all these nests may be reoccupied during the next nesting season (February 15–September 15).

Other bird species protected under the MBTA, such as killdeer (*Charadrius vociferus*) and mourning dove (*Zenaida macroura*), are known to nest on the ground, even in disturbed areas which are also present within the BSA. If construction occurs during the nesting season, then the project may have the potential to impact these nesting birds without implementation of restrictive mitigation measures.

7.2 Sensitive Natural Community Impacts

As discussed in Section 6.4, the BSA contains approximately 0.72 acre of Valley Oak Woodland and 1.04 acres of Valley Oak Riparian Woodland. Both of these communities are considered sensitive by the

CDFW (CDFW 2022b). Based on current project designs, the project is unlikely to impact these communities.

The canopies of three large individual valley oaks located north of Renfree Field overlap with the project footprint, totaling 1,742 square feet (see Appendix A: Figure 5). However, impacts to these native oaks would be low to moderate and these trees are expected to survive development (see Section 7.3) with the implementation of tree protective measures recommended by the arborist report (Dudek 2023); these measures are discussed further in Section 8.3. Therefore, no further actions are recommended.

7.3 Protected Tree Impacts

According to the arborist report, the proposed project activities will impact approximately 56 of the 111 City Trees present within the BSA. Table 2 lists the anticipated tree impacts to project site trees by species. Further details regarding tree impacts can be found in the arborist report (see Appendix F).

Table 2. Project Tree Impacts by Tree Species

Scientific Name	Common Name	Number of Trees	High Impact	Moderate Impact	Low Impact	No Impact
Ailanthus altissima	Tree of heaven	2	0	2	0	0
Fraxinus velutina 'Modesto'	Modesto ash	6	0	5	0	1
Gleditsia triacanthos	Honey locust	1	0	0	0	1
Platanus x *hispanica*	London plane tree	18	7	5	0	6
Pyrus calleryana	Callery pear	7	1	1	3	2
Quercus agrifolia	Coast live oak	7	0	1	1	5
Quercus lobata	Valley oak	54	0	10	11	33
Quercus wislizeni	Interior live oak	10	0	2	1	7
Robinia × ambigua 'Idahoensis'	Idaho locust	5	5	0	0	0
Washingtonia filifera	Mexican fan palm	1	0	1	0	0
Total		**111**	**13**	**27**	**16**	**55**

Note: “x” = hybrid cultivar

The arborist report classifies impacts to trees as high, moderate, low, or no impact. There are 13 trees classified as having high construction impacts. These trees are those with the trunk located inside or within 5 feet of the proposed development footprint and/or are in poor health that would make it unlikely that the tree would survive the development process and therefore will be removed. Trees present within the development footprint with high construction impacts include the two rows of London plane trees and oak trees located between the existing ballfield and parking lot.

Trees classified as having moderate or low impacts include trees located adjacent to the proposed development or to existing improvements that will be demolished. Construction is anticipated to occur within the Tree Protection Zone (TPZ) (the area around a tree within the outermost circumference of the canopy) and is expected to result in disturbance to the soil and roots or disturbance to the tree crown. However, these trees are expected to survive and be incorporated into the new park facilities. The 27 trees classified as having moderate construction impacts include the trees located immediately north and south of the existing ballfield, up to half of the TPZ on these trees could be impacted by the demolition of the existing ballfield facilities and the construction of the new facilities.

The 16 trees classified as having low construction impacts include the oak trees around the perimeter of the field west of Bridge Road; only minor grading is being proposed within the TPZ of these trees and no development is anticipated to occur.

The 55 trees classified as having no impact are those trees that are located within the BSA boundaries but are not anticipated to be affected by project development.

The arborist report recommends that 30 trees within the BSA be removed due to either poor health, structural defects that have potential to become hazardous, or being located within the development footprint. Of the 30 trees recommended for removal, 13 are located within the project footprint and would not likely survive development of the project; the remaining 17 trees are located outside the project footprint. Justification for the removal is required for any City Tree that is 4 inches in diameter or larger at diameter at standard height (DSH). 29 of the 30 trees identified for removal have a diameter greater than 4 inches DSH (City of Sacramento 2016). However, the City has determined that only 21 trees would need to be removed to accommodate the proposed project. The removal of these 21 trees will require the City to submit public notice prior to removing any of these trees and will require that the City plant replacement trees to mitigate the loss of the removed trees.

The Director of the Department of Parks and Recreation is ultimately responsible for deciding mitigations; however, the City Code requires the City to plant replacement trees at either a 1 tree to 1 tree ratio or an inch for inch ratio (City of Sacramento 2016). Therefore, the City will need to plant at least 21 replacement trees or a number of trees with a total DSH equal to the 21 trees removed in order to accommodate the project. Additionally, the City will need to obtain a permit in order to perform construction activities within the TPZ of 33 trees that will be subject to low to moderate impacts by the project.

The remaining 90 City Trees present within the BSA can be preserved provided that protective measures are installed for the trees near the development footprint to prevent these trees from being damaged by construction activities. To prevent damage to trees identified for preservation, the arborist report recommends that the City install protective measures around these trees, including protective fencing and signage to prevent construction storage or parking from occurring within their TPZ. As mentioned above, construction is expected to occur within the TPZ of 33 trees. These trees are anticipated to experience low or moderate impacts as result of the project development and may require trimming and/or root pruning to prevent unnecessary damage to the tree during project development. Section 6.3 of the attached arborist report describes these recommended protective measures in greater detail (see Appendix F).

8 AVOIDANCE AND MINIMIZATION MEASURES

The following Avoidance and Minimization Measures (AMMs) are recommended to reduce or eliminate potentially significant biological impacts resulting from the project.

8.1 General Measures

The following AMMs are recommended in addition to the measures specified in the Arborist Report to minimize impacts to sensitive habitats:

MM BIO-1: **Minimize Disturbance.** Travel and parking of vehicles and equipment will be limited to pavement, existing roads, and previously disturbed areas. Ground disturbance and vegetation removal will not exceed the minimum amount necessary to complete work at the site.

8.2 Species-Specific Measures

The following AMMs are recommended to minimize impacts to nesting birds:

MM BIO-2: Nesting Birds.

a. If construction begins outside the February 1 to August 31 breeding season, there will be no need to conduct a preconstruction survey for active bird nests.

b. If construction will begin during nesting bird season (February 1–August 31), then a preconstruction survey for protected nesting birds shall be conducted by a qualified biologist.

c. The preconstruction survey shall be conducted within 7 days prior to the start of construction. The survey shall cover the project site and areas within 500 feet for birds-of-prey and within 100 feet for other (non-bird-of-prey) nests. Inaccessible areas and private lands shall be surveyed from accessible (public) areas with binoculars.

   i. If no active nest of a bird of prey, MBTA bird, or other CDFW-protected bird is found, then no further AMMs are necessary.

   ii. If active nests are found, they shall be avoided and protected as follows: If a bird-of-prey nest is found, a 500-foot-radius Environmentally Sensitive Area (ESA) shall be established around the nest.

   iii. If an active nest of another (non-bird-of-prey) bird is found, a 100-foot-radius ESA shall be established around the nest.

d. Between February 1 and August 31, if additional vegetation removal is required after construction has started, a survey will be conducted for active nests in the area to be affected.

e. If a 15-day lapse in construction work occurs during the nesting season, then another preconstruction survey shall be conducted prior to the resumption of work. If an active nest is found, the above measures will be implemented.

8.3 Protected Trees

As stated in Section 7.3, the proposed project is anticipated to require the removal 21 trees and result in low to moderate impacts to a further 33 trees in order to accommodate the proposed project. The following AMMs are recommended in order to offset and minimize impacts to City Trees:

MM BIO-3: Tree Removal and Replacement Requirements.

a. Prior to the removal or commencement of construction activities within the TPZ of any City Trees, the City shall submit public notice. The City shall provide justification for the removal of trees that measure 4 inches in diameter or greater at DSH.

b. The project applicant shall plant the required number of replacement trees as determined by the Director of the City Department of Parks and Recreation.

MM BIO-4: **Tree Protection Measures.** In order to minimize and avoid damage to the 90 City Trees identified for preservation; the City shall install/implement protective measures as described in Section 6.3 of the arborist report.

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APPENDIX A

Figures

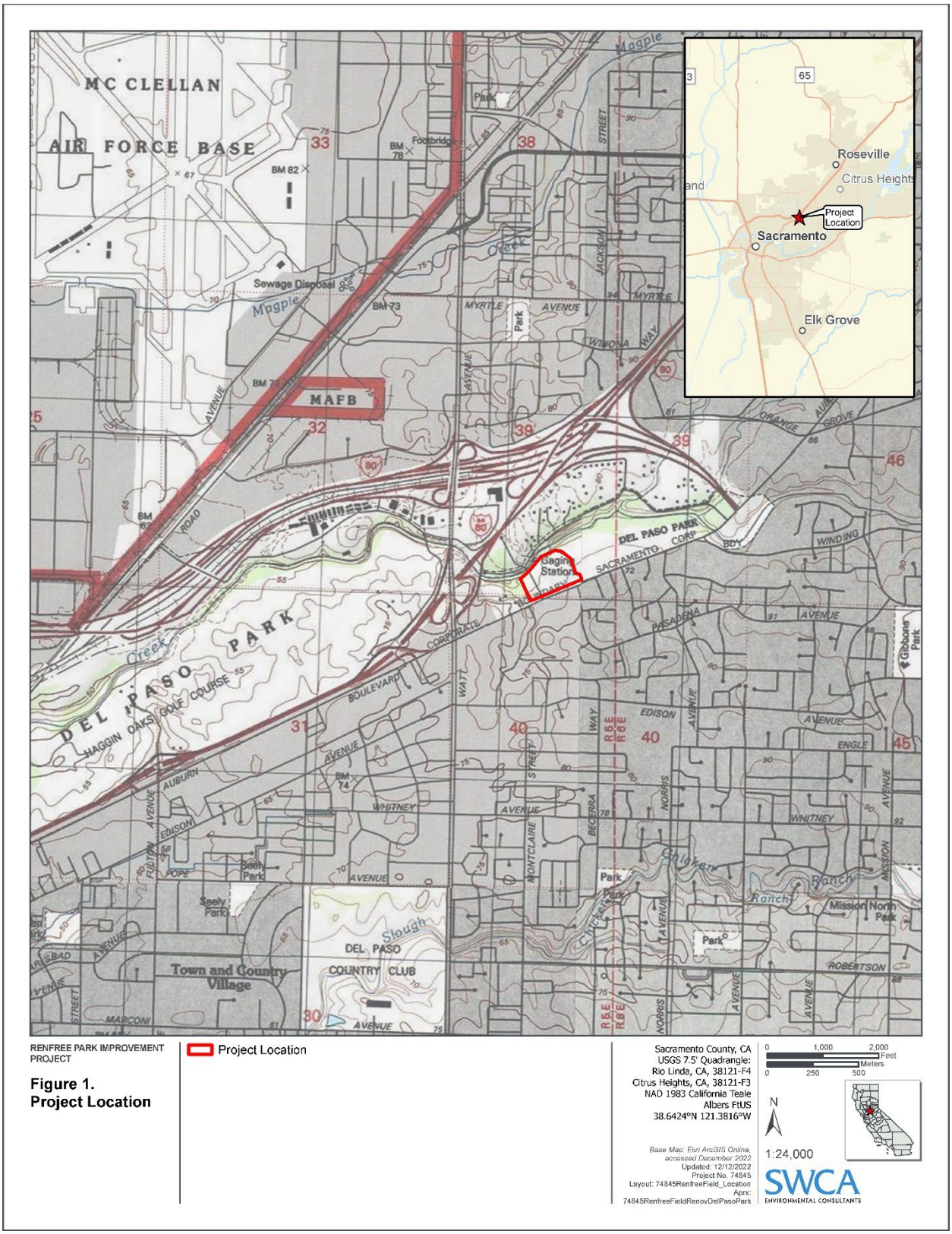

Figure 1. Project location map.

Figure 2. Aerial photograph.

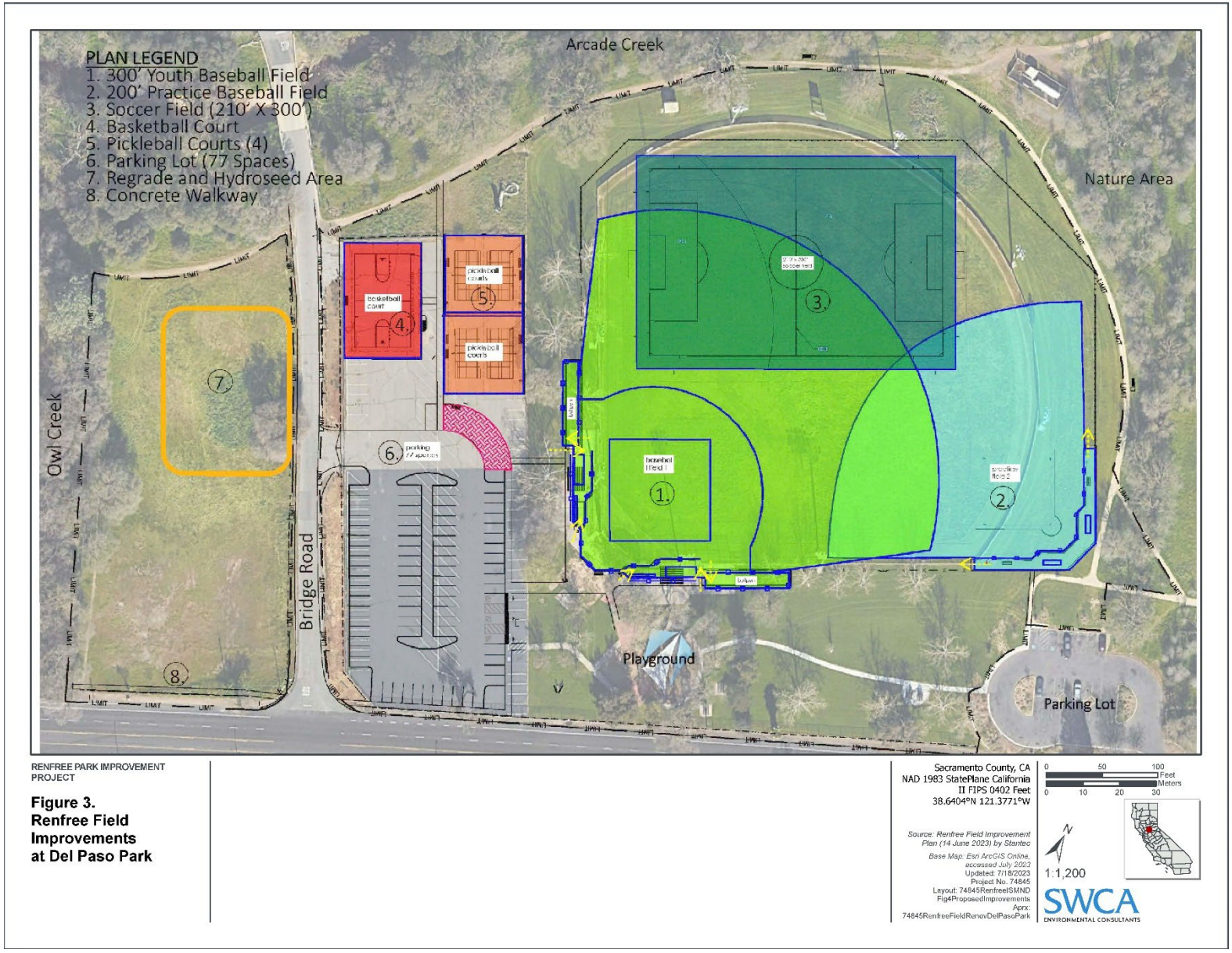

Figure 3. Renfree Field Improvements at Del Paso Park.

