APPENDIX D

BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM

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MEMORANDUM

DATE: May 27, 2025

TO: **Jennifer Ackerman, MA**
Associate Planner
Planning Division | Community Development Department
Office 925-960-4473

FROM: John Kunna, Associate Biologist, LSA

SUBJECT: Biological Resources Technical Memorandum for the 2930 Pacific Avenue Residential Project, Livermore, Alameda County, California

INTRODUCTION

This Biological Resources Technical Memorandum (BRTR) for the proposed 2930 Pacific Avenue Residential Project (project) in Livermore has been prepared using standard methods. This BRTR provides information on existing conditions, biological resources, jurisdictional waters, and locally protected resources at the project site. The biological evaluation herein includes the results of a background literature review, a reconnaissance-level field survey conducted by an LSA biologist, and provides an assessment of potential impacts to protected biological resources that could result from implementation of the project.

Project Location

The approximately 6.5-acre project site is at 2930 Pacific Avenue in Livermore, Alameda County, California (Assessor's Parcel Numbers 98A-412-106-5, -106-8, -106-3, and -106-6). The project site is in central Livermore in an area primarily consisting of residential, commercial, and institutional uses. The project site is bounded by single-family residential uses to the north, Dolores Street to the east, Pacific Avenue to the south, and South Livermore Avenue to the west. A map showing the location of the project area is provided (Attachment B).

Project Description

The proposed project would include demolition of the existing buildings and surface parking lots on the project site. Construction debris, such as old foundations, pavements, and structures, would be collected and hauled off site for disposal.

Following demolition, the project site would be redeveloped with 15 residential buildings and two recreational/support buildings (pool equipment and clubhouse buildings). The residential buildings would be located throughout the project site and would consist of 98 townhouses in three-story buildings and 17 townhouses in two-story buildings.

Total open space provided would be approximately 26,000 square feet and would include a community park with a tot lot and picnic area, as well as an approximately 3,200-square-foot central pool area with a pool, spa area, and lounge seating. Of the 71 existing trees on the project site, 70 trees would be removed. Approximately 405 new trees would be planted throughout the project site. Landscaping and other plantings would be provided throughout the project site as well.

REGULATORY CONTEXT

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) protects listed species from harm or "take," which is broadly defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Any such activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are typically provided less protection than listed animals.

An endangered species is one that is considered in danger of becoming extinct throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. Federal agencies involved in permitting projects that may result in take of federally listed species (e.g., United States Army Corps of Engineers [USACE]) are required under Section 7 of the FESA to consult with the USFWS prior to issuing such permits. Any activity that could result in the take of a federally listed species and is not authorized as part of a Section 7 consultation requires an FESA Section 10 take permit from the USFWS.

Clean Water Act Section 404 (33 United States Code Sections 1251 to 1376)

The USACE is responsible under Section 404 of the Clean Water Act (CWA) to regulate the discharge of fill material into waters of the United States. The CWA provides the primary means for the protection of "waters of the United States," including wetlands. Under Section 404 of the CWA, the USACE, under the United States Environmental Protection Agency (EPA), regulates the discharge of dredged and fill material into waters of the United States, including wetlands.

The CWA addresses "navigable waters," defined in the statute as waters of the United States. The USACE has further refined the definition through various Clean Water Rules, including wetlands as a subset of waters of the United States. Wetlands are those areas that are inundated or saturated by surface water 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. Wetlands include swamps, marshes, bogs, and similar areas (33 Code of Federal Regulations [CFR] 328.3[b]; 40 CFR 230.3[t]). Wetlands contain three distinct parameters: hydrophytic vegetation, hydric soils, and wetland hydrology.

Waters of the United States generally not considered to be USACE jurisdictional include nontidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds excavated on dry land used for irrigation or stock watering, small artificial waterbodies such as swimming pools, and water-filled depressions (51 *Federal Register* 41, 217 1986). In addition, a

Supreme Court ruling (*South Waste Agency of North Cook County vs. USACE*, January 9, 2001) determined that the USACE exceeded its statutory authority by asserting CWA jurisdiction over "an abandoned sand and gravel pit in northern Illinois, which provides habitat for migratory birds." Based solely on the use of such waters by migratory birds, the Supreme Court's holding was strictly limited to waters that are "non-navigable, isolated, and intrastate."

The Supreme Court further addressed the extent of the USACE's jurisdiction in the consolidated cases *Rapanos v. United States* (No. 04-1034) and *Carabell v. United States* (No. 04-1384) referred to collectively as "*Rapanos*" (USACE and EPA 2007). In *Rapanos*, a sharply divided Court issued multiple opinions, none of which garnered the support of a majority of the Justices. This created substantial uncertainty as to which jurisdictional test should be used in routine jurisdictional determinations. The Ninth Circuit Court of Appeal, which encompasses California, answered this in *Northern California River Watch v. City of Healdsburg* (August 11, 2006). In this case, the Court held that Justice Kennedy's opinion in *Rapanos* provided the controlling rule of law. Under that rule, wetlands or other waters that are not navigable are subject to USACE jurisdiction if they have "a significant nexus to waters that are navigable in fact." As Justice Kennedy explained, whether a "significant nexus" exists in any given situation will need to be decided on a case-by-case basis, depending on site-specific circumstances. The EPA and the USACE subsequently developed an instructional guidebook on how to apply these rulings for all future jurisdictional determinations (USACE and EPA 2007), as well as a memorandum providing guidance to implement the United States Supreme Court's decision in *Rapanos* (Grumbles and Woodley 2007).

On January 18, 2023, the USACE published in the *Federal Register* the final *Revised Definition of Waters of the United States* (88 *Federal Register* 2004). On March 25, 2023, the United States Supreme Court modified the January 2023 definition of WOTUS in *Sackett v. Environmental Protection Agency* (No. 21-454), herein referred to as "*Sackett*." Specifically, the Court considered the "significant nexus" standard established under *Rapanos* to be inconsistent with the CWA while upholding the plurality standard that the USACE jurisdiction is limited to waters of the United States that are "relatively permanent, standing or continuously flowing bodies of water" that can be described in ordinary parlance as "streams, oceans, rivers, and lakes." The Supreme Court further affirmed that wetlands can be considered waters of the United States when continuous surface connections to bodies that are waters of the United States are present and that no clear boundary exists between waters of the United States and wetlands. *Sackett* further revised the CWA by removing interstate wetlands from consideration as waters of the United States.

On September 8, 2023, the USACE published a final rule conforming the January 2023 rule with the *Sackett* decision, removing the "significant nexus" standard. The amended rule is operative in California.