Figure 4. Soils map.

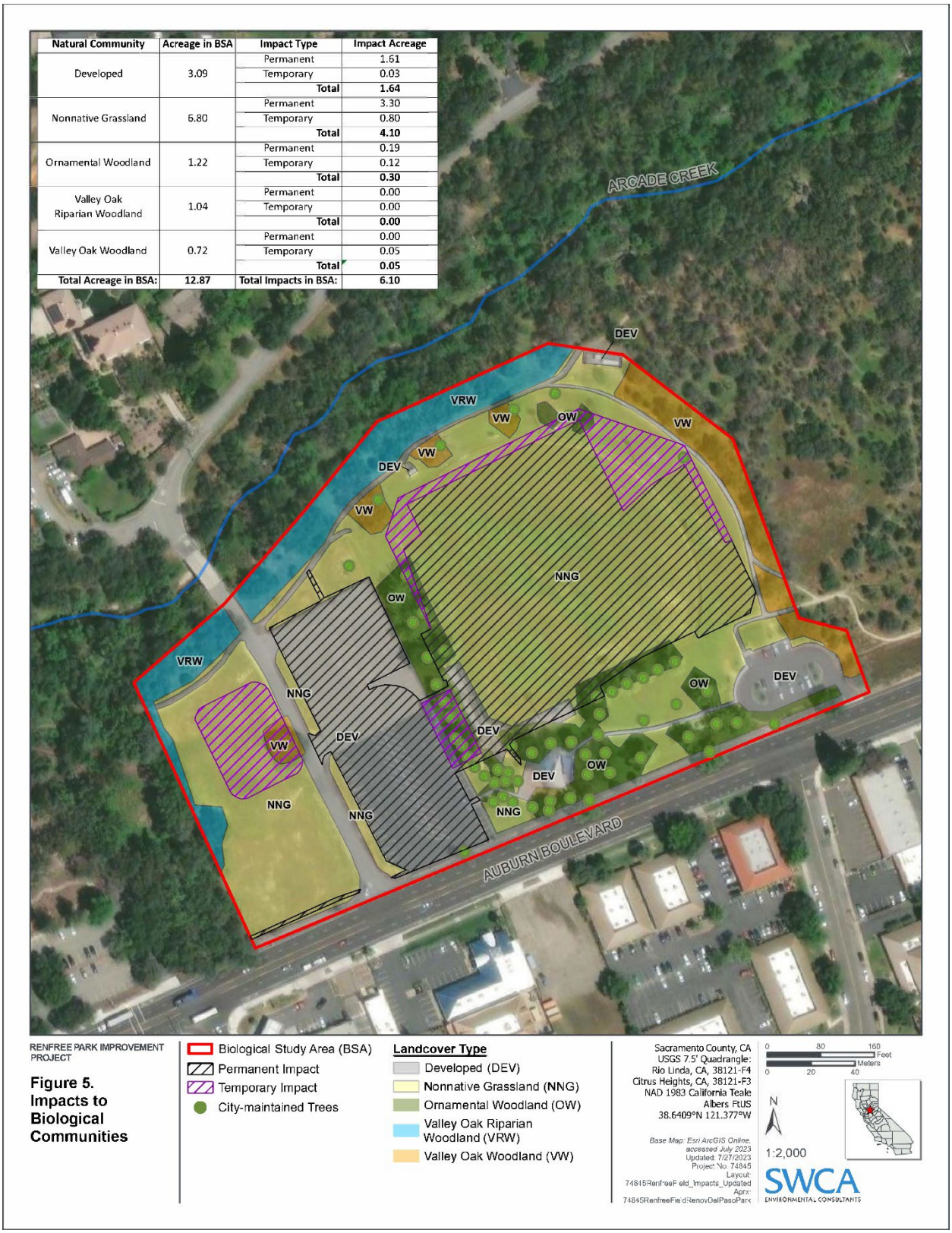

Figure 5. Impacts to biological communities.

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APPENDIX B

USFWS Species List, CNDDB Summary Report, CNPS Inventory Query, and eBird Bird Observation Data

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.

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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:

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

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/321	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 — Threatened
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

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered
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

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.

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 should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- 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

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, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list 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.	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
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Tern *Chlidonias niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
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

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
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

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
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

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

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 and understand the FAQ "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.

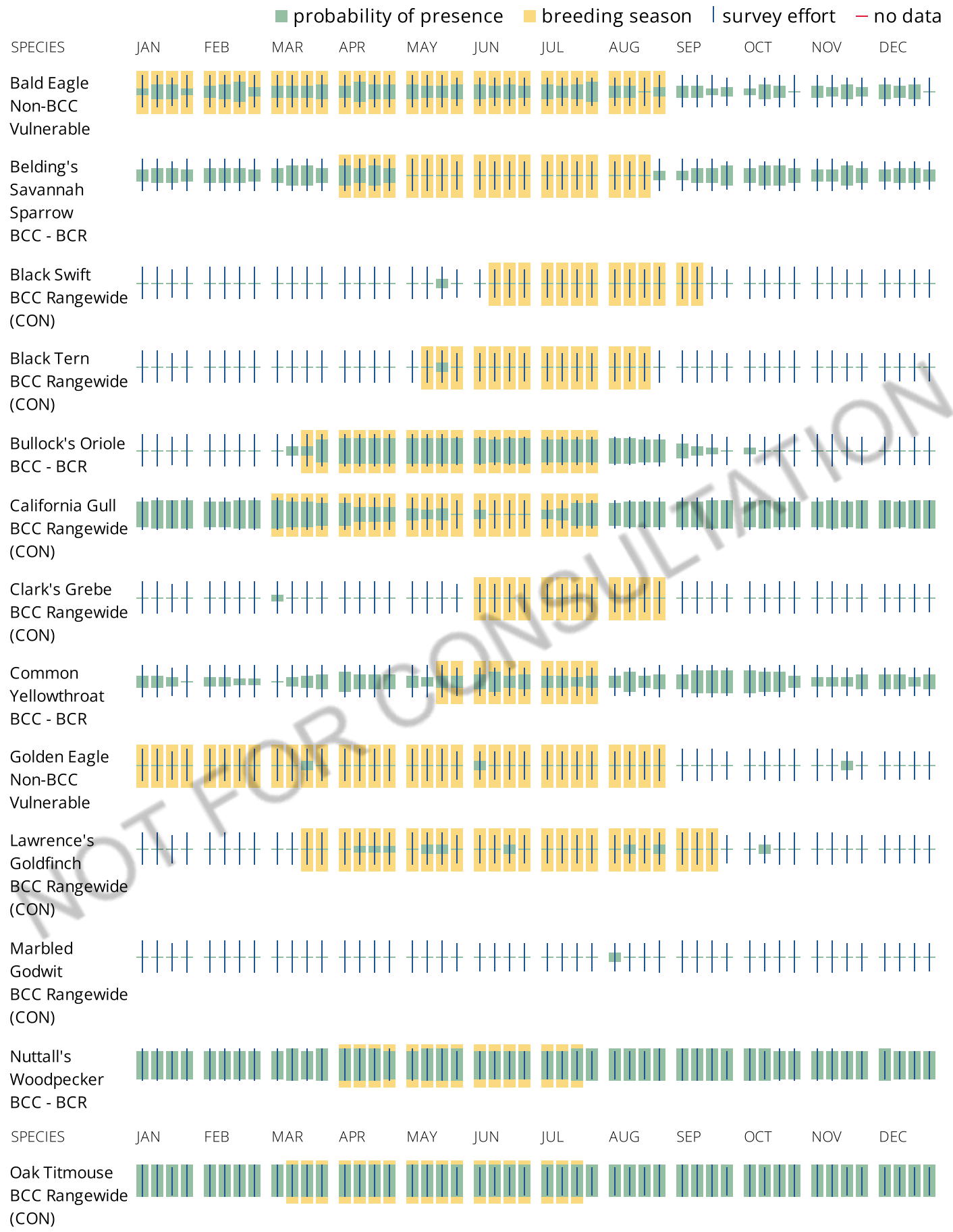
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

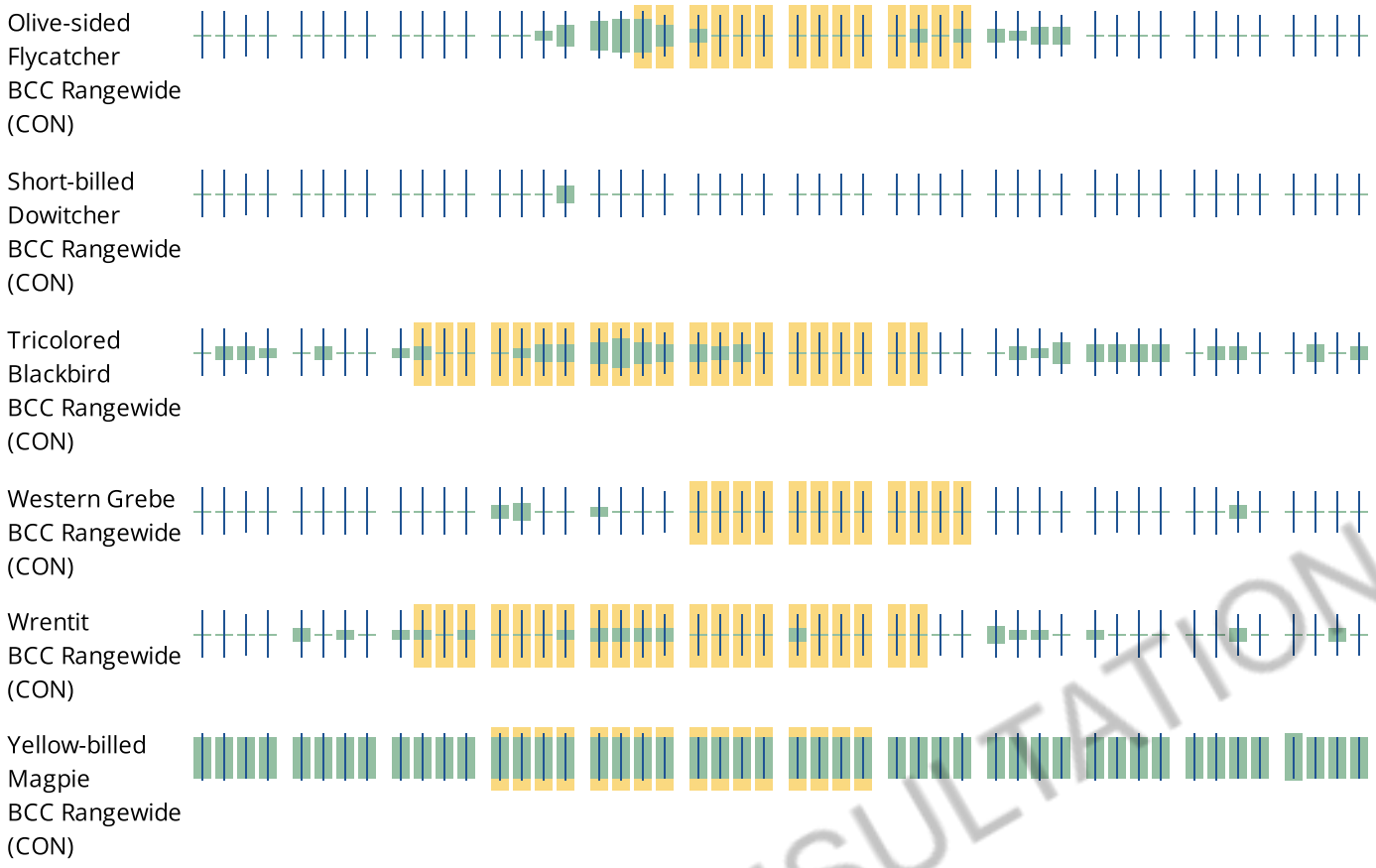
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

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.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

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.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Citrus Heights (3812163) OR Roseville (3812173) OR Carmichael (3812153) OR Sacramento West (3812155) OR Taylor Monument (3812165) OR Rio Linda (3812164) OR Pleasant Grove (3812174) OR Verona (3812175) OR Sacramento East (3812154))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Andrena subapasta An andrenid bee	IIHYM35210	None	None	G1G2	S1S2	
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Archoplites interruptus Sacramento perch	AFCQB07010	None	None	G1	S1	SSC
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Astragalus tener var. ferrisiae Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Chloropyron molle ssp. hispidum hispid salty bird's-beak	PDSCR0J0D1	None	None	G2T1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Cicindela hirticollis abrupta Sacramento Valley tiger beetle	IICOL02106	None	None	G5TH	SH	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Fritillaria agrestis stinkbells	PMLIL0V010	None	None	G3	S3	4.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Juncus leiospermus var. ahartii Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
Juncus leiospermus var. leiospermus Red Bluff dwarf rush	PMJUN011L2	None	None	G2T2	S2	1B.1
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S1	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Melospiza melodia pop. 1 song sparrow ("Modesto" population)	ABPBXA3013	None	None	G5T3?Q	S3?	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Nycticorax nycticorax black-crowned night heron	ABNGA11010	None	None	G5	S4	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 11 chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 7 chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	G5T1Q	S2	
Orcuttia viscida Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020	None	None	G3	S3	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 53

CNPS Rare Plant Inventory

California Native Plant Society

Search Results

12 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [1A:1B:2A:2B:3] , 9-Quad include [3812163:3812173:3812153:3812155:3812165:3812164:3812174:3812175:3812154]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	FED LIST	STATE LIST	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION (FT)	HIGHEST ELEVATION (FT)	BLOOMING PERIOD
Astragalus tener var. *ferrisiae*	Ferris' milk-vetch	Fabaceae	annual herb	None	None	S1	1B.1	Meadows and seeps, Valley and foothill grassland		5	245	Apr-May
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	None	None	S2	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland	Serpentinite (sometimes)	150	5100	Mar-Jun
Chloropyron molle ssp. *hispidum*	hispid salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	None	None	S1	1B.1	Meadows and seeps, Playas, Valley and foothill grassland	Alkaline	5	510	Jun-Sep
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	None	None	S2	2B.2	Valley and foothill grassland, Vernal pools		5	1460	Mar-May
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	None	CE	S2	1B.2	Marshes and swamps, Vernal pools	Clay	35	7790	Apr-Aug
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	None	None	S3	1B.2	Marshes and swamps		0	395	Jun-Sep
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	None	None	S1	1B.2	Valley and foothill grassland		100	750	Mar-May
Juncus leiospermus var. *leiospermus*	Red Bluff dwarf rush	Juncaceae	annual herb	None	None	S2	1B.1	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools	Vernally Mesic	115	4100	Mar-Jun

Legenere limosa	legenere	Campanulaceae	annual herb	None	None	S2	1B.1	Vernal pools	5	2885	Apr-Jun
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	FE	CE	S1	1B.1	Vernal pools	100	330	Apr-Jul(Sep)
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	None	None	S3	1B.2	Marshes and swamps	0	2135	May-Oct(Nov)
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	None	None	S2	1B.2	Marshes and swamps	0	10	(Apr)May-Nov

Showing 1 to 12 of 12 entries

Suggested Citation:

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« Start Over

Bird Observations

Date Range: Change Date
Jan-Dec, 1900-2023

Change Location **Del Paso Park**

Updated ~23 hr(s) ago.

117 species (+13 other taxa)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Graylag Goose												
Canada Goose												
Wood Duck												
Mallard												
California Quail												
Wild Turkey												
Ring-necked Pheasant												
Indian Peafowl												
Rock Pigeon												
Eurasian Collared-Dove												
Mourning Dove												
Vaux's Swift												
White-throated Swift												
Black-chinned Hummingbird												
Anna's Hummingbird												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rufous/Allen's Hummingbird												
hummingbird sp.												
Sandhill Crane												
Killdeer												
California Gull												
gull sp.												
Double-crested Cormorant												
American White Pelican												
Great Blue Heron												
Great Egret												
Snowy Egret												
Green Heron												

117 species (+13 other taxa)

Turkey Vulture

White-tailed Kite

Northern Harrier

Sharp-shinned Hawk

Cooper's Hawk

Accipiter sp.

Bald Eagle

Red-shouldered Hawk

Swainson's Hawk

Red-tailed Hawk

Buteo sp.

Barn Owl

Western Screech-Owl

Great Horned Owl

Belted Kingfisher

Red-breasted Sapsucker

Red-naped x Red-breasted Sapsucker (hybrid)

Acorn Woodpecker

Downy Woodpecker

Nuttall's Woodpecker

Northern Flicker

American Kestrel

Merlin

Olive-sided Flycatcher

Western Wood-Pewee

Willow Flycatcher

Pacific-slope Flycatcher

Pacific-slope/Cordilleran Flycatcher (Western Flycatcher)

Black Phoebe

Say's Phoebe

Ash-throated Flycatcher

Western Kingbird

Hutton's Vireo

Cassin's Vireo

Warbling Vireo

California Scrub-Jay

117 species (+13 other taxa)

Yellow-billed Magpie
American Crow
Common Raven
Oak Titmouse
Northern Rough-winged Swallow
Tree Swallow
Barn Swallow
Cliff Swallow
swallow sp.
Bushtit
Wrentit
Ruby-crowned Kinglet

Red-breasted Nuthatch
White-breasted Nuthatch
Blue-gray Gnatcatcher
House Wren
Bewick's Wren
European Starling
Northern Mockingbird
Western Bluebird
Varied Thrush
Swainson's Thrush
Hermit Thrush
American Robin
Cedar Waxwing
House Sparrow
American Pipit

House Finch
Purple Finch
Pine Siskin
Lesser Goldfinch
American Goldfinch
new world goldfinch sp.
Chipping Sparrow
Lark Sparrow
Fox Sparrow
Dark-eyed Junco
White-crowned Sparrow

117 species (+13 other taxa)

Golden-crowned Sparrow

Zonotrichia sp.

Song Sparrow

Lincoln's Sparrow

California Towhee

Spotted Towhee

Western Meadowlark

Hooded Oriole

Bullock's Oriole

Tricolored Blackbird

Brown-headed Cowbird

Brewer's Blackbird

Orange-crowned Warbler

Nashville Warbler

MacGillivray's Warbler

Common Yellowthroat

Yellow Warbler

Chestnut-sided Warbler

Yellow-rumped Warbler

Black-throated Gray Warbler

Townsend's Warbler

Hermit Warbler

Setophaga sp.

Wilson's Warbler

new world warbler sp.

Western Tanager

Black-headed Grosbeak

Lazuli Bunting

passerine sp.

KEY: = insufficient data | = rare to widespread

Download Histogram Data

APPENDIX C

Plant and Wildlife Species Observed Tables

Table C-1. Plant Species Observed

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
Dicots				
Anacardiaceae	*Toxicodendron diversilobum*	Poison oak	N	
Asteraceae	*Centaurea solstitialis*	Yellow star thistle	I	High
	Dittrichia graveolens	Stinkwort	I	Moderate
	Erigeron canadensis	Canada horseweed	N	
	Lactuca serriola	Prickly lettuce	I	
Betulaceae	*Alnus rhombifolia*	White alder	N	
Brassicaceae	*Croton setiger*	Turkey-mullein	N	
Fabaceae	*Gleditsia triacanthos*	Honeylocust	I	
	Robinia × ambigua 'Idahoensis'	Idaho Locust	I	
	Trifolium hirtum	Rose clover	I	Limited
Fagaceae	*Quercus agrifolia*	Coast Live Oak	N	
	Quercus lobata	Valley Oak	N	
	Quercus wislizeni	Interior Live Oak	N	
Geraniaceae	*Erodium cicutarium*	Redstem filaree	I	
Moraceae	*Ficus carica*	Edible fig	I	Moderate
Oleaceae	*Fraxinus velutina 'Modesto'*	Modesto Ash	N	
Platanaceae	*Platanus x hispanica*	London Plane Tree	I	
Plantaginaceae	*Plantago lanceolata*	Ribwort	I	Limited
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	I	High
	Pyrus calleryana	Callery pear	I	
Salicaceae	*Salix gooddingii*	Goodding's black willow	N	
Simaroubaceae	*Ailanthus altissima*	Tree of Heaven	I	
Solanaceae	*Solanum elaeagnifolium*	Horse nettle	I	
Ulmaceae	*Ulmus parvifolia*	Chinese Elm	I	
Vitaceae	*Vitis californica*	California wild grape	N	
Monocots				
Arecaceae	*Washingtonia robusta*	Mexican fan palm	I	
Poaceae	*Avena barbuta*	Wild oat	I	Moderate
	Bromus diandrus	Ripgut brome	I	Moderate
	Bromus hordeaceus.	Soft brome	I	Limited
	Bromus rubens	Red brome	I	High
	Cynodon dactylon	Bermuda grass	I	Moderate
	Cynosurus echinatus	Bristly dogstail grass	I	Moderate
	Digitaria sanguinalis	Crabgrass	I	
	Festuca perennis	Italian ryegrass	I	Moderate
	Poa annua	Annual bluegrass	I	

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
	Poa pratensis	Kentucky bluegrass	I	Limited
	Polypogon monspeliensis	Rabbitsfoot grass	N	
	Sorghum halepense	Johnsongrass	I	

[1] Nomenclature and taxonomy follow *The Jepson Manual: Vascular Plants of California,* 2nd ed. (Baldwin et al. 2012).

[2] N = Native to California; I = Introduced.

[3] Negative ecological impact ranking by the California Invasive Plant Council (Cal-IPC 2018).

Table C-2. Wildlife Species Observed

Scientific Name	Common Name	N/I
Birds		
Aphelocoma californica	California scrub jay	N
Baeolophus inornatus	Oak titmouse	N
Bombycilla cedrorum	Cedar waxwing	N
Calypte anna	Anna's hummingbird	N
Colaptes auratus	Northern flicker	N
Haemorhous mexicanus	House finch	N
Meleagris gallopavo	Wild turkey	N
Pica nutalli	Yellow-billed magpie	N
Sayornis nigricans	Black phoebe	N
Setophaga coronata	Yellow-rumped warbler	N
Spinus psaltria	Lesser goldfinch	N
Sturnus vulgaris	European starling	I

* Species not directly observed but evidence of presence within BSA evident by feathers, nests, pellets, burrows, or scat.

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APPENDIX D

Site Photographs

Photo D-1. View looking northwest from intersection of Auburn Boulevard and Bridge Road.

Photo D-2. View looking north from southwest corner of BSA.

Photo D-3. View looking northeast from Bridge Road along trail north of Renfree Field.

Photo D-4. View looking southwest from northeast corner of BSA along trail north of Renfree Field.

Photo D-5. View looking east from northeast corner of BSA along trail north of Renfree Field.

Photo D-6. View looking northwest along trail east of Renfree Field.

Photo D-7. View looking east at parking lot near southeast corner of BSA.

Photo D-8. View looking southwest from southern fence of Renfree Field.

Photo D-9. View looking northeast at playground from parking lot east of Bridge Road.

Photo D-10. View looking northwest from southeast corner of parking lot, east of Bridge Road.

Photo D-11. View looking north–northwest from interior of Renfree Field.

Photo D-12. View looking northeast from intersection of Auburn Boulevard and Bridge Road.

Photo D-13. View looking east at parking lot and Renfree Field from Bridge Road.

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APPENDIX E

Special-Status Species Evaluation Tables

Table E-1. Evaluation of Special-Status Plant Species with Potential to Occur

Special-Status Species Common Name	Federal Status	State Status/ CRPR	Habitat Requirements	Potential to Occur in the Biological Survey Area
Astragalus tener var. ferrisiae Ferris' milk vetch	--	--/1B.1	Annual herb found in meadows, seeps, valley and foothill grassland from 5 to 245 feet. Known from Butte, Colusa, Glenn, Solano, Sutter, Yolo, and Yuba Counties (CNPS 2022). Blooms April through May (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable mesic grassland habitat. There are no CNDDB records of this species in or adjacent to the BSA.
Balsamorhiza macrolepis big-scale balsamroot	--	--/1B.2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils from 150 to 5,100 feet. Known from Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne Counties (CNPS 2022). Blooms March through June (CNPS 2022); March through July (UCB 2022). Habitat also described as "open grassy or rocky slopes, valleys" (UCB 2022).	**No potential.** Although the BSA does contain suitable woodland habitat, the BSA is below the known elevation range of this species, lacks serpentine soils, and has not been previously documented in Sacramento County. There are no CNDDB records of this species in or adjacent to the BSA.
Chloropyron molle ssp. hispidum hispid salty bird's-beak	--	--/1B.1	Annual herb found at alkaline areas of meadows, seeps, playas, and valley and foothill grassland from 5 to 510 feet. Known from Alameda, Kern, Merced, Placer, and Solano Counties (CNPS 2022). Blooms June through September (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable alkaline mesic grassland habitat. There are no CNDDB records of this species in or adjacent to the BSA.
Downingia pusilla dwarf downingia	--	--/2B.2	Annual herb found in valley and foothill grassland and vernal pools from 5 to 1,460 feet. Known from Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba Counties (CNPS 2022). Blooms March through May (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable grassland or vernal pool habitat. There are no CNDDB records of this species in or adjacent to the BSA.
Gratiola heterosepala Boggs Lake hedge-hyssop	--	--/1B.2	Annual herb found in marshes, swamps, and vernal pools from 35 to 7,790 feet. Know from Fresno, Lake, Lassen, Madera, Mendocino, Merced, Modoc, Placer, Sacramento, San Joaquin, Shasta, Siskiyou, Solano, Sonoma, and Tehama Counties (CNPS 2022). Blooms April through August (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable wetland or vernal pool habitat. There are no CNDDB records of this species in or adjacent to the BSA.
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	--	--/1B.2	Perennial rhizomatous herb found in freshwater marshes and swamps from 0 to 395 feet. Known from Butte, Colusa, Contra Costa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo Counties (CNPS 2022). Blooms June through September (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable freshwater wetland habitat. There are no CNDDB records of this species in or adjacent to the BSA.

Special-Status Species Common Name	Federal Status	State Status/ CRPR	Habitat Requirements	Potential to Occur in the Biological Survey Area
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--	--/1B.2	Annual herb found at mesic areas of valley and foothill grassland from 100 to 750 feet. Known from Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba Counties (CNPS 2022). Blooms March through May (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable mesic grassland habitat. BSA is below the known elevation range of this species. There are no CNDDB records of this species in or adjacent to the BSA.
Juncus leiospermus var. leiospermus *Red Bluff dwarf rush*	--	--/1B.1	Annual herb found at vernal pools and mesic areas of chaparral, cismontane woodland, meadows, seeps, valley and foothill grassland from 115 to 4100 feet. Known from Butte, Placer, Shasta, Tehama Counties (CNPS 2022). Blooms March through June (CNPS 2022; UCB 2022).	**No potential.** Although the BSA does contain suitable woodland habitat, the BSA is below the known elevation range of this species and has not been previously documented in Sacramento County. There are no CNDDB records of this species in or adjacent to the BSA.
Legenere limosa legenere	--	--/1B.1	Annual herb found in vernal pools from 5 to 2,885 feet. Known from Alameda, Lake, Monterey, Napa, Placer, Sacramento, San Joaquin, San Mateo, Santa Clara, Shasta, Solano, Sonoma, Stanislaus, Tehama, and Yuba Counties (CNPS 2022). Blooms April through June (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain vernal pools. There are no CNDDB records of this species in or adjacent to the BSA.
Orcuttia viscida Sacramento Orcutt grass	T	R/1B.2	Annual herb found in vernal pools from 100 to 330 feet. Known only from Sacramento County (CNPS 2022). Blooms from April through July, sometimes through September (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain vernal pools the BSA and is below the known elevation range of this species. There are no CNDDB records of this species in or adjacent to the BSA.
Sagittaria sanfordii Sanford's arrowhead	--	--/1B.2	A perennial emergent rhizomatous herb found in assorted shallow freshwater marshes and swamps from 0 to 2,130 feet. Known mainly the Central Valley, but also from the San Francisco Bay Area, northwestern California, the Cascade foothills, and South Coast (CNPS 2022). Blooms May through October (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable freshwater wetland habitat. There are no CNDDB records of this species in or adjacent to the BSA.
Symphyotrichum lentum Suisun Marsh aster	--	--/1B.2	Perennial rhizomatous herb found in freshwater marshes and swamps from 0 to 10 feet. Known from Contra Costa, Napa, Sacramento, San Joaquin, Solano, and Yolo Counties (CNPS 2022). Blooms May through November (CNPS 2022; UCB 2022).	**No potential.** The BSA does not contain suitable freshwater wetland habitat. There are no CNDDB records of this species in or adjacent to the BSA.