Features currently **included** in the definition of waters of the United States per 33 CFR 328.3(b) include:

(1) Waters which are:

(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(ii) The territorial seas; or

(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

(i) Waters identified in paragraph (a)(1) of this section, or

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

Features currently **excluded** from identification as waters of the United States per 33 CFR 328.3(b) include:

- Intrastate streams and wetlands.
- Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the CWA.
- Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA.
- Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water.

- Artificially irrigated areas that would revert to dry land if the irrigation ceased.
- Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons.
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WOTUS.
- Swales and erosional features (*e.g.,* gullies, small washes) characterized by low-volume, infrequent, or short-duration flow.

In general, a USACE permit must be obtained before placing fill or grading in jurisdictional wetlands or other waters of the United States. The USACE will be required to consult with the USFWS and/or National Marine Fisheries Services under Section 7 of the FESA if the action subject to CWA permitting could result in take of federally listed species.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, and their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." This act covers all bird species native to the United States.

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under the California Endangered Species Act (CESA). In addition, species designated as "candidates" for listing under CESA are protected by its provisions. CDFW also maintains a list of Species of Special Concern, defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Species of Special Concern are not afforded legal protection under CESA.

Fish and Game Code Section 86 defines "take" as to "Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

California Fish and Game Code

CDFW is also responsible for enforcing the California Fish and Game Code, which contains several provisions potentially relevant to construction projects. For example, Section 1602 of the California Fish and Game Code governs CDFW's issuance of Lake and Streambed Alteration Agreements. Lake

and Streambed Alteration Agreements are required whenever proposed project activities would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as such by CDFW.

The California Fish and Game Code also designates some animal species as fully protected, which may not be taken or possessed without a permit from the California Fish and Game Commission and/or CDFW. These take permits do not allow "incidental take" (except in limited circumstances) and are more restrictive than the take allowed under Section 2081 of CESA. Fully protected species are listed in Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code.

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the order of Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, essentially serve to protect nesting native birds. Nonnative species are not afforded any protection under the MBTA or California Fish and Game Code (except that hunting regulations apply to some nonnative species listed as gamebirds).

California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to "projects" proposed to be undertaken or requiring approval by State or local government agencies. Projects are defined as having the potential to have physical impact on the environment.

Special-Status Species

For the purposes of CEQA and this assessment, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under FESA
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under CESA
- Wildlife species designated as Species of Special Concern or Fully Protected by the CDFW
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines
- Species that are considered a taxa of special concern by local agencies.

Riparian Habitat and Other Sensitive Natural Communities

The California Wildlife Conservation Board defines riparian areas as "transitional zones between terrestrial and aquatic systems that exhibit characteristics of both systems. They are typically

vegetated with lush growths of grasses, forbs, shrubs, and trees that are tolerant of periodic flooding and have sediments that are rich in nutrients and organic matter."

CDFW tracks the occurrences of natural plant communities that are of limited distribution statewide or within a county or region where they are often vulnerable to the effects of development projects. In the most recent list of vegetation alliances/natural communities recognized in California, alliances with a NatureServe State ranking code of S1 through S3 are "highly imperiled" and impacts to "high-quality occurrences" of these communities may be considered significant under CEQA. Whether a natural plant community is imperiled or not can be determined by checking CDFW's *List of Vegetation Alliances and Associations* (CDFW 2010). Some imperiled vegetation associations can be difficult to distinguish from common plant communities without a quantitative vegetation description. For example, patches of native grassland comprising at least 15 percent relative cover in a grassland area are considered a sensitive natural community by CDFW.

Local Regulations

City of Livermore General Plan

Applicable goals, objectives, and policies from the adopted City of Livermore General Plan related to biological resources are presented below:

Goal OSC-1 Conserve the value and function of Livermore's open space as a biological resource.

> **Objective OSC-1.1** Maintain biodiversity within the Planning Area with special emphasis on species that are sensitive, rare, declining, unique or represent valuable biological resources.
>
> > **Policy P4** The City shall require all projects that impact a federal or State listed threatened or endangered species, federal or State listed candidate species, State species of special concern, or State designated sensitive habitats, to mitigate for identified impacts in a way consistent with mitigation and avoidance measures published and distributed by the federal and/or State resource agencies at the time of the specific plan or project-level review. Monitoring requirements also shall be consistent with published requirements for each species or habitat. For listed or candidate species, species of special concern, or sensitive habitats for which no mitigation or avoidance measures have been published, the City shall require evidence of coordination with the responsible agencies prior to acceptance of mitigation or avoidance measures or monitoring requirements.
>
> **Objective OSC-1.2** Minimize impacts to sensitive natural habitats including alkali sinks, riparian vegetation, wetlands, and woodland forest.
>
> > **Policy P1** Habitats of rare or endangered species shall be preserved.

Policy P2 Use and development of riparian areas should enhance the appearance of the creekside environment and protect and enhance native vegetation.

Policy P3 Require appropriate setbacks, to be determined in coordination with resource agencies, LARPD, EBRPD, and other responsible agencies, adjacent to natural streams to provide adequate buffer areas that ensure the protection of plant and animal communities.

Policy P4 Riparian woodlands and freshwater marshes shall be preserved. Developers shall be required to mitigate possible adverse impacts upon these resource areas. Consistent with the North Livermore Urban Growth Boundary Initiative, no development shall be allowed that would have a substantial adverse impact or significant effect on such areas.

Policy P6 The City shall require all development to comply with State and federal regulations to preserve and protect the habitats of rare and endangered species.

Policy P7 The City shall require project proponents to identify and map sensitive biological and wetland resources on each development parcel and identify the measures necessary to avoid and/or minimize impacts on sensitive biological and wetland resources prior to approving the development. Mitigation for impacts to sensitive biological and wetland resources shall replace the functions and values of the resources as well as gross acreage.

Policy P8 The City shall require development to avoid take of species listed as threatened, endangered, or candidate under federal and state endangered species acts by implementing measures determined in consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

Policy P12 The City shall require the maintenance of adequately sized terrestrial and aquatic movement corridors that connect natural open space areas.

Objective OSC-1.3 Conserve Livermore's native trees and vegetation, which are important biological resources within the Planning Area

Policy P1 Require new developments to incorporate native vegetation into their landscape plans and prohibit the use of invasive non-native plant species. Propagules (seeds or plants) of native plants shall be from native sources.