Source: Special-status plants evaluated in table were obtained from IPaC (USFWS 2022a), CNDDB (CDFW 2022b), and CNPS Rare Plant Inventory (CNPS 2022) database queries as described in report.

Note: Status Codes are as follow.

State: E = Endangered; T = Threatened; P = Proposed; C = Candidate; R = California Rare.
Status determined from the CNDDB query (CDFW 2022b).

California Rare Plant Rank (CRPR): 1A = Presumed extirpated in CA; 1B = Rare or Endangered in CA and elsewhere; 2A = Presumed extirpated in CA but more common elsewhere; 2B = Rare or Endangered in CA but more common elsewhere; 3 = Need more information; 4 = Watch List: Plants of limited distribution

CRPR Decimal Extensions: _.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); _.2 = Fairly threatened in CA (20–80% of occurrences threatened / moderate degree and immediacy of threat); _.3 = Not very threatened in CA (<20% of occurrences threatened / low degree and immediacy of threat or no current threats).

Table E-2. Evaluation of Special-Status Wildlife Species Potential to Occur

Special-Status Species Common Name	Federal Status	State Status/ CDFW SSC or FP	Habitat Requirements	Potential to Occur in the Botanical Survey Area
Amphibians				
Ambystoma californiense California tiger salamander	T	T/--	Occurs in grassland, savanna, or open woodland habitats. Lives in vacant or mammal-occupied burrows throughout most of the year. Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding (CDFW 2022a).	**No potential.** Although the BSA contains suitable open woodland habitat, it lacks suitable breeding habitat. Additionally, the BSA is surrounded by urban development in all directions, which inhibits dispersal. There are no CNDDB occurrences of this species within 10 miles of the BSA (CDFW 2022a).
Spea hammondii western spadefoot	--	--/SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg laying (CDFW 2022a).	**No potential.** Although the BSA contains suitable open woodland habitat, it lacks suitable breeding habitat. Additionally, the BSA is surrounded by urban development in all directions, which inhibits dispersal. There are no CNDDB occurrences of this species within 7 miles of the BSA (CDFW 2022a).
Birds				
Agelaius tricolor tricolored blackbird	T	--/SSC	Highly colonial species, most numerous in Central Valley and vicinity; largely endemic to California. Forages on ground in cropland, grassland, and pond edges. Nests near or over freshwater. Prefers emergent marsh of dense cattails or tules for nesting, but also nests in thickets of willow, blackberry, wild rose, and tall herbs (CDFW 2022a).	**No potential.** The BSA does not contain suitable nesting or habitat in the form of emergent freshwater marsh vegetation or dense shrub thickets capable of supporting large colonies.
Ammodramus savannarum grasshopper sparrow	--	--/SSC	Uncommon local summer resident and breeder in foothills and lowlands west of Cascade-Sierra Nevada crest from Mendocino and Trinity Counties south to San Diego County. Occurs in dry, dense grasslands, especially with scattered shrubs for sitting perches. Thick cover of grasses and forbs is essential for concealment. Nests are built of grasses and forbs in slight depressions in ground hidden by clump of grasses or forbs. Usually nests solitarily from early April to mid-July. May form semicolonial breeding groups of three to 12 pairs (CDFW 2022a).	**No potential.** The BSA lacks suitable dense grassland habitat for nesting and foraging due to regular mowing.
Aquila chrysaetos golden eagle	--	--/FP	Habitat includes rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of this species range; also, large trees in open areas (CDFW 2022a).	**No potential.** Although the BSA contains suitable trees for nesting, the BSA is largely developed and likely lacks sufficient prey for this species.

Special-Status Species Common Name	Federal Status	State Status/ CDFW SSC or FP	Habitat Requirements	Potential to Occur in the Botanical Survey Area
Athene cunicularia burrowing owl	--	--/SSC	Inhabits open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent on burrowing mammals, most notably, California ground squirrel (*Otospermophilus beecheyi*) (CDFW 2022a).	**Unlikely to occur.** Suitable grassland is present within the BSA and adjacent areas; however, suitable small mammal burrows were not observed.
Buteo swainsoni Swainson's hawk	--	T /--	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands or alfalfa or grain fields supporting rodent populations (CDFW 2022a).	**Unlikely to occur.** Although the BSA contains suitable trees for nesting and the surrounding areas within Del Paso Park may also provide marginal foraging habitat, the remaining areas surrounding the BSA are largely developed and do not provide optimal foraging conditions for this species. There are five occurrences of this species within 5 miles of the BSA (CDFW 2022a). Most of these occurrences are found along larger river systems adjacent to agricultural field and undisturbed grassland habitat suitable for foraging.
Coccyzus americanus occidentalis western yellow-billed cuckoo	T	E/--	Nests in riparian forest, especially along broad, lower flood-bottoms of larger river systems. Prefers to nest in dense thickets of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape (CDFW 2022a).	**Unlikely to occur.** Although the BSA contains riparian woodland habitat, this community lacks dense thickets of woody vegetation, which this species requires for nesting.
Elanus leucurus white-tailed kite	--	--/FP	Habitat includes rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Forages in open grasslands, meadows, or marshes for close to isolated, dense-topped trees for nesting and perching (CDFW 2022a).	**Unlikely to occur.** The BSA contains suitable large trees for nesting. Suitable valley oak woodland foraging habitat is available immediately east of the BSA. There are 10 CNDDB occurrences of this species within 5 miles of the BSA (CDFW 2022a). Most of these occurrences are found along larger river systems adjacent to agricultural field and undisturbed grassland habitat suitable for foraging.
Laterallus jamaicensis coturniculus California black rail	--	T/FP	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during year and dense vegetation for nesting habitat (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater or saltwater marsh habitats to support this species.
Melospiza melodia (pop. 1) song sparrow ("Modesto" population)	--	--/SSC	Occurs in central lower basin of Great Valley, from Colusa County south to Stanislaus County and east of Suisun Marshes. Breeds chiefly below 200 feet elevation in freshwater marshes, riparian thickets, sparsely vegetated irrigation canals, and valley oak restoration sites. Prefers areas of dense vegetation cover, consisting of willow and nettle thickets, growths of tules and cattails, and riparian oak forests with sufficient understory of blackberry. (CDFW 2022a).	**Unlikely to occur.** Although the BSA contains riparian woodland habitat along its northern edge, the BSA lacks dense thickets of woody vegetation, which this species prefers for nesting. Suitable nesting habitat is therefore marginal at best.

Special-Status Species Common Name	Federal Status	State Status/ CDFW SSC or FP	Habitat Requirements	Potential to Occur in the Botanical Survey Area
Progne subis purple martin	--	--/SSC	Inhabits woodlands, low-elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Mostly nests in old woodpecker cavities and in humanmade structures; nests often located in tall, isolated tree/snag (CDFW 2022a).	**Likely to occur.** The BSA does not contain suitable conifer forests and woodlands; however, suitable snags and humanmade structures for nesting are present. There are three CNDDB occurrences of this species within 5 miles of the BSA (CDFW 2022a).
Riparia riparia bank swallow	--	T /--	Colonial nester that nests primarily in riparian and other lowland habitats west of desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole (CDFW 2022a).	**Unlikely to occur.** The BSA does not contain suitable cliff faces to provide suitable nesting sites for this species; however, marginally suitable habitat may be present nearby along Arcade Creek.
Vireo bellii pusillus least Bell's vireo	E	E/--	Summer resident of southern California that occurs in low-lying riparian habitat, below 2,000 feet in elevation within the vicinity of water or dry river bottoms. Nests are often placed along margins of bushes (usually willow, *Baccharis*, or mesquite) or on twigs projecting into pathways (CDFW 2022a).	**Unlikely to occur.** Although the BSA contains riparian woodland habitat, this community lacks dense thickets of woody vegetation, which this species requires for nesting.
Crustaceans				
Branchinecta lynchi vernal pool fairy shrimp	T	--/--	Endemic to grasslands of Central Valley, Central Coast mountains, and South Coast mountains in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools (CDFW 2022a).	**No potential.** The BSA does not contain suitable vernal pool habitat.
Lepidurus packardi vernal pool tadpole shrimp	E	--/--	Inhabits vernal pools and swales in Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid (CDFW 2022a).	**No potential.** The BSA does not contain suitable vernal pool habitat.
Fish				
Acipenser medirostris (pop. 1) green sturgeon (southern Distinct Population Segment [DPS])	T	--/--	Anadromous fish that spawns in Sacramento, Feather, and Yuba Rivers (and possibly upper Stanislaus and San Joaquin Rivers). Spawning occurs primarily in cool (11–15ºC) sections of mainstem rivers in deep pools (8–9 meters) with substrate containing small- to medium-sized sand, gravel, cobble, or boulder. Exhibits spawning site fidelity. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles. (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.

Special-Status Species Common Name	Federal Status	State Status/ CDFW SSC or FP	Habitat Requirements	Potential to Occur in the Botanical Survey Area
Archoplites interruptus Sacramento perch	--	--/SSC	Historically found in sloughs, slow-moving rivers, and lakes of Central Valley. Tolerates wide range of physio-chemical water conditions but refers warmer waters. Aquatic vegetation cover is essential for young (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.
Hypomesus transpacificus Delta smelt	T	E/--	Occurs in Sacramento–San Joaquin Delta and may occur seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. Seldom found where salinity exceeds 10 ppt, but most often occurs where salinity is less than 2 ppt (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.
Oncorhynchus mykiss irideus (pop. 11) steelhead (Central Valley DPS)	T	--/--	Anadromous salmonid that spawns in small tributaries on coarse gravel beds in riffle areas (Busby et al. 1996). Once thought extirpated from San Joaquin Basin (Moyle 2002). Now potentially widespread throughout accessible streams and rivers in Central Valley, including known populations or observations in Deer and Mill Creeks in Tehama County; Yuba, Stanislaus, Mokelumne, Calaveras, Tuolumne, and Merced Rivers; and other streams (NOAA Fisheries 2022).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.
Oncorhynchus tshawytscha (pop. 11) chinook salmon (Central Valley spring-run ESU)	T	T/--	Federal listing refers to populations spawning in Sacramento River and tributaries. Spring-run salmon enter Sacramento River from late March through September. Adults hold in cool water habitats through summer, then spawn in fall from mid-August through early October. Juveniles migrate soon after emergence as young-of-the-year or remain in freshwater and migrate as yearlings (CDFW 1998). Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temperatures greater than 27ºC are lethal to adults. (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.
Pogonichthys macrolepidotus Sacramento splittail	--	--/SSC	Endemic to lakes and rivers of Central Valley, but now confined to Delta, Suisun Bay, and associated marshes. Occurs in slow-moving river sections and dead end sloughs. Requires flooded vegetation for spawning and foraging for young (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.
Spirinchus thaleichthys longfin smelt	C	T/--	Euryhaline, nektonic and anadromous fish found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities between 15 and 30 ppt, but also is known to occasionally occur in completely freshwater to almost pure seawater (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.

Special-Status Species Common Name	Federal Status	State Status/ CDFW SSC or FP	Habitat Requirements	Potential to Occur in the Botanical Survey Area
Insects				
Desmocerus californicus dimorphus valley elderberry longhorn beetle	T	--/--	Occurs throughout Central Valley, from approximately Shasta County to Madera County. Range includes valley floor and lower foothills below 500 feet in elevation. Requires elderberry (*Sambucus* sp.) as a host plant. Prefers to lay eggs in elderberries 2 to 8 inches in diameter; some preference shown for "stressed" elderberries (CDFW 2022a).	**No potential.** The BSA does not contain elderberry shrubs to support this species.
Danaus plexippus monarch butterfly	C	--/--	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, and cypress), with nectar and water sources nearby. Winter roost sites extend along coast from northern Mendocino County to Baja California, Mexico. Caterpillars feed exclusively on milkweed plants (*Asclepias* sp.)	**Unlikely to occur.** The BSA contains no known roosting sites, and no milkweed plants were observed.
Mammals				
Taxidea taxus American badger	--	--/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils for burrowing. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents (CDFW 2022a).	**No potential.** Suitable open woodland is present east of the BSA; however, the BSA is surrounded by urban development in all directions, which inhibits dispersal. There are no CNDDB occurrences of this species within 7 miles of the project (CDFW 2022a).
Reptiles				
Emys marmorata western pond turtle	--	--/SSC	Inhabits permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, unlined irrigation canals, and reservoirs. Substantial populations can exist in waterbodies in urban areas. Sometimes found in brackish water. Often basks on logs, vegetation mats, or rocks. Nesting sites are on sandy banks and bars or in fields or sunny spots up to few hundred meters from water (CDFW 2022a).	**Unlikely to occur.** Although the BSA does not contain suitable freshwater habitats to support this species, Arcade Creek, located immediately north of the BSA, may provide suitable habitat; however, the BSA is surrounded by urban development in all directions, which inhibits dispersal. The nearest CNDDB occurrence of this species is located approximately 2.5 miles northwest of the BSA (CDFW 2022a).
Thamnophis gigas giant garter snake	T	T/SSC	Prefers freshwater marsh and low-gradient streams but has adapted to drainage canals and irrigation ditches. Most aquatic of garter snakes in California (CDFW 2022a).	**No potential.** The BSA does not contain suitable freshwater habitats to support this species.

Source: Special-status plants evaluated in table were obtained from IPaC (USFWS 2022a), CNDDB (CDFW 2022a), and CNPS Rare Plant Inventory (CNPS 2022) database queries as described in report.

Note: Status Codes are as follow.

E = Endangered; T = Threatened; P = Proposed; C = Candidate; R = California Rare. SSC = Species of Special Concern. Status determined from the Special Animals Lists (CDFW 2022c) or the CNDDB query (CDFW 2022a).

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APPENDIX F

Arborist Report

Arborist Report

Renfree Field at Del Paso Park Project

JANUARY 2023

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
City	City of Sacramento
DSH	Diameter at Standard Height 4.5’ above ground
ISA	International Society of Arboriculture
project	Del Paso Park Renfree Field Improvement Project
TPZ	Tree protection zone

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1 Introduction

This Arborist Report and Tree Plan provides an inventory and evaluation of the trees on the 11.5-acre Renfree Field at Del Paso Park Improvement project (project) site in the City of Sacramento, California, that City of Sacramento Youth, Parks, and Community Services Department (City) is currently developing. The project site is in a public park within the city of Sacramento and is subject to the City of Sacramento's rules and regulations for the protection, removal, and mitigation of protected trees within the City's jurisdiction.