City of Livermore Tree Protection Ordinance

Chapter 12.20 of the City's Municipal Code comprises the City's Tree Preservation Ordinance. Pursuant to Section 12.20.190, removal or encroachment into the protected zone of any "protected

trees" on public or private property within the City requires issuance of a tree permit from the City pursuant to the provisions of the Ordinance. Protected trees are defined in Section 12.20.160(M) of the Municipal Code as a single-trunked tree, a multitrunked tree, or a stand of trees dependent upon each other for survival that meets any one or more of the following criteria:

1. Any tree located on private property occupied by single-family residential development that meets the following criteria:

    a. Any tree with a circumference at breast height (CBH) of 60 inches or more; or

    b. Any California native tree having a circumference (CBH) of 24 inches or more;

2. Any tree located on private property occupied by commercial, industrial, institutional (i.e., religious, public agency, hospital, care facilities, etc.), mixed-use or multifamily residential (two or more units) development with a circumference (CBH) of 24 inches or more;

3. Any tree located on an undeveloped or underdeveloped property, regardless of zoning district, use, or development status, for which new development is proposed, with a circumference (CBH) of 18 inches or more;

4. Any tree located in an open space, riparian, or habitat area with a circumference (CBH) of 18 inches or more;

5. Any tree approved as part of a site plan approval, or required as a condition of approval for a development project, zoning use permit, use permit or other site development review;

6. Any tree designated by the City Council as determined to be an ancestral tree

7. Any tree listed on the City's ancestral tree inventory; and/or

8. Any tree required to be planted as mitigation for unlawfully removed trees.

In addition, Section 12.20 contains further regulations related to the definition, planting, protection, removal, and pruning of street trees within Livermore. As noted in Section 12.20.020 of the City's Municipal Code, all street trees within Livermore are considered property of the City, and the Director of Public Works or designee thereof retains exclusive authority and responsibility to plant, remove, prune, inspect, maintain, root-prune, or otherwise alter street trees

East Alameda County Conservation Strategy

The East Alameda County Conservation Strategy (EACCS) is a collaborative document developed by multiple federal, State, and local entities, including Alameda County, to provide an effective framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from

infrastructure and development projects. The EACCS study area encompasses 271,485 acres within Alameda County and includes the cities of Dublin, Livermore, and Pleasanton. The EACCS enables project proponents to comply with federal and State regulatory requirements within a framework of comprehensive conservation goals and objectives by implementing standardized mitigation requirements. Although the EACCS does not directly result in permits from any regulatory agencies, the standardized avoidance, minimization, and mitigation measures for species and natural communities provide more certainty for project proponents and local agencies of regulatory expectations and costs. This approach is expected to streamline the environmental permitting process, reducing the overall cost of environmental permitting and consolidating mitigation.

The EACCS addresses 19 "focal species" composed of 13 wildlife and 6 plant species that meet one of the following criteria: (1) listed under the federal ESA as threatened or endangered, or proposed for listing; (2) listed under the California ESA as threatened or endangered, or proposed for listing; (3) listed under the Native Plant Protection Act as rare; or (4) expected to be listed under the federal or State ESA in the foreseeable future (Arbor Resources 2023).

METHODS

Database Search and Literature Review

Prior to conducting fieldwork, LSA searched the California Natural Diversity Database (CNDDB) (CDFW 2025) for records of special-status plant and wildlife species and sensitive habitat occurrences within 2 miles of the project site. LSA also searched the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California for all records of special-status species on the *Livermore* and *Altamont, California* USGS quadrangle (CNPS 2025).

LSA obtained an unofficial species list of federally protected species from the USFWS' Information for Planning and Consultation (IPaC) database (Attachment C). This list identifies threatened, endangered, proposed, and candidate plant and wildlife species, as well as proposed and final designated critical habitat that may occur within the boundary of the project site and/or may be affected by the project.

Based on these outputs and the results of the field survey described below, LSA developed *Table D.1: Special-Status Plant Species' Potential to Occur* and Table D.2: *Special-Status Animal Species' Potential to Occur.* These tables (provided later in this report) were used as a target list for special-status plants and communities on the project site.

LSA reviewed the Arborist Report that had been prepared for the site (Arbor Resources 2023). LSA also reviewed current and historic Google Earth aerial images of the site.

FIELD SURVEY

LSA Senior Biologist John Kunna visited the site on April 17, 2025. Mr. Kunna has conducted wildlife throughout the greater Bay Area since 2005. He has expertise with all other special-status wildlife species that occur in Alameda County.

The survey area included all accessible outdoor areas of the project site as well as accessible adjacent areas. The weather at the time of the field survey was clear and visibility was excellent. The biologist used binoculars to scan the site and adjacent areas for wildlife prior to walking the site. Plant and animal species observed during the survey were recorded in field notes. The site was also generally inspected for wetlands or water features that may fall under the jurisdiction of the USACE, Regional Water Quality Control Board, and/or CDFW.

Mr. Kunna also identified trees on the site as part of a peer review of the certified arborist report.

RESULTS

Database Search and Literature Review

Special-Status Plants

A total of 15 special-status plant species and 17 special-status wildlife species have CNDDB occurrences within 2 miles of the project site. The IPaC list contained one federally protected plant species, palmate-bracted bird's beak (*Cordylanthus palmatus*), which was also included in the CNDDB results. The CNPS list contained 18 rare plant species, including 3 species that were not in the CNDDB results. Table D.1 summarizes the potential for each of these plants to occur.

Special-Status Wildlife

A total of 15 special-status wildlife species have CNDDB occurrences within 2 miles of the project site. The IPaC list contained an additional five federally protected animal species which have no CNDDB occurrences within 5 miles of the site. Table D.2 summarizes the potential for each of these 20 wildlife species to occur.

Field Survey

The site is entirely developed with two commercial buildings consisting of a strip mall and a vacant barbecue restaurant. At the northwestern end of the site is a vacant lot where a gas station used to be. The rest of the site is covered in parking lots with landscaping in medians. Many of the stores in the strip mall are vacant. The strip mall building is in poor condition and several structural issues were noted. The site is surrounded by residential and commercial development.

A few rodenticide bait stations were seen on the property, but it was not clear if they were actively being baited.

The site has no native vegetation communities. Vegetation on the site is limited to planted landscaping trees and shrubs with a few ruderal species on the periphery of the site and where the gas station used to be.

No active bird nests were detected. A few old bird nests were seen on the strip mall. Birds likely nest each year on and adjacent to the site in trees and on buildings.

There are no wetlands or other potentially jurisdictional waters on the site.

Arborist Report

The arborist report was sufficiently detailed and used professional methodologies and standards. One deodar cedar tree (#46) that had been inventoried in poor health in 2022 was found to have died.

SIGNIFICANCE CRITERIA

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

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

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

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

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

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

These thresholds were used in completing the analysis of potential project impacts for the purposes of CEQA. For the purposes of this analysis, a "substantial adverse effect" is generally interpreted to mean that a potential impact could directly or indirectly affect the resiliency or viability of a local biological community or population of a species. Potential impacts to natural processes that support biological communities and special-status species populations that can produce similar effects are also considered potentially significant. Impacts to individuals of a species or small areas of existing biological communities may be considered less than significant if those impacts are speculative, net beneficial, and/or would not affect the resiliency of a local population.

IMPACTS ANALYSIS

Impacts are defined as project-related activities that change, destroy, damage, or otherwise adversely affect biological resources. Impacts may include injury or mortality to plant or wildlife species and effects on an animal's behavior (such as through harassment or frightening off an animal by construction noise), as well as the loss, modification, or disturbance of natural resources or habitats. Impacts can be either direct or indirect and either permanent or temporary.

Direct impacts are generally those that occur during project implementation and at the same time and location as the cause of the impact. Direct impacts for this project may include injury, death, and/or harassment of special-status wildlife species, if present in the work areas or vicinity. Direct impacts may also include the destruction of habitat necessary for special-status species breeding, feeding, or sheltering. Direct impacts to special-status plants can include crushing of plants, root systems, or seeds where present in the impact areas.

Indirect impacts are those that are reasonably foreseeable and caused by a project but occur later in time and/or potentially at locations of some distance from the source of the impact. If a direct physical change in the environment in turn causes another change in the environment, then the secondary change would be an indirect impact.

Permanent impacts are those that result in the very long-term or irreversible loss of biological resources. For example, construction of new buildings and paved areas, which would result in a large, developed, and fenced property where native vegetation may have existed before would constitute a permanent impact.

Temporary impacts to biological resources are those that are reversible over time, with or without implementation of avoidance measures. Examples include the generation of dust and noise during demolition or construction, trimming or crushing vegetation that will regrow following project completion, and removed vegetation that will be actively restored. These temporary impacts are anticipated to last during project implementation and shortly thereafter. However, the biological resources are anticipated to return to pre-project conditions after project completion.

Using the CEQA analysis methodology outlined above, the following section describes potential significant impacts to sensitive resources within the project site and suggests mitigation measures that would reduce impacts to less than significant levels.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No special-status plant or wildlife species are expected to occur on the site.

However, common native bird species are protected by California Fish and Game Code, and it is likely that birds nest on and adjacent to the site each year.

Impact Bio-1: Tree removal, building demolition, and construction could impact nesting birds due to destruction or damage of active nests, or through disturbance to nesting birds from construction activity and noise causing nest abandonment. Potential impacts to special-status raptors and nesting birds would be less than significant with implementation Standard Condition BIO-1.

Standard Condition BIO-1: If project activities including tree removal, demolition, or construction take place during nesting bird season (February 1 to September 15), a qualified biologist shall conduct focused surveys for active nests within 5 days prior to the initiation of project-related activities. Surveys shall be conducted in all potential habitat on and adjacent to the project site. If a lapse in project-related activities of 7 days or longer occurs, another focused survey will be required before project activities can resume. If an active nest is found, the biologist shall consult with CDFW regarding appropriate action to comply with the Fish and Game Code of California.

The qualified biologist shall observe any identified active nests prior to the start of any construction-related activities to establish a behavioral baseline of adults and any nestlings. Once work commences, all active nests should be continuously monitored for a minimum of three consecutive workdays by the biologist to detect any signs of disturbance and behavioral changes as a result of project activities. In addition to direct impacts, such as nest destruction, nesting birds might be affected by noise, vibration, odors and movement of workers or equipment. If signs of disturbance and behavioral changes are observed at any time, the biologist shall cease work causing that behavioral change and shall contact CDFW for guidance.

Active nest sites and protective buffer zones shall be designated as "Environmentally Sensitive Areas" where no project-related activities or personnel may enter until the biologist determines that the young have fully fledged and will no longer be adversely affected by the project. These designated areas shall be protected during project activities by surrounding the nest site with a wildlife- safe fence or flagging barrier. The biologist shall determine the necessary buffer distance to protect nesting birds based on existing site conditions (such as construction activity and line of sight). Buffer distance shall be increased to provide sufficient protection of nesting birds and their natural behaviors, as needed.

Implementation of this standard development requirement will reduce potential impacts to nesting birds to a level that is less than significant. ***Less than significant.***

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

No sensitive natural communities or riparian habitat are present on the site. ***No Impact***.

c) Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No state or federally protected wetlands or other waters are present on the site. ***No Impact***.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The site is surrounded by urban development and does not provide a corridor for wildlife movement. Although birds may nest on the site, individual bird nests are not considered nursery sites. ***No Impact***.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The goals, objectives, and policies from the adopted City of Livermore General Plan relate to undeveloped open space and sensitive, rare, declining, unique or represent valuable biological resources. The site is developed and contains no protected biological resources.

The City of Livermore Tree Protection Ordinance states that removal or encroachment into the protected zone of any "protected trees" on public or private property within Livermore requires issuance of a tree permit from the City pursuant to the provisions of the ordinance.

Impact Bio-2: Development of the proposed project would result in significant impacts to protected trees.

Standard Condition BIO-2.1: All applicable requirements shall be followed and all permits obtained as required by the City's Tree Protection Ordinance (Chapter 12.20 of the City's Municipal Code). Final landscape plans shall be reviewed and approved by the City of Livermore Maintenance Division prior to issuance of any grading, trenching, encroachment, demolition, or building permit for development. Final landscape plans shall clearly identify all "protected trees," as defined in the Tree Protection Ordinance, and all trees to be removed from the project site and the size, location, type, value of trees and specify the species of all replacement trees.

Standard Condition BIO-2.2: The project applicant shall implement all tree protection measures recommended in the Arborist Report prepared for the project.

With implementation of Standard Conditions BIO-2.1 and 2.2, impacts would be less than significant. ***Less than significant***.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is within the EACCS. None of the 19 focal species in the EACCS have any potential to occur on the site. Therefore, there would be no conflict. ***No Impact***.