The City's Municipal Code protects all trees where the trunk is either wholly or partially located on City property or City right-of-way as a "City Tree". When development is proposed at public facilities like the park improvements proposed for this project, Chapter 12.56.040 of the City Municipal Code requires the city provide written justification for the removal of trees four inches in diameter or greater as part of a public project.

Dudek was retained by the City to complete an inventory of the trees present on the project site, provide an assessment of the condition and health of the trees, assess potential impacts from the proposed site development and park improvements, and describe any mitigation required to meet the standards in the City's Municipal Code. This Arborist Report presents an inventory of the trees present within the project site and trees next to the project site that could be impacted by the proposed project. The report includes detailed tree attribute information and a tree location exhibit that shows the locations of the protected trees on the project site. This report also includes an evaluation of the expected impacts to the protected trees present based on the proposed development footprint. Recommended protective measures are described for the trees that would be preserved and retained on site, and mitigation measures are described for the trees that would be removed to accommodate project development.

2 Project Location and Description

The project site is in Del Paso Park in the City Sacramento, Sacramento County, California. Del Paso Park is 624-acre park located in the Del Paso Heights neighborhood of Sacramento in the northeast part of the city. The park is bounded by Park Road to the north, the on and off ramps to Highway 244 to the east, Auburn Boulevard to the south, and Watt Avenue to the west. Arcade Creek runs through the park from west to east dividing the park into a smaller northern portion that is maintained as a natural area and larger southern portion that contains a mix of natural areas and park improvements such playing fields, playgrounds, and parking lots.

Adjacent properties are composed of a residential neighborhood to the north along Park Road, commercial properties to the east of Highway 244, a mix of residential and commercial properties to the south along Auburn Boulevard, and a museum to the west. (Figure 1)

2.1 Existing Conditions

Henry Renfree Field currently has a public park with a baseball field, a playground, and two parking lots. The project has two sections of the trail system that loops through Del Paso Park. Both sections run approximately east to west with one section beginning near the parking lot on the east project boundary and the other extending across the north project boundary. The project site is divided by Bridge Road running north to south through the western half of the project site. West of Bridge Road the project is undeveloped containing a cleared field surrounded by a chain link fence on the south and west sides. A vegetation fire recently occurred within the park burning into the natural area along the creek and the undeveloped field west of Bridge Road within the project boundaries.

Next to the project site on the north, east, and west of the project site are other areas of the park having a natural area covered with an oak woodland. To the south the park ends at Auburn Boulevard, a 4-lane divided road.

The terrain over the project site is generally level. Existing vegetation is predominantly composed of areas of landscape plants and shade trees around the parking lots and throughout the playground area and turf grass on the baseball fields. Around the perimeter of the project site is the natural area mentioned above, in these areas the vegetation is composed of an open canopy Valley Oak woodland with a grass understory. (Figure 2)

2.2 Project Description

The project proposes to perform several park improvements including new a basketball and pickle ball courts, a new parking lot, and the remodeling of the existing baseball field on the part of the project site northeast of Bridge Road. In the past excess soil had been spread in the open field southwest of Bridge Road. In this area, the project proposes to regrade and hydroseed the field. Finally, a walkway will be installed from the museum parking lot west of the project site to Bridge Road. Existing improvements such as the playground and the parking lot on the east side of the project site will remain.

Figure 1 Project Location

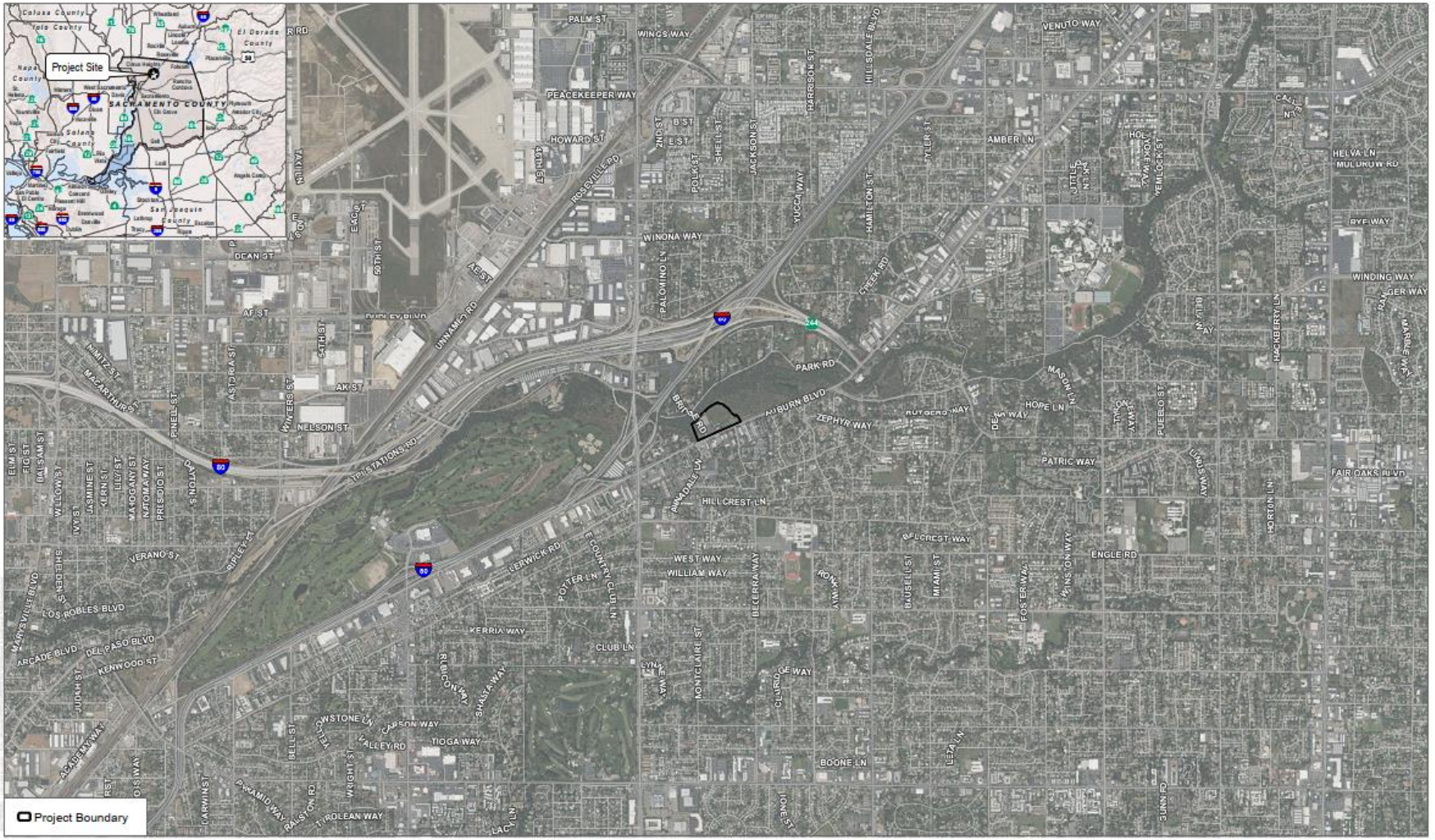

Figure 2 Existing Park Improvements

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3 Methods

The following sections describe the methods used by Dudek's ISA Certified Arborists to inventory and evaluate trees in the tree survey area.

3.1 Field Tree Inventory and Evaluation

Dudek mapped and collected individual tree attribute information for all protected trees meeting the City's definition of a protected tree—which includes street trees—and other trees within and next to the project limits. The location of each individual protected tree was mapped using the ArcGIS Collector software running on an iPad. Tree location information was collected by the iPad's internal GPS receiver. All trees were tagged in the field with an aluminum tree tag bearing a unique identification number. A tag was placed on the trunk of each inventoried tree except for the recently planted trees which were too small to tag. Each tag number corresponds with the individual tree data presented in Appendix B, Tree Information Matrix.

Concurrent with tree mapping efforts, Dudek arborists collected tree attribute data, including species, quantity of individual trunks, individual trunk diameters, overall height, canopy extent, general health and structural conditions, and overall condition. Trunk diameter measurements were collected at 4.5 feet above natural grade along the trunk axis, with a few common exceptions. In cases in which a tree's trunk was located on a slope, the 4.5-foot height was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of the tree's trunk, respectively), and the measurement was made at the circumference of the trunk at this point. Tree height measurements were using a clinometer with 66-foot baseline. Heights for trees in clusters were made by measuring a single tree with the clinometer and then estimating the height of the remaining trees in the cluster based on the height obtained from the clinometer. Tree canopy diameters were typically estimated by pacing off the measurement based on the arborist's stride length or by visually estimating the canopy width. The tree-crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average crown diameter.

Pursuant to the Guide for Plant Appraisal (Council of Tree and Landscape Appraisers 2000), tree health and structure were evaluated with respect to the following five distinct tree components: roots, trunks, scaffold branches, small branches, and foliage. Each component of the tree was assessed regarding health factors such as insect, fungal, or pathogen damage; fire damage; mechanical damage; presence of decay; presence of wilted or dead leaves; and wound closure. Tree health was graded as excellent, very good, *good*, *fair*, *poor*, critical, and *dead*, with *excellent* representing a tree with a full crown of dense, healthy foliage and *dead* representing a dying and/or dead tree. Structurally trees were graded as good, fair, poor, and very poor with good representing trees with no significant structural defects and only small dead branches and very poor representing a tree with significant defects in multiple areas of the tree with high likelihood of failure. This method of tree condition rating is comprehensive, and results in ratings that are useful for determining the status of trees based on common standards. This assessment focuses on tree conditions concerning health and structure for the purposes of analyzing potential project impacts, and where necessary, providing recommendations for mitigating potential tree hazards, such as trees with weak limb attachments, cavities and rot, or excessive lean that would not be appropriate for inclusion in a developed landscape. Each tree was assigned a health and structure rating which can be found in Attachment B the Tree Information Matrix.

Upon completion of field data collection and mapping, individual tree location and measurement data was compiled and updated using the ArcGIS suite of software. The digital tree locations were linked to individual tree identification numbers

and associated tree attribute data. This data set was then evaluated using ArcGIS (version 10.8.1) software to determine the position of individual trees related to the project development areas. Data resulting from this analysis were used to evaluate the individual tree impact totals in this report. Trees four inches in Diameter at Standard Height (DSH) or larger were assigned a number starting with 64 and ending with 157. Small recently planted trees were assigned a tree number with the prefix PT attached to signify that this tree was smaller than 4 inches DSH and recently planted.

3.2 Scope of Work Limitations

All trees were evaluated by visual assessment from the ground only. No aerial inspections, root crown excavations or investigations, or internal probing were performed during the tree assessment. Therefore, the presence or absence of internal decay or other hidden inferiorities in individual trees could not be confirmed. Trees located on the adjacent property, particularly those trees behind fences, were visually assessed from within project site, and the data recorded is based on what was measurable from within the project borders.

4 Results

There are a total of 111 trees located within or next time to the project site. Project site trees are composed of 10 different species, as presented in table 1. Representative photographs of the species present are presented in Attachment A. All 111 trees found within the project area meet the City's criteria for a "City Tree" as defined in Section 12.56.020 of the Sacramento City Code. The Tree Location Map (Attachment C) presents the location of the individual trees mapped and assessed for the proposed project.

Table 1 Project Site Tree Species Composition

Scientific Name	Common Name	Number of Trees
Ailanthus altissima	Tree of Heaven	2
Fraxinus velutina 'Modesto'	Modesto Ash	6
Gleditsia triacanthos	Honey Locust	1
Platanus x hispanica	London Plane Tree	18
Pyrus calleryana	Callery Pear	7
Quercus agrifolia	Coast Live Oak	7
Quercus lobata	Valley Oak	54
Quercus wislizeni	Interior Live Oak	10
Robinia × ambigua 'Idahoensis'	Idaho Locust	5
Washingtonia filifera	Mexican Fan Palm	1
	Total	**111**

Project site trees can be grouped into two categories; native tree species found in the natural areas of the park and ornamental or shade tree species planted in the developed areas of the park. Native trees are composed of native oaks. Shade and ornamental trees are composed of a mix of commonly planted urban trees including London Plane tree and pear tree. The exception to this is Valley Oak which was the most common tree on the project site and was found in both the natural and the developed parts of the park.

Sixteen of the 111 trees inventoried are small, recently planted trees that still have attached nursery stakes.

4.1 Tree Summary

Overall, the trees exhibit growth and structural conditions that are representative of their environment. Shade and ornamental trees were evenly spaced throughout the developed areas of the park and had symmetrical crowns that had been shaped by regular pruning that included removing lower branches from the tree crowns. Native trees in the natural areas had crowns that were less symmetrical with a crown structure influenced by competition from neighboring trees.

Tree health varied from very good to dead with trees in fair or better condition composing the majority (73%) of the trees measured. As presented in the Tree Information Matrix (Attachment B), 1.82% (2 trees) are in excellent

health, 41.82% (46 trees) are in good health, 30% (34 trees) are in fair health condition, and 13.64% (15 trees) are in poor health, 8.18% (9 trees) are in critical health, and 4.55% (5 trees) are dead.

The trees include various trunk and branch maladies, and varying health and structural conditions. As presented in the Tree Information Matrix (Appendix B), 1.82% (2 trees) are in excellent health, 41.82% (46 trees) are in good health, 30% (34 trees) are in fair health condition, and 13.64% (15 trees) are in poor health, 8.18% (9 trees) are in critical health, and 4.55% (5 trees) are dead. Many of the trees inventoried exhibited health symptoms typical of trees in moisture stress including thin crowns, early leaf drop, and branch tip dieback.

Structure varied from good to very poor with approximately ½ of the trees inventoried presenting no significant defects. As presented in the Tree Information Matrix (Appendix B), 53.1% (59 trees) presented good structure, 34.23% (38 trees) presented fair structure, 8.1% (9 trees) presenting poor structure, and 4.55% (5 trees) presenting very poor structure. Trees with structural ratings of fair or worse presented structural defects in their crown, trunk, and/or roots that had increased likelihood of failure. Fair trees had typically had defects that either occurred on a limited portion of the tree, for example a few large dead branches, or only affected a small portion of the tree, for example weak branch attachments in the crown. Poor trees typically had similar defects as trees with fair structure but the defects either occurred more frequently throughout the tree or affected a large portion of the tree, for example decay in the trunk or previous large branch or stem failure. Trees with very poor structure typically presented extensive structural defects throughout the entire tree such as significant decay that extends from the root flare up into the trunk. Three of the five trees rated as having very poor structure were Modesto Ash trees, a species that typically develops weakly attached branches and is not able to compartmentalize decay.

In summary most (72%) of the trees within the project area present fair or better health and structure. Health and structural grades were evenly distributed throughout the park with no areas where poor health or structure was concentrated.

5 Tree Impacts

Tree impacts were determined using GIS technology and spatial locations of trees relative to the project's development footprint. Impacts were further determined based on Dudek's experience with native and non-native trees, and trees' typical reactions to root disturbances from construction activities, such as soil compaction, excavation, and remedial grading. The impact analysis results in this arborist report were used for developing appropriate mitigation measures for the project.

Impacts to trees can be classified as high, moderate, low, or no impact. Trees classified as having high impacts are those trees where construction impacts and poor health would make it unlikely that the tree would survive the development process. Trees classified as having moderate or low impacts are those trees where construction is anticipated to occur within the Tree protection zone (TPZ) (the area around a tree within the outermost circumference of the canopy) but are not expected to be significantly impacted by the development process and are anticipated to be a part of the park post-development. Trees classified as no impact are those trees that are located within the project boundaries but are not anticipated to be affected by project development. Table 2 lists the anticipated tree impacts to project site trees by species. A description of the tree impacts for each tree can be found in Attachment D the Tree Impact Matrix.

Table 2 Project Tree Impacts by Tree Species

Scientific Name	Common Name	Number of Trees	High Impact	Moderate Impact	Low Impact	No Impact
Ailanthus altissima	Tree of Heaven	2	0	2	0	0
Fraxinus velutina 'Modesto'	Modesto Ash	6	0	5	0	1
Gleditsia triacanthos	Honey Locust	1	0	0	0	1
Platanus x hispanica	London Plane Tree	18	7	5	0	6
Pyrus calleryana	Callery Pear	7	1	1	3	2
Quercus agrifolia	Coast Live Oak	7	0	1	1	5
Quercus lobata	Valley Oak	54	4	6	11	33
Quercus wislizeni	Interior Live Oak	10	0	2	1	7
Robinia × ambigua 'Idahoensis'	Idaho Locust	5	5	0	0	0
Washingtonia filifera	Mexican Fan Palm	1	0	1	0	0
	Total	**111**	**17**	**23**	**16**	**56**

5.1 Project Site Trees Classified as High Impact

For the purposes of this arborist report, trees classified as high construction impacts are those with the trunk located inside or within five feet of the proposed development footprint. As shown in Table 2, there are 17 trees identified as having high construction impacts. Sixteen of these trees are categorized as removals solely because they are located within the development footprint, one additional tree is classified as high impacts because of a combination of poor health, poor structure, and its location within development footprint. An example of trees within the project site with high construction impacts is the row of trees between the existing ballfield and parking lot. These two rows of London Plane trees and oak trees are located within one of the proposed ballfields.

5.2 Project Site Trees Classified as Moderate and Low Impact

Trees are classified as having moderate and low construction impacts are located adjacent to the proposed development or to existing improvements that will be demolished. Construction is anticipated within the Tree protection zone that is expected to result in disturbance to the soil and roots or disturbance to the tree crown, but it is anticipated that trees with moderate or low construction impacts will survive development and can be incorporated into the new park facilities. Moderate and low construction impacts are differentiated by two criteria; first, how much of the TPZ is impacted and second, the severity of the impact. Trees classified as moderate construction impacts include the trees south of the existing ballfield, up to half of the TPZ on these trees could be impacted by the demolition of the existing ballfield facilities and the construction of the new facilities. Trees classified as low construction impact include the oak trees around the perimeter of the field west of Bridge Road, only minor grading is being proposed within the TPZ of these trees and no development. As shown in table 2, 23 trees are categorized as having moderate construction impacts and 16 are categorized as having low construction impacts.

5.3 Project Site Trees Classified as No Impact

Trees classified as having no impact are located within the project area boundaries but are not located near the development footprint and are not expected to be significantly impacted. Trees with no anticipated construction impacts include the trees surrounding the parking lot in the southeast corner of the project site and trees located along the trail east of the ballfields. As shown in Table 2, 56 trees are classified as no impact.

6 Recommendations for Project Site Trees

6.1 Tree Removals

Thirty-four trees within the project site are recommended for removal. These trees are recommended for removal for because:

1. They are dead or are in poor health with no hope of recovery (6 trees).
2. They have structural defects that cannot be mitigated by less severe measures and have the potential to fail onto park users, park improvements, or nearby public streets (8 trees).
3. They are located within the development footprint and are not expected to survive project development (18 trees).

Dudek recommends that the city removes all above ground portions and grinds the stumps of these 34 trees. Attachment D the Tree Impact Matrix describes the reason(s) for removal for each tree identified for removal. Attachment E, The Tree Impact Map shows the location of the trees that are identified for removal and those that are identified for preservation. Regardless of the status of the project Dudek recommends that the city remove the five trees rated as having very poor structure, trees # 80, 117, 118, 119, and 146. These trees have an increased likelihood of failure within the next 12 months due to significant decay, cracking or splitting, or cavities. Details and location of each tree recommended for prompt removal can be found in the Tree Impact Matrix and Map.

6.2 Tree Replacement Plan

Dudek recommends that the city plant replacement trees to mitigate the loss of the 34 trees identified for removal. Fourteen of the trees recommended for removal are not located within the project development footprint and Dudek recommends that a replacement tree be installed in the same location as the removed tree. For the remaining 20 trees Dudek recommends installing a new tree in a suitable location within the project area. There are several openings within the project boundaries with adequate space to support the growth of replacement trees including:

- Between the trail and the east ball field fence.
- In the undeveloped area west of Bridge Road.
- In small field along the walkway between the existing parking lot and the existing playground.

Dudek recommends that replacement trees be selected from native oak species including Valley Oak, Interior Live Oak, and Coast Live Oak. These species are present in the natural areas surrounding the field and are well adapted to the conditions within the project site. The only exception to this would be the replacement of the dead pear tree

in the planter in the playground area, Dudek recommends Western Redbud (*Cercis occidentalis*) for this smaller growing space. For all the replacement trees Dudek recommends planting 24-inch box size trees.

If the City were to replace the trees recommended for removal on 1 tree to 1 tree ratio, then the city would be required to plant 34 new trees. If the City were to replace the trees recommended for removal on inch for inch ratio than the city would be required to plant 297 new 24-inch box trees (Total removed trees diameter=594 diameter inches/ average 2-inch diameter for 24-inch box size tree.).

6.3 Protecting Trees Identified for Preservation

To prevent damage to the 77 trees identified for preservation Dudek recommends that the city install protective measures around these trees. Trees that have been identified as having no construction impacts will need fewer protective measures than those identified as having low or moderated impacts. Trees with no impacts may only require signage to prevent construction storage or parking from occurring within their TPZ while trees with low or moderate may require trimming, root pruning, or fencing to prevent unnecessary damage to the tree during project development. Protective measures recommended for the project site are described below.

Protective Fencing: Install protective fencing at the outer circumference of the TPZ or along the boundary or approved construction for the trees identified as Low and Moderate Construction impacts (Trees #93, 105-117, 122, 131-136, 139, 146,148-150, 153, and 155-156). Where practical, install protective fencing to enclose the overlapping TPZs of clusters or rows of trees. Tree protection fencing should be composed of 6-foot-tall chain link fencing. The fencing should be supported by steel posts either driven into the ground or supported on weighted steel feet.

Signage: Signs should be installed along the outer circumference of the TPZ or along the boundary of approved construction that identify that the nearby tree(s) are identified as trees that will be preserved and are protected by City code 12.56. Signs should clearly state the following information:

1. The nearby tree(s) is protected.
2. Only approved construction activities are allowed near the tree.
3. Parking vehicles, storing construction materials, and dumping waste is prohibited near the tree

Signs can be posted on protective fencing or small posts installed into the ground.

Irrigation: Water the trees identified for preservation during construction if it has been more than 30 days since the last measurable precipitation. A 6-inch-tall berm can be constructed around the preserved trees or clusters of preserved trees to serve as a basin to retain supplemental water. This berm can be constructed out of earth or the mulch. The berm should be constructed at approximately 10 feet from the trunk of the tree. Supplemental water should be applied every two weeks and in sufficient quantity to fill water up to the top of the berm. Irrigation water can be applied by whatever means are most practical including hand watering or using water tanker trucks already on site to control dust.

Tree Trimming: Trees along the baseball field may require trimming to create adequate space for the installation of the backstop and fence along the south side of the field (Trees # 130-134). In addition to tree trimming for project clearance Dudek recommends crown cleaning to remove dead and broken branches for trees # 93, 105, 116-117, 148, 153, and 155. All tree pruning should be performed by an International Society of Arboriculture (ISA) certified arborist should be performed according to tree trimming guidelines published by the ISA and following American National Standards Institute (ANSI) A300 standards.

Root pruning: Based on the site plans reviewed in the creation of this report root pruning is not expected for most of the trees identified for preservation. The grading of the undeveloped field west of Bridge Road has the highest potential for encountering tree roots two inches in diameter or greater that would require evaluation prior to removing. For all tree roots encountered during project construction activities Dudek recommends that the roots be cut with a sharp instrument such as hand pruners or a saw-zall and cut cleanly at the edge of the approved construction. Tree roots should not be twisted, ripped, or broken off by construction equipment. Roots greater than two inches in diameter should be evaluated by the Project Arborist prior to pruning.

Monitoring: An ISA certified arborist should visit the project site periodically during construction to assess the status of the preserved trees and check on the tree protection measures that were implemented. Ideally an arborist should be present after the following construction related events: tree fencing has been installed, during excavation and grading, and during the installation of parking lots and driveways near project trees.

The tree protection measures described above except for root pruning should be set up prior to the start of any grading or construction work.

6.4 Tree Permits and Public Notice

The Sacramento City Code section 12.56 has several requirements for public projects where the removal of City trees is proposed.

First, the city must apply for and obtain a Tree Permit to perform regulated work on City Trees within the project boundaries. Regulated work includes tree removal, tree branch and root pruning, and construction activities within the Tree protection zone (TPZ). For the Del Paso Park Renfree Field Improvement Project the City would be responsible for obtaining a permit to perform regulated work for the removal of 34 trees and performing construction activities within the TPZ of 29 trees. A Tree Permit is not required to perform tree trimming for removing dead and broken branches since this is considered “routine work” and exempt from permit requirements.

Second, the city must supply written notice of the proposal to remove the 34 trees identified for removal in this report by posting a notice of the city council meeting where the city council will decide whether or not to remove city trees.

Finally, the city is required to provide justification and obtain city council for each City Tree proposed for removal by the project that is four inches in diameter or larger at DSH. For this project this includes 33 of 34 trees recommended for removal in this report. One tree recommended for removal has a diameter below 4 inches DSH and not justification is required for its removal.

This arborist report supplies the site and tree information necessary to apply for the Tree Permit and provides justification for the trees recommended for removal. It can be submitted as part of the project development plan package to satisfy the City's requirements described in section 12.56 of the City Code.

6 Conclusion

The Del Paso Park Renfree Field Improvement project site covers an 11.5-acre part of Del Paso Regional Park in the City of Sacramento. The park improvement project proposes to replace the existing ballfield and an unused parking lot with new playing field plus a new parking lot, basketball, and pickle ball courts. The project also proposes to install a walkway along Auburn Boulevard connecting the parking lot at the southeast corner of the project to the museum west of the project site and grade the undeveloped field west of Bridge Road. There are 111 trees found within the project boundaries that include the proposed park improvements plus several existing features that will remain after development is complete. Since all 111 trees are found within a public park, all meet the City's criteria for protection as a City Tree as described in section 12.56 of the Sacramento City Code.

For the 111 City Trees within the project site Dudek recommends that 34 City trees be removed because of conflicts with the proposed construction, the tree is dead or in poor health, the tree has poor structure, or a combination of the three. The project will require the city to obtain a Tree Permit prior to removing these trees and will require that the city plant replacement trees to mitigate the loss of the project trees. Using the criteria provided in the City code mitigating the removal of the 34 trees could require the City to plant between 34 and 274 new trees with the number of required replacement trees ultimately being decided by the Director of the Department of Parks and Recreation. Seventy-seven City Trees on the project site can be preserved provided that protective measures are installed for the trees near the development footprint from to prevent these trees from being damaged by construction activities.

This report was produced using the information obtained from a site visit and a set of conceptual site plans. As the design process progresses the number of protected trees impacted, and the severity of the impact may change including the number of trees that can be removed or preserved. This arborist report should be reviewed as the project progresses and updated accordingly.

7 Arborists Disclosure

This report provides conclusions and recommendations based only on a visual examination of the trees and surrounding site by an ISA Certified Arborist and reasonable reliance on the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized, but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and below ground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature that can cause even an apparently healthy tree to fail, including storms of sufficient strength. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for any specific period. A tree's condition could change over a short or long period of time due to climatic, cultural, or environmental conditions. Further, there is no guarantee or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this report nor Dudek assumes any responsibility for, nor will either of them be liable for, any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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8 References

Council of Tree and Landscape Appraisers. 2000. *Guide for Plant Appraisal*. 9th ed. Champagne, Illinois: International Society of Arboriculture.

City of Sacramento. 2016. *AN ORDINANCE AMENDING SECTIONS 2.62.030 AND 8.04.100, DELETING AND ADDING CHAPTER 12.56, AND DELETING CHAPTERS 12.60 AND 12.64 OF THE SACRAMENTO CITY CODE, RELATING TO TREES* Sacramento City Council Ordinance 2016-0026. August 4, 2016.

Attachment A
Representative Photographs

Photo 1: Trees #64-66 near the SE corner of the project.

Photo 2: Tree # 80, a Valley Oak just north of the existing parking lot at the SE corner of the project.

Photo 3: Idaho Locusts #85-89 along the north project boundary.

Photo 4: Tree # 91 a dead Valley Oak along the north project boundary.

Photo 5: Tree # 96, A London Plane Tree along the west side of the baseball field.

Photo 6: Tree # 108 located behind the fence along the west project boundary.

Photo 7: Tree # 128, A London Plane Tree located in the park area east of the playground.

Photo 8: Trees # 148 (Valley Oak background) and 151 (Callery Pear foreground) next to the playground.