Attachments: A: References
B: Figures
C: USFWS IPaC List
D: Species Tables

ATTACHMENT A

REFERENCES

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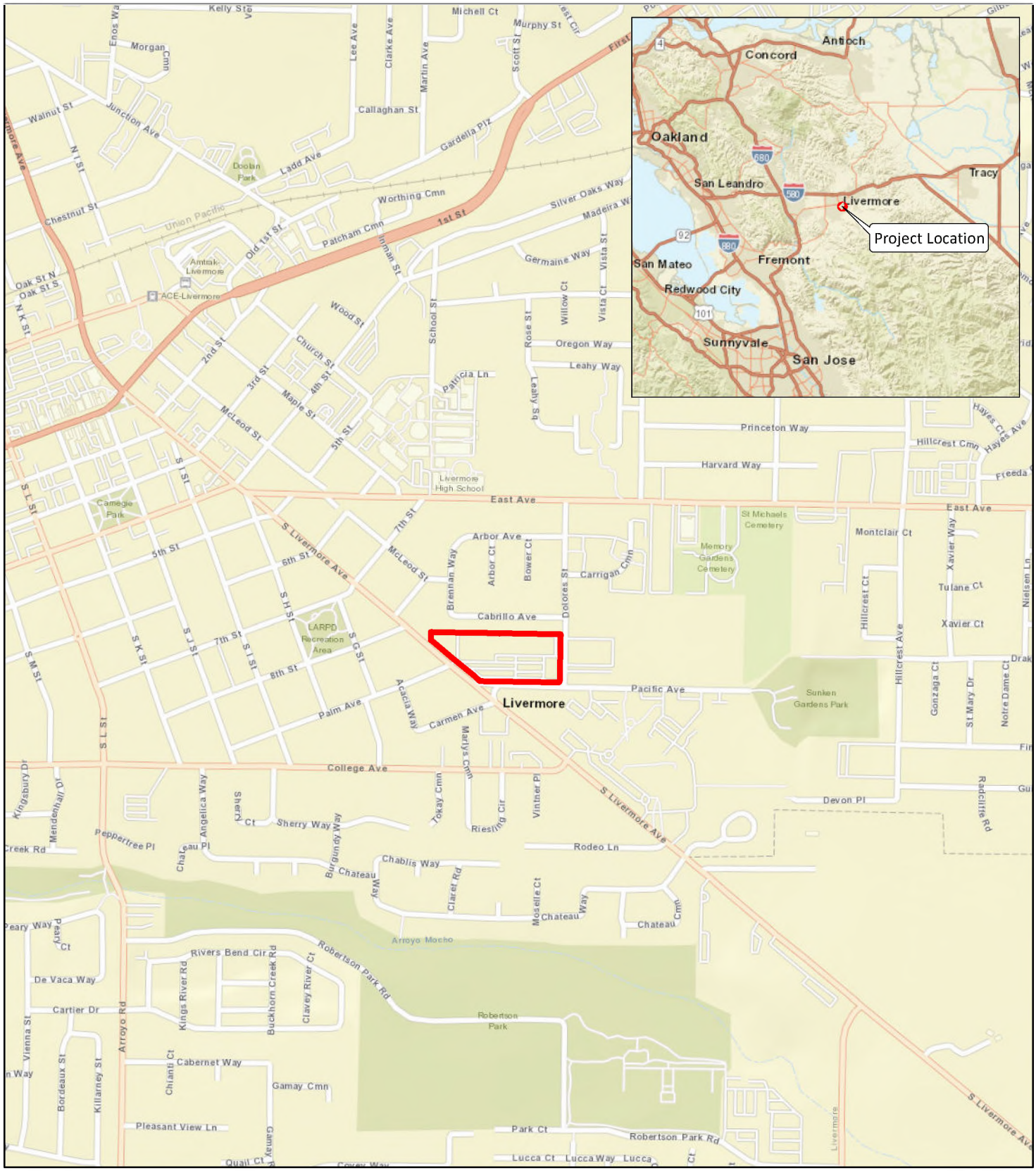
ATTACHMENT B

FIGURES

Figure 1 – Project Location and Vicinity



LSA

LEGEND

Project Site

FIGURE 1

N

0 500 1000

FEET

SOURCE: Esri World Street Map (2025)

I:\C\CLV2201\GIS\MXD\ProjectLocation_and_RegionalVicinity.mxd (2/18/2025)

Pacific and Livermore Townhomes Project

Project Location and Regional Vicinity

ATTACHMENT C

UNITED STATES FISH AND WILDLIFE SERVICE INFORMATION FOR PLANNING AND CONSULTATION LIST

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.

NOT FOR CONSULTATION

Location

Alameda 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

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

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

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

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

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:

Mammals

NAME	STATUS
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sternula antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5524	Threatened
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NOT FOR CONSULTATION

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
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
Foothill Yellow-legged Frog Rana boylii There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5133	Threatened
Western Spadefoot Spea hammondii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8246	Endangered

NOT FOR CONSULT

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

Flowering Plants

NAME	STATUS
Palmate-bracted Bird's Beak Cordylanthus palmatus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1616	Endangered

Critical habitats

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

There are no critical habitats at this location.

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

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON

NOT FOR CONSULTATION

Bald Eagle Haliaeetus leucocephalus — 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.

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

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

NOT FOR CONSULTATION

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.

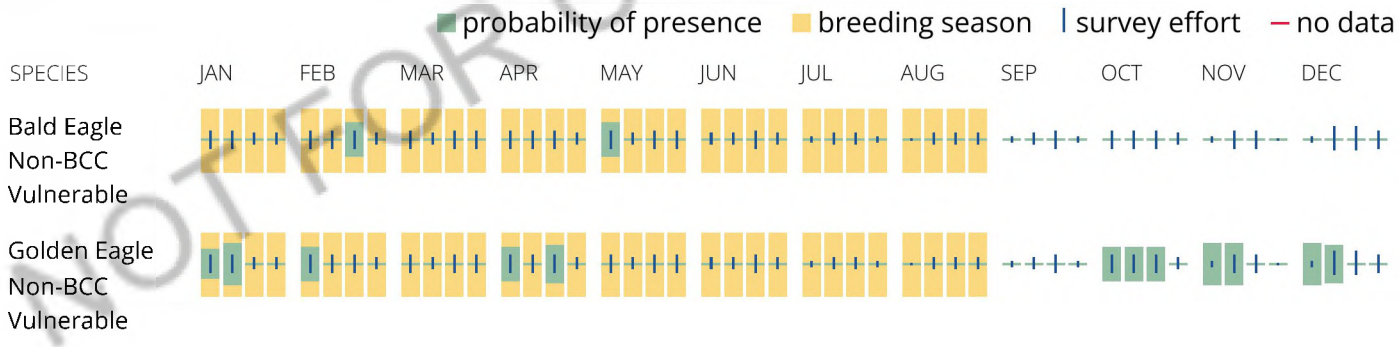
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.



NOT FOR CONSULTATION

Bald & Golden Eagles FAQs

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

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). 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 line or no data line (red horizontal) 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 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 and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are 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 resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), 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.

Interpreting the Probability of Presence Graphs

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 taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

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.

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.

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.

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

Survey Timeframe

NOT FOR CONSULTATION

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.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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

Additional information can be found using the following links:

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

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

NOT FOR CONSULTATION

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
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
Bullock's Oriole Icterus bullockii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull Larus californicus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31

NOT FOR CONSULTATION

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 Spinus 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

Long-eared Owl asio otus — Breeds Mar 1 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/3631

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

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Nuttall's Woodpecker Dryobates 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

NOT FOR CONSULTA

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

Santa Barbara Song Sparrow Melospiza melodia graminea — Breeds Mar 1 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/5513

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

Western Gull Larus occidentalis — Breeds Apr 21 to Aug 25

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Western Screech-owl Megascops kennicottii cardonensis — Breeds Mar 1 to Jun 30

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Willet Tringa semipalmata — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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.

NOT FOR CONSULTATION

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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

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

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

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

Breeding Season (■)

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

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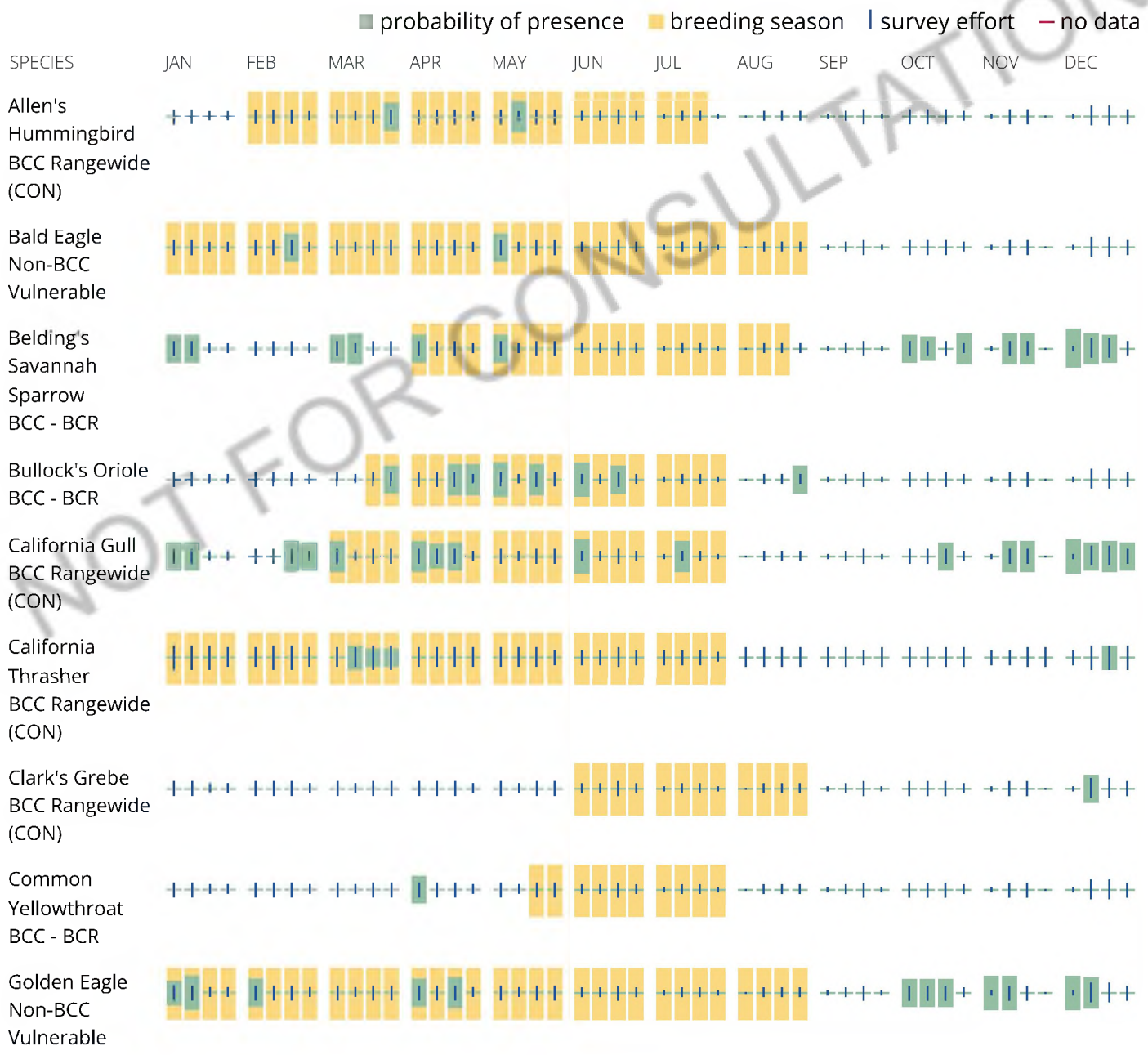
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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.



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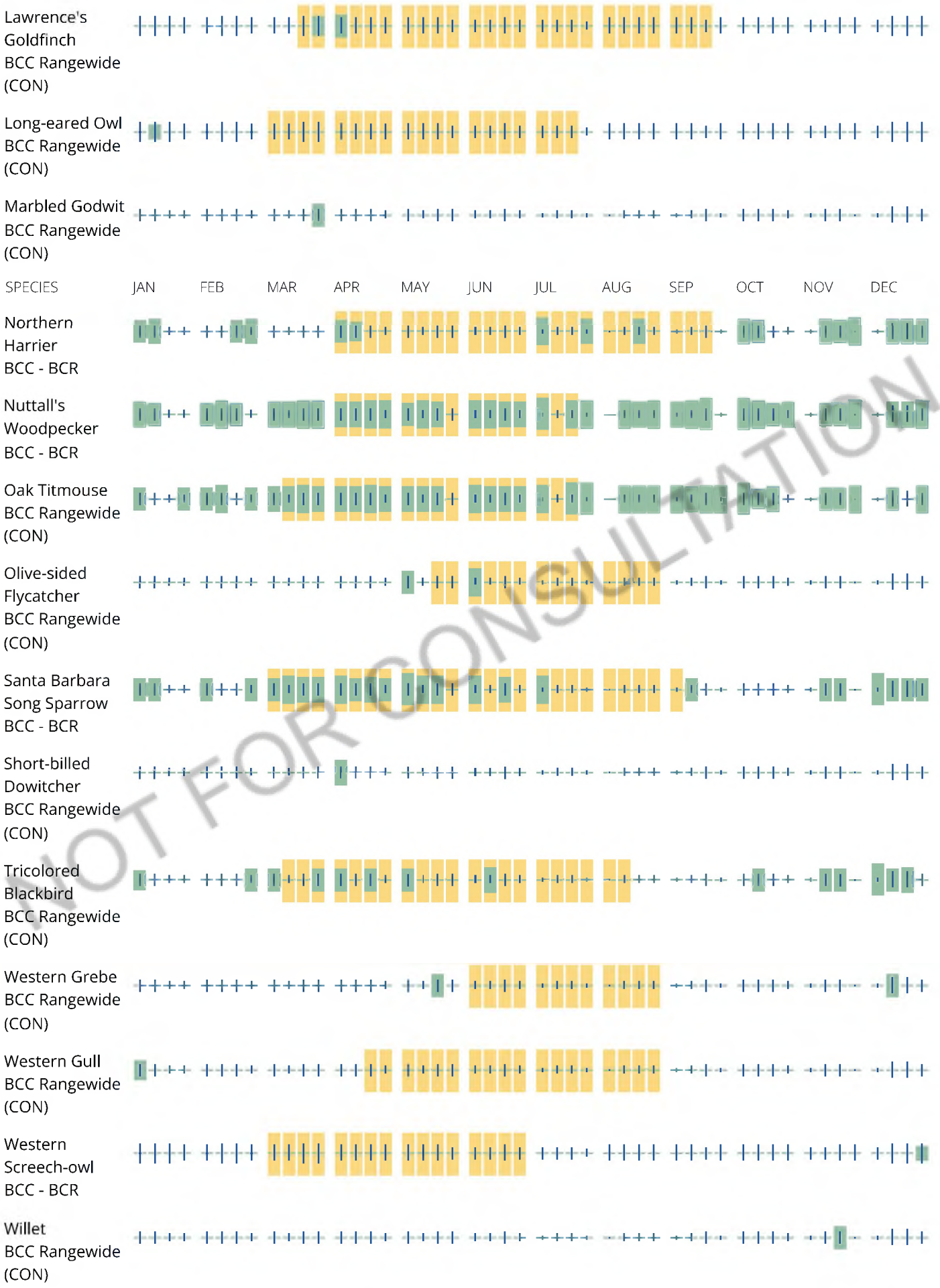