Attachment B
Tree Information Matrix

Tree ID Number	*Scientific Name*	Common Name	Total Diameter (inches)	Stems	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Height (ft.)	Crown Width (ft.)	Health	Structure Rating	Structural Integrity	Notes
64	*Quercus lobata*	Valley Oak	20	3	10	6	4				29	27	80	60	Fair. Unbalanced crown, weak attachments at the main stem union.	
65	*Fraxinus velutina 'Modesto'*	Modesto Ash	40	4	8	13	9	10			36	36	80	60	Fair. weak attachments at the main stem union.	
66	*Quercus lobata*	Valley Oak	4	1	4						18	15	80	80	Good. Suppressed tree.	
67	*Quercus lobata*	Valley Oak	4	1	4						17	15	80	80	Good. Suppressed tree.	
68	*Quercus lobata*	Valley Oak	5	1	5						15	10	80	60	Fair. Unbalanced crown. Suppressed tree.	
69	*Quercus lobata*	Valley Oak	9	1	9						22	15	80	80	Good.	
70	*Quercus lobata*	Valley Oak	12	2	7	5					25	20	40	60	Fair. Weak attachments at the main stem union.	
71	*Quercus wislizeni*	Interior Live Oak	4	1	4						13	12	80	60	Fair. Unbalanced crown.	
72	*Quercus wislizeni*	Interior Live Oak	7	1	7						33	10	60	60	Fair. Large wound on the trunk with decay.	
73	*Quercus wislizeni*	Interior Live Oak	5	1	5						14	10	60	80	Good.	
74	*Quercus lobata*	Valley Oak	6	1	6						20	15	80	80	Good.	
75	*Quercus lobata*	Valley Oak	8	2	4	4					22	15	40	60	Fair. Weak attachments at the main stem union.	
76	*Quercus lobata*	Valley Oak	6	2	3	3					18	11	60	60	Fair. Weak attachments at the main stem union.	
77	*Quercus lobata*	Valley Oak	10	3	4	3	3				20	11	60	60	Fair. Weak attachments at the main stem union.	
78	*Quercus lobata*	Valley Oak	4	1	4						12	11	60	80	Good.	
79	*Quercus lobata*	Valley Oak	4	1	4						14	15	40	80	Good.	
80	*Quercus lobata*	Valley Oak	30	1	30						46	52	40	60	Fair. Weak attachments at the main stem union. Large dead branches.	
81	*Quercus lobata*	Valley Oak	11	1	11						31	17	0	20	Very poor. Cracks and decay on the trunk. Large dead branches.	
82	*Quercus lobata*	Valley Oak	23	2	11	12					35	30	0	40	Poor. Large dead branches. Weak attachment at the main stem union.	
83	*Quercus lobata*	Valley Oak	10	1	5	5					18	15	20	40	Poor. Large dead branches. Weak attachment at the main stem union.	
84	*Quercus lobata*	Valley Oak	18	1	18						47	40	60	60	Fair. Weak attachment at the main stem union.	Mistletoe
85	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	14	2	7	7					40	25	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	
86	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	4	2	2	2					24	16	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Main stem previously removed.
87	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	13	3	9	2	2				35	25	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Previously a multi stem tree, 4 stems removed.
88	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	6	2	2	2	2				20	15	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Previously a multi stem tree, 2 stems removed.

Tree ID Number	*Scientific Name*	Common Name	Total Diameter (inches)	Stems	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Height (ft.)	Crown Width (ft.)	Health	Structure Rating	Structural Integrity	Notes
89	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	7	1	7						36	16	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Previously a multi stem tree, 4 stems removed.
90	*Gleditsia triacanthos*	Honey Locust	23	1	23						53	45	80	60	Fair. Large dead branches.	
91	*Quercus lobata*	Valley Oak	44	1	44						55	70	0	40	Poor. Large dead branches. Previous large branch failure. Decay on the trunk.	
92	*Quercus lobata*	Valley Oak	46	0	46						59	85	20	40	Poor. Large dead branches. Decay in the crown.	Bird nest
93	*Quercus lobata*	Valley Oak	56	0	56						72	70	60	60	Fair. Weak attachment at the main stem union with decay. Large dead branches.	
94	*Platanus x hispanica*	London Plane tree	15	0	15						54	35	60	80	Good.	
95	*Platanus x hispanica*	London Plane tree	16	0	16						58	35	60	80	Good.	Hanging branches.
96	*Platanus x hispanica*	London Plane tree	16	1	16						56	35	60	80	Good.	
97	*Platanus x hispanica*	London Plane tree	22	1	22						60	55	60	80	Good.	Hanging branches.
98	*Platanus x hispanica*	London Plane tree	16	1	16						60	45	60	60	Fair. Overextended branches.	Hanging branches.
99	*Quercus lobata*	Valley Oak	20	1	20						50	45	80	60	Fair. Weak attachments at the main stem union and branch unions. Large dead branches.	Hanging branches.
100	*Quercus lobata*	Valley Oak	15	1	15						45	33	90	80	Good.	
101	*Quercus lobata*	Valley Oak	15	1	15						46	40	60	80	Good.	
102	*Quercus lobata*	Valley Oak	27	1	27						53	55	90	60	Fair. large dead branches.	
103	*Platanus x hispanica*	London Plane tree	18	1	18						60	45	60	80	Good.	
104	*Platanus x hispanica*	London Plane tree	15	1	15						55	35	60	80	Good.	
105	*Quercus lobata*	Valley Oak	30	1	30						56	60	80	60	Fair. Large dead branches.	Veg fire damage to lower crown. Mistletoe.
106	*Quercus agrifolia*	Coast Live Oak	8	1	8						24	15	80	80	Good.	Veg fire damage to lower crown. Not tagged behind fence.
107	*Quercus wislizeni*	Interior Live Oak	58	5	14	12	10	10	12		47	40	80	80	Good.	Veg fire damage to lower crown. Not tagged behind fence. DSH estimated.
108	*Quercus lobata*	Valley Oak	18	1	18						64	30	80	60	Fair. Unbalanced crown.	Not tagged behind fence. DSH estimated.
109	*Quercus lobata*	Valley Oak	36	3	12	12	12				60	30	80	60	Fair. Unbalanced crown.	Not tagged behind fence. DSH estimated.
110	*Quercus wislizeni*	Interior Live Oak	26	2	14	12					43	25	80	60	Fair. Unbalanced crown. Weak attachment at the main stem union.	Not tagged behind fence. DSH estimated.
111	*Quercus lobata*	Valley Oak	18	1	18						50	35	60	80	Good.	Not tagged behind fence. DSH estimated.
112	*Quercus lobata*	Valley Oak	30	1	30						65	55	80	60	Fair. Weak attachments at the main stem union.	Damage to the lower crown from recent Veg fire.
113	*Quercus lobata*	Valley Oak	28	2	18	10					50	55	60	80	Good.	Not tagged behind fence. DSH estimated.

Tree ID Number	*Scientific Name*	Common Name	Total Diameter (inches)	Stems	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Height (ft.)	Crown Width (ft.)	Health	Structure Rating	Structural Integrity	Notes
114	*Quercus lobata*	Valley Oak	25	2	15	10					59	40	60	80	Good.	
115	*Quercus lobata*	Valley Oak	49	2	25	24					55	50	80	60	Fair. Unbalanced crown.	Not tagged, behind fence. DSH estimated.
116	*Quercus lobata*	Valley Oak	30	2	30						60	50	60	60	Fair. Large dead branches.	Not tagged, behind fence. DSH estimated.
117	*Quercus lobata*	Valley Oak	30	1	30						45	40	60	60	Fair. Large dead branches.	Not tagged, behind fence. DSH estimated.
118	*Fraxinus velutina 'Modesto'*	Modesto Ash	22	1	22						16	14	20	20	Very poor. Decay in the trunk and root flare.	Not tagged, behind fence. DSH estimated.
119	*Fraxinus velutina 'Modesto'*	Modesto Ash	22	1	22						36	35	80	20	Very poor. Decay in the trunk and root flare. Previous large branch failure	
120	*Fraxinus velutina 'Modesto'*	Modesto Ash	30	1	30						35	35	80	20	Very poor. Decay in the crown, trunk, and root flare. Previous large branch failure	
121	*Fraxinus velutina 'Modesto'*	Modesto Ash	30	1	30						65	55	60	40	Poor. Large dead branches. Previous large branch failure. Decay in the crown.	
122	*Washingtonia filifera*	Mexican Fan Palm	18	1	18						35	15	80	80	Good. Large dead skirt.	
123	*Fraxinus velutina 'Modesto'*	Modesto Ash	32	1	32						56	55	80	40	Poor. Large dead branches. Weak attachments. Decay and cavity in the trunk below the main union.	
124	*Quercus lobata*	Valley Oak	47	5	8	10	11	10	8		50	35	80	60	Fair. Weak attachments at the main stem union.	
125	*Quercus lobata*	Valley Oak	6	2	3	3					20	15	80	80	Good.	
126	*Quercus lobata*	Valley Oak	6	1	6						22	20	80	80	Good.	
127	*Platanus x hispanica*	London Plane tree	14	1	14						54	40	80	80	Good.	
128	*Platanus x hispanica*	London Plane tree	14	1	14						50	35	60	80	Good.	
129	*Platanus x hispanica*	London Plane tree	13	1	13						50	30	80	80	Good.	
130	*Platanus x hispanica*	London Plane tree	15	1	15						55	45	60	80	Good.	
131	*Platanus x hispanica*	London Plane tree	13	1	13						55	47	60	80	Good.	
132	*Platanus x hispanica*	London Plane tree	13	1	13						42	27	60	80	Good.	
133	*Platanus x hispanica*	London Plane tree	13	1	13						51	30	60	80	Good. Corrected lean.	
134	*Platanus x hispanica*	London Plane tree	13	1	13						54	27	40	80	Good. Hanging branches.	
135	*Platanus x hispanica*	London Plane tree	14	1	14						54	43	40	80	Good.	
136	*Quercus lobata*	Valley Oak	18	1	18						45	35	20	80	Good.	
137	*Platanus x hispanica*	London Plane tree	13	1	13						24	12	60	40	Poor. Top died and broke off. Large dead area on the trunk. Weak attachments near top failure point.	
138	*Platanus x hispanica*	London Plane tree	16	1	16						53	47	60	60	Fair. Overextended branches.	

Tree ID Number	*Scientific Name*	Common Name	Total Diameter (inches)	Stems	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Height (ft.)	Crown Width (ft.)	Health	Structure Rating	Structural Integrity	Notes
139	*Quercus wislizeni*	Interior Live Oak	6	1	6						20	20	80	80	Good.	Growing into the fence.
140	*Quercus agrifolia*	Coast Live Oak	12	1	12						26	25	80	80	Good.	
141	*Quercus agrifolia*	Coast Live Oak	17	1	17						47	25	60	80	Good.	
142	*Quercus lobata*	Valley Oak	12	1	12						38	30	20	40	Poor. Large dead branches. Large dead area on the trunk and root flare. Corrected lean.	
143	*Quercus lobata*	Valley Oak	14	1	14						46	30	20	80	Good.	
144	*Quercus lobata*	Valley Oak	15	1	15						45	40	60	60	Fair. Weak attachment at the main stem union.	
145	*Quercus agrifolia*	Coast Live Oak	9	1	9						29	23	60	80	Good.	
146	*Quercus agrifolia*	Coast Live Oak	31	2	14	17					29	40	80	80	Good.	
147	*Pyrus calleryana*	Callery Pear	26	1	9	17					24	20	0	20	Very poor. Cracks and decay in the trunk. Large dead branches.	
148	*Quercus lobata*	Valley Oak	23	1	23						60	55	60	60	Fair. Large dead branches	
149	*Quercus lobata*	Valley Oak	12	1	12						41	30	40	80	Good.	
150	*Quercus lobata*	Valley Oak	13	1	13						40	30	40	80	Good.	
151	*Pyrus calleryana*	Callery Pear	12	1	12						39	25	20	60	Fair. Large dead branches.	
152	*Pyrus calleryana*	Callery Pear	10	1	10						31	25	20	40	Poor. Large dead branches. Previous large branch failure. Weak attachments at the branch unions. Unbalanced crown	
153	*Pyrus calleryana*	Callery Pear	20	4	6	5	5	4			33	25	40	60	Fair. Weak attachments at the branch unions. Large dead branches.	
154	*Pyrus calleryana*	Callery Pear	7	1	7						25	20	20	60	Fair. Weak attachments at the branch unions. Large dead branches.	
155	*Pyrus calleryana*	Callery Pear	22	1	8	5	5	4			30	20	40	60	Fair. Weak attachments at the branch unions. Large dead branches.	
156	*Pyrus calleryana*	Callery Pear	9	1	9						27	20	60	60	Fair. Weak attachments at the branch unions.	
157	*Ailanthus altissima*	Tree of Heaven	9	3	3	3	3				16	15	80	80	Good	Previously cut off at 2 ft above ground.
158	*Ailanthus altissima*	Tree of Heaven	7	3	3	2	2				15	15	80	80	Good	
PT 1	*Quercus lobata*	Valley Oak	1	1	1						3	2	80	80	Good	Recently planted tree.
PT 10	*Quercus lobata*	Valley Oak	3	1	3						13	12	80	80	Good	Recently planted tree.
PT 11	*Quercus lobata*	Valley Oak	3	1	3						12	10	80	80	Good	Recently planted tree.
PT 12	*Quercus lobata*	Valley Oak	3	1	3						14	10	80	80	Good	Recently planted tree.
PT 13	*Quercus lobata*	Valley Oak	2	1	2						10	10	80	80	Good	Recently planted tree.
PT 14	*Quercus lobata*	Valley Oak	3	1	3						14	12	80	80	Good	Recently planted tree.
PT 15	*Quercus wislizeni*	Interior Live Oak	2	1	2						12	12	80	80	Good	Recently planted tree.
PT 16	*Quercus wislizeni*	Interior Live Oak	2	1	2						12	10	80	80	Good	Recently planted tree.
PT 2	*Quercus agrifolia*	Coast Live Oak	2	1	2						8	4	80	80	Good	Recently planted tree.
PT 3	*Quercus agrifolia*	Coast Live Oak	2	1	2						7	4	80	80	Good	Recently planted tree.
PT 4	*Quercus lobata*	Valley Oak	2	1	2						7	4	0	80	Good	Recently planted tree.
PT 5	*Quercus lobata*	Valley Oak	2	1	2						10	7	60	80	Good	Recently planted tree.
PT 6	*Quercus wislizeni*	Interior Live Oak	2	1	2						7	10	80	80	Good	Recently planted tree.

Tree ID Number	*Scientific Name*	Common Name	Total Diameter (inches)	Stems	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Height (ft.)	Crown Width (ft.)	Health	Structure Rating	Structural Integrity	Notes
PT 7	*Quercus wislizeni*	Interior Live Oak	2	1	2						7	12	80	80	Good	Recently planted tree.
PT 8	*Quercus lobata*	Valley Oak	3	1	3						12	12	80	80	Good	Recently planted tree.
PT 9	*Quercus lobata*	Valley Oak	3	1	3						15	12	80	80	Good	Recently planted tree.