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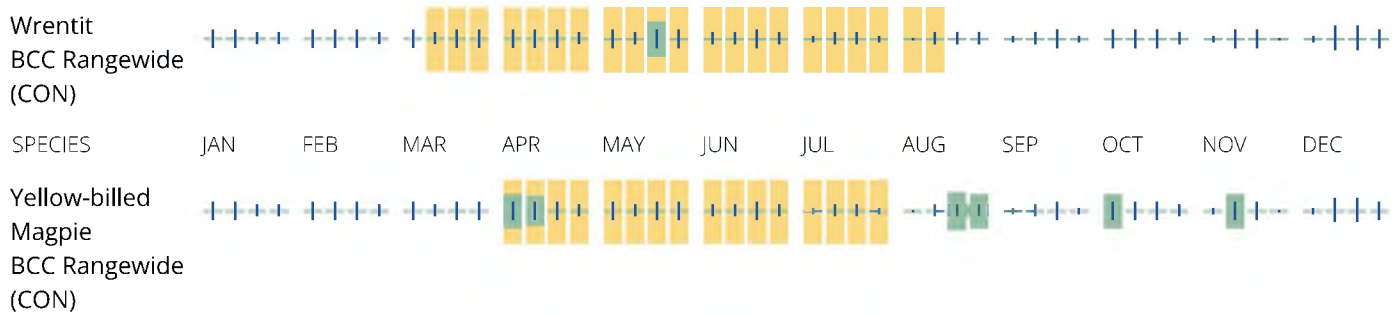

Migratory Bird FAQs

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

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed 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 Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

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) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection 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, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

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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 to 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 resident), you may query your location using the RAIL Tool and view 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 IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), 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 Bald and Golden Eagle Protection 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 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 BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

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.

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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 look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). 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 does not represent all birds present in your project area. 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 and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
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 taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

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.

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.

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.

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

Survey Timeframe

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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.

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.

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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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.

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ATTACHMENT D

SPECIES TABLES

Table D.1: Special-Status Plant Species Evaluated

Species	Status (Federal/State/RPR)	Habitat/Blooming Period	Potential to Occur
Astragalus tener* var. *tener Alkali milk-vetch	--/--/1B.2	• Alkali flats • Vernal swales and vernal pool edges Elevation: 1–60 meters (3.3–197 feet) Blooms: April–October	**None.** No suitable alkaline/vernal pool habitat occurs on the site. There is one "possibly extirpated" CNDDB occurrence within 5 miles of the site.
Atriplex cordulata* var. *cordulata Heartscale	--/--/1B.2	• Alkali or saline flats • Shadscale scrub • Valley grassland • Wetland-riparian Elevation: 1-70 meters (3.3-230 feet) Blooms: June–July	**None.** No suitable pool habitat is present on the site. There are two CNDDB occurrences within 5 miles of the site.
Atriplex depressa Brittlescale	--/--/1B.2	• Chenopod scrub • Meadows and seeps • Playas • Valley and foothill grassland • Vernal pools Elevation: 1–320 meters (3.3–1,050 feet) Blooms: March–June	**None.** There is no potentially suitable habitat on the site. There are six CNDDB occurrences within 5 miles of the site.
Atriplex minuscula Lesser saltscale	--/--/1B.1	• Chenopod scrub • Playas • Valley and foothill grassland Elevation: 15–200 meters (50–656 feet) Blooms: May–October	**None.** There is no potentially suitable habitat on the site. There are four CNDDB occurrences within 5 miles of the site.
Balsamorhiza macrolepis Big scale balsam root	--/--/1B.2	• Open grassy or rocky slopes • Foothill woodland • Valley grassland Elevation: 1–1,400 meters (3.3–4,600 feet) Blooms: March–July	**None.** There is no suitable habitat on the site. There is one extirpated CNDDB occurrence within 5 miles of the site.