Note: PT designates a recently planted tree

Attachment C
Tree Location Map

SOURCE: Bing Imagery 2021, Architect D. Dey 2022

DUDEK

FIGURE 3
Project Tree Map
Renfree Field At Del Paso Regional Park

Attachment D
Tree Impact Matrix

Tree ID Number	*Scientific Name*	Common Name	Project Impacts	Remove/ Preserve	Reason For Removal	Tree Protection Measures	Total Diameter (inches)	Stems	Height (ft.)	Crown Width (ft.)	Health Rating	Structure Rating	Structural Integrity	Notes
64	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	20	3	29	27	80	60	Fair. Unbalanced crown, weak attachments at the main stem union.	
65	*Fraxinus velutina 'Modesto'*	Modesto Ash	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	40	4	36	36	80	60	Fair. weak attachments at the main stem union.	
66	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	4	1	18	15	80	80	Good. Suppressed tree.	
67	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	4	1	17	15	80	80	Good. Suppressed tree.	
68	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	5	1	15	10	80	60	Fair. Unbalanced crown. Suppressed tree.	
69	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	9	1	22	15	80	80	Good.	
70	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	12	2	25	20	40	60	Fair. Weak attachments at the main stem union.	
71	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	4	1	13	12	80	60	Fair. Unbalanced crown.	
72	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	7	1	33	10	60	60	Fair. Large wound on the trunk with decay.	
73	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	5	1	14	10	60	80	Good.	
74	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	6	1	20	15	80	80	Good.	
75	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	8	2	22	15	40	60	Fair. Weak attachments at the main stem union.	

76	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	6	2	18	11	60	60	Fair. Weak attachments at the main stem union.
77	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	10	3	20	11	60	60	Fair. Weak attachments at the main stem union.
78	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	4	1	12	11	60	80	Good.
79	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	4	1	14	15	40	80	Good.
80	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	30	1	46	52	40	60	Fair. Weak attachments at the main stem union. Large dead branches.
81	*Quercus lobata*	Valley Oak	No Impact	Remove	Dead Tree	N/A	11	1	31	17	0	20	Very poor. Cracks and decay on the trunk. Large dead branches.
82	*Quercus lobata*	Valley Oak	No Impact	Remove	Dead tree	N/A	23	2	35	30	0	40	Poor. Large dead branches. Weak attachment at the main stem union.
83	*Quercus lobata*	Valley Oak	Low	Remove	Poor health and structure	N/A	10	1	18	15	20	40	Poor. Large dead branches. Weak attachment at the main stem union.
84	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	18	1	47	40	60	60	Fair. Weak attachment at the main stem union.	Mistletoe
85	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	High	Remove	Within Construction Footprint		14	2	40	25	40	60	Fair. Weak attachment at the main stem union. Large dead branches.
86	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	High	Remove	Within Construction Footprint		4	2	24	16	40	60	Fair. Weak attachment at the main stem	Main stem previously removed.

													union. Large dead branches.	
87	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	High	Remove	Within Construction Footprint		13	3	35	25	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Previously a multi stem tree, 4 stems removed.
88	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	High	Remove	Within Construction Footprint		6	2	20	15	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Previously a multi stem tree, 2 stems removed.
89	*Robinia × ambigua 'Idahoensis'*	Idaho Locust	High	Remove	Within Construction Footprint		7	1	36	16	40	60	Fair. Weak attachment at the main stem union. Large dead branches.	Previously a multi stem tree, 4 stems removed.
90	*Gleditsia triacanthos*	Honey Locust	No Impact	Preserve	N/A	Tree Protection Fencing, Signage, Crown cleaning	23	1	53	45	80	60	Fair. Large dead branches.	
91	*Quercus lobata*	Valley Oak	No Impact	Remove	Dead tree	N/A	44	1	55	70	0	40	Poor. Large dead branches. Previous large branch failure. Decay on the trunk.	
92	*Quercus lobata*	Valley Oak	Low	Remove	Poor health and structure	N/A	46	0	59	85	20	40	Poor. Large dead branches. Decay in the crown.	Bird nest
93	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage, Crown cleaning	56	0	72	70	60	60	Fair. Weak attachment at the main stem union with decay. Large dead branches.	
94	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	15	0	54	35	60	80	Good.	
95	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	16	0	58	35	60	80	Good.	Hanging branches.
96	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	16	1	56	35	60	80	Good.	

97	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	22	1	60	55	60	80	Good.	Hanging branches.
98	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	16	1	60	45	60	60	Fair. Overextended branches.	Hanging branches.
99	*Quercus lobata*	Valley Oak	High	Remove	Within Construction Footprint	N/A	20	1	50	45	80	60	Fair. Weak attachments at the main stem union and branch unions. Large dead branches.	Hanging branches.
100	*Quercus lobata*	Valley Oak	High	Remove	Within Construction Footprint	N/A	15	1	45	33	90	80	Good.	
101	*Quercus lobata*	Valley Oak	High	Remove	Within Construction Footprint	N/A	15	1	46	40	60	80	Good.	
102	*Quercus lobata*	Valley Oak	High	Remove	Within Construction Footprint	N/A	27	1	53	55	90	60	Fair. large dead branches.	
103	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	18	1	60	45	60	80	Good.	
104	*Platanus x hispanica*	London Plane tree	High	Remove	Within Construction Footprint	N/A	15	1	55	35	60	80	Good.	
105	*Quercus lobata*	Valley Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage, Crown cleaning	30	1	56	60	80	60	Fair. Large dead branches.	Veg fire damage to lower crown. Mistletoe.
106	*Quercus agrifolia*	Coast Live Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	8	1	24	15	80	80	Good.	Veg fire damage to lower crown. Not tagged behind fence.
107	*Quercus wislizeni*	Interior Live Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	58	5	47	40	80	80	Good.	Veg fire damage to lower crown. Not tagged behind fence. DSH estimated.
108	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	18	1	64	30	80	60	Fair. Unbalanced crown.	Not tagged behind fence. DSH estimated.

109	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	36	3	60	30	80	60	Fair. Unbalanced crown.	Not tagged behind fence. DSH estimated.
110	*Quercus wislizeni*	Interior Live Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	26	2	43	25	80	60	Fair. Unbalanced crown. Weak attachment at the main stem union.	Not tagged behind fence. DSH estimated.
111	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	18	1	50	35	60	80	Good.	Not tagged behind fence. DSH estimated.
112	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	30	1	65	55	80	60	Fair. Weak attachments at the main stem union.	Damage to the lower crown from recent Veg fire.
113	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	28	2	50	55	60	80	Good.	Not tagged behind fence. DSH estimated.
114	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	25	2	59	40	60	80	Good.	
115	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	49	2	55	50	80	60	Fair. Unbalanced crown.	Not tagged, behind fence. DSH estimated.
116	*Quercus lobata*	Valley Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage, Crown cleaning	30	2	60	50	60	60	Fair. Large dead branches.	Not tagged, behind fence. DSH estimated.
117	*Quercus lobata*	Valley Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage, Crown cleaning	30	1	45	40	60	60	Fair. Large dead branches.	Not tagged, behind fence. DSH estimated.
118	*Fraxinus velutina 'Modesto'*	Modesto Ash	Moderate	Remove	Poor health and structure	N/A	22	1	16	14	20	20	Very poor. Decay in the trunk and root flare.	Not tagged, behind fence. DSH estimated.
119	*Fraxinus velutina 'Modesto'*	Modesto Ash	Moderate	Remove	Poor health and structure	N/A	22	1	36	35	80	20	Very poor. Decay in the trunk and root flare. Previous large branch failure	
120	*Fraxinus velutina 'Modesto'*	Modesto Ash	Moderate	Remove	Poor health and structure	N/A	30	1	35	35	80	20	Very poor. Decay in the crown, trunk, and root flare. Previous large branch failure	

121	*Fraxinus velutina 'Modesto'*	Modesto Ash	Moderate	Remove	Poor structure	N/A	30	1	65	55	60	40	Poor. Large dead branches. Previous large branch failure. Decay in the crown.
122	*Washingtonia filifera*	Mexican Fan Palm	Moderate	Preserve	N/A	Remove dead skirt	18	1	35	15	80	80	Good. Large dead skirt.
123	*Fraxinus velutina 'Modesto'*	Modesto Ash	Moderate	Remove	Poor structure	N/A	32	1	56	55	80	40	Poor. Large dead branches. Weak attachments. Decay and cavity in the trunk below the main union.
124	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	47	5	50	35	80	60	Fair. Weak attachments at the main stem union.
125	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	6	2	20	15	80	80	Good.
126	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	6	1	22	20	80	80	Good.
127	*Platanus x hispanica*	London Plane tree	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	14	1	54	40	80	80	Good.
128	*Platanus x hispanica*	London Plane tree	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	14	1	50	35	60	80	Good.
129	*Platanus x hispanica*	London Plane tree	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	13	1	50	30	80	80	Good.
130	*Platanus x hispanica*	London Plane tree	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	15	1	55	45	60	80	Good.
131	*Platanus x hispanica*	London Plane tree	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	13	1	55	47	60	80	Good.
132	*Platanus x hispanica*	London Plane tree	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	13	1	42	27	60	80	Good.
133	*Platanus x hispanica*	London Plane tree	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	13	1	51	30	60	80	Good. Corrected lean.
134	*Platanus x hispanica*	London Plane tree	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	13	1	54	27	40	80	Good. Hanging branches.
135	*Platanus x hispanica*	London Plane tree	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	14	1	54	43	40	80	Good.
136	*Quercus lobata*	Valley Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	18	1	45	35	20	80	Good.

137	*Platanus x hispanica*	London Plane tree	No Impact	Preserve	N/A	Tree Protection Fencing, Signage, Crown Cleaning, remove poorly attached branches near treetop	13	1	24	12	60	40	Poor. Top died and broke off. Large dead area on the trunk. Weak attachments near top failure point.	
138	*Platanus x hispanica*	London Plane tree	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	16	1	53	47	60	60	Fair. Overextended branches.	
139	*Quercus wislizeni*	Interior Live Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	6	1	20	20	80	80	Good.	Growing into the fence.
140	*Quercus agrifolia*	Coast Live Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	12	1	26	25	80	80	Good.	
141	*Quercus agrifolia*	Coast Live Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	17	1	47	25	60	80	Good.	
142	*Quercus lobata*	Valley Oak	No Impact	Remove	Poor health and structure	N/A	12	1	38	30	20	40	Poor. Large dead branches. Large dead area on the trunk and root flare. Corrected lean.	
143	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	14	1	46	30	20	80	Good.	
144	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	15	1	45	40	60	60	Fair. Weak attachment at the main stem union.	
145	*Quercus agrifolia*	Coast Live Oak	No Impact	Preserve	N/A	Tree Protection Fencing, Signage	9	1	29	23	60	80	Good.	
146	*Quercus agrifolia*	Coast Live Oak	Low	Preserve	N/A	Tree Protection Fencing, Signage	31	2	29	40	80	80	Good.	
147	*Pyrus calleryana*	Callery Pear	No Impact	Remove	Dead tree	N/A	26	1	24	20	0	20	Very poor. Cracks and decay in the trunk. Large dead branches.	
148	*Quercus lobata*	Valley Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage, Crown Cleaning	23	1	60	55	60	60	Fair. Large dead branches	
149	*Quercus lobata*	Valley Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	12	1	41	30	40	80	Good.	

150	*Quercus lobata*	Valley Oak	Moderate	Preserve	N/A	Tree Protection Fencing, Signage	13	1	40	30	40	80	Good.
151	*Pyrus calleryana*	Callery Pear	High	Remove	Poor health and structure, Within Development Footprint	N/A	12	1	39	25	20	60	Fair. Large dead branches.
152	*Pyrus calleryana*	Callery Pear	Moderate	Remove	Poor health and structure, Within Development Footprint	N/A	10	1	31	25	20	40	Poor. Large dead branches. Previous large branch failure. Weak attachments at the branch unions. Unbalanced crown
153	*Pyrus calleryana*	Callery Pear	Low	Preserve	N/A	Tree Protection Fencing, Signage, Crown Cleaning	20	4	33	25	40	60	Fair. Weak attachments at the branch unions. Large dead branches.
154	*Pyrus calleryana*	Callery Pear	No Impact	Remove	Poor health	N/A	7	1	25	20	20	60	Fair. Weak attachments at the branch unions. Large dead branches.
155	*Pyrus calleryana*	Callery Pear	Low	Preserve	N/A	Tree Protection Fencing, Signage, Crown Cleaning	22	1	30	20	40	60	Fair. Weak attachments at the branch unions. Large dead branches.
156	*Pyrus calleryana*	Callery Pear	Low	Preserve	N/A	Tree Protection fencing, signage.	9	1	27	20	60	60	Fair. Weak attachments at the branch unions.
157	*Ailanthus altissima*	Tree of Heaven	Moderate	Remove	Invasive Species, Within development Footprint	N/A	9	3	16	15	80	80	Good	Previously cut off at 2 ft above ground.

158	*Ailanthus altissima*	Tree of Heaven	Moderate	Remove	Invasive Species, Within development Footprint	N/A	7	3	15	15	80	80	Good	
PT 1	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	1	1	3	2	80	80	Good	Recently planted tree.
PT 10	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	3	1	13	12	80	80	Good	Recently planted tree.
PT 11	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	3	1	12	10	80	80	Good	Recently planted tree.
PT 12	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	3	1	14	10	80	80	Good	Recently planted tree.
PT 13	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	3	1	14	12	80	80	Good	Recently planted tree.
PT 14	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	10	10	80	80	Good	Recently planted tree.
PT 15	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	12	12	80	80	Good	Recently planted tree.
PT 16	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	12	10	80	80	Good	Recently planted tree.
PT 2	*Quercus agrifolia*	Coast Live Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	8	4	80	80	Good	Recently planted tree.
PT 3	*Quercus agrifolia*	Coast Live Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	7	4	80	80	Good	Recently planted tree.
PT 4	*Quercus lobata*	Valley Oak	No Impact	Remove	Dead tree	N/A	2	1	7	4	0	80	Good	Recently planted tree.
PT 5	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	10	7	60	80	Good	Recently planted tree.
PT 6	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	7	10	80	80	Good	Recently planted tree.
PT 7	*Quercus wislizeni*	Interior Live Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	2	1	7	12	80	80	Good	Recently planted tree.
PT 8	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	3	1	12	12	80	80	Good	Recently planted tree.
PT 9	*Quercus lobata*	Valley Oak	No Impact	Preserve	N/A	Tree Protection fencing, signage.	3	1	15	12	80	80	Good	Recently planted tree.

Attachment E
Tree Impact Map

SOURCE: Bing Imagery 2021, Architect O. Dey 2022

DUDEK

FIGURE 4
Tree Impacts
Renfree Field At Del Paso Regional Park