Table D.1: Special-Status Plant Species Evaluated

Species	Status (Federal/State/RPR)	Habitat/Blooming Period	Potential to Occur
Blepharizonia plumosa Big tarweed	--/--/1B.1	• Dry slopes in grassland • Foothill woodland • Chaparral • Valley grassland Elevation: 1–500 meters (3.3–1,640 feet) Blooms: July–October	**None.** No potentially suitable habitat occurs on the site. There are no CNDDB occurrences within 5 miles of the site.
Centromadia parryi* ssp. *congdonii Congdon's tarplant	--/--/1B.1	• Grazed and ungrazed annual grassland • Alkaline or saline soils sometimes described as saline clay soil Elevation: 1–230 meters (3.3–755 feet) Blooms: May–October	**None.** There are two CNDDB occurrences within 5 miles of the site. There is no suitable habitat with saline or highly alkaline soils on the site.
Chloropyron molle* ssp. *hispidum Hispid bird's-beak	--/--/1B.1	• Meadows and seeps • Playas • Valley and foothill grassland • Alkaline Elevation: 1–130 meters (3.3–430 feet) Blooms: June–September.	**None.** No suitable alkaline habitat occurs on the site. There is one CNDDB occurrence within 5 miles of the site.
Chloropyron palmatum Palmate-bracted bird's-beak	FE/CE/1B.1	• Chenopod scrub • Valley and foothill grassland Elevation: 5–155 meters (15–105 feet) Blooms: May–October	**None.** No potentially suitable habitat occurs on the site. There is one CNDDB occurrence within 5 miles of the site.
Deinandra bacigalupii Livermore tarplant	--/CE/1B.1	• Alkaline meadows • Edge of alkali barrens and sinks Elevation: 100–200 meters (330–660 feet) Blooms: June–October	**None.** No potentially suitable habitat occurs on the site. There are four CNDDB occurrences within 5 miles of the site.
Delphinium californicum* ssp. *interius Hospital canyon larkspur	--/--/1B.2	• Slopes in open woodland • Eastern side of coast ranges • Foothill woodland Elevation: 300–1,000 meters (990–3,280 feet) Blooms: April–June	**None.** There is no suitable habitat on the site. There are no CNDDB occurrences within 5 miles of the site.

Table D.1: Special-Status Plant Species Evaluated

Species	Status (Federal/State/RPR)	Habitat/Blooming Period	Potential to Occur
Extriplex joaquinana San Joaquin spearscale	--/--/1B.2	• Chenopod scrub • Meadows and seeps • Playas • Valley and foothill grassland • Alkaline microhabitats Elevation: 1–835 meters (3.3–2,740 feet) Blooms: April–October	**None.** No suitable wet alkaline habitat occurs on the site. There are four CNDDB occurrences within 5 miles of the site.
Navarretia prostrata Prostrate vernal pool navarettia	--/--/1B.2	• Coastal scrub • Meadows and seeps • Valley and foothill grassland (alkaline) • Vernal pools Elevation: 3–1,210 meters (10–689 feet) Blooms: April–July	**None.** There are no vernal pools or other suitable habitat on the project site.
Plagiobothrys glaber Hairless popcornflower	--/--/1A	• Coastal salt marsh • Meadows and seeps (alkaline) Elevation: 15–1,800 meters (50–5,906 feet) Blooms: March–May	**None.** This plant is presumed extinct. There is one CNDDB occurrence within 5 miles of the site, but it is based on a collection made in 1942, and the population is considered extirpated. There is no suitable habitat on the site.
Puccinellia simplex California alkali grass	--/--/1B.2	• Chenopod scrub • Meadows and seeps • Valley and foothill grassland • Vernal pools Elevation: 2–930 meters (7–3,051 feet) Blooms: March–May	**None.** There are no vernal pools, seeps, or other potentially suitable habitat on the site.
Spergularia macrotheca* var. *longistyla Long-styled sand-spurrey	--/--/1B.2	• Marshes and swamps • Meadows and seeps Elevation: 0–255 meters (0–837 feet) Blooms: February–May	**None.** There are no marshes, swamps, or seeps on the site. There is one "possibly extirpated" and one "presumed extant" CNDDB occurrence within 5 miles of the site.

Table D.1: Special-Status Plant Species Evaluated

Species	Status (Federal/State/RPR)	Habitat/Blooming Period	Potential to Occur
Trifolium hydrophilum Saline clover	--/--/1B.2	• Marshes and swamps • Valley and foothill grassland (mesic, alkaline) • Vernal pools Elevation: 0–255 meters (0–836 feet) Blooms: February–May	**None.** There are no vernal pools, alkaline soils, marshes, or swamps on the site. There is one CNDDB occurrence within 5 miles of the site.
Tropidocarpum capparideum Caper-fruited tropidocarpum	--/--/1B.1	• Alkaline-clay soils in valley and foothill grassland Elevation: 1–455 meters (3–1,493 feet) Blooms: March–April	**None.** No typical alkaline habitat occurs on the site. The one CNDDB occurrence within 5 miles of the site is based on a collection made in 1897.

Source: Compiled by LSA (2025).
Status:
CE: California Endangered
FE: Federally Endangered
Rare Plant Rank (RPR)

1A: California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere. These plants have not been seen or collected in the wild in California for many years. A plant is extinct if it no longer occurs anywhere. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.

1B.1: California Rare Plant Rank 1B, Threat Rank 0.1: Plant species rare, threatened, or endangered in California and elsewhere. Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).

1B.2: California Rare Plant Rank 1B, Threat Rank 0.2: Plant species rare, threatened, or endangered in California and elsewhere. Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat).

2B.1: California Rare Plant Rank 2B, Threat Rank 0.1: Plant species rare, threatened, or endangered in California, but more common elsewhere. Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).

CNDDB = California Natural Diversity Database

Table D.2: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Amphibians			
Ambystoma californiense California tiger salamander	FT/CT/--	Spends most of its life in underground burrows. Breeds in vernal pools and ponds, including cattle stock ponds. Breeds after the first rains in late fall and early winter when the wet season allows the salamander to migrate to the nearest pond, a journey that may be over 1 mile and take several days. Lays eggs in small clusters or singly, which hatch after 14 to 21 days. The pools must hold water for a minimum of 12 weeks for the larvae to successfully metamorphose into their terrestrial form.	**None.** There are 50 CNDDB occurrences within 2 miles of the site. There is no suitable aquatic breeding habitat or upland habitat on or adjacent to the site.
Rana boylii Foothill yellow-legged frog	--/CE/CSC	Found in streams with clear water and gravel or rocky substrates. Requires perennial or nearly perennial pools in streams or flowing water. Needs some cobble-sized rocks as a substrate for egg laying.	**None.** There is one CNDDB occurrence within 2 miles of the project site, based on observations made in Arroyo Mocho Creek at the Mines Road bridge. There are no streams on the site.
Rana draytonii California red-legged frog	FT/--/CSC	Inhabits permanent and temporary pools, streams, freshwater seeps, and marshes in lowlands and foothills. Uses adjacent upland habitat for foraging and refuge. Breeds during the wet season from December through March in slow parts of streams, lakes, reservoirs, ponds, and other waters with emergent vegetation. Lays 300 to 4,000 eggs in a large cluster, which is attached to plants near the water surface. Requires water for 4 to 7 months for tadpoles to complete metamorphosis.	**None.** There are 34 CNDDB occurrences within 2 miles of the site. The developed nature of the site makes it unsuitable upland habitat even if there were a nearby breeding area.
Spea hammondii Western spadefoot	PT/--/CSC	Mostly terrestrial, spending most of its life dormant in underground burrows. The spadefoots emerge after heavy rainfall to breed in vernal pools, other shallow temporary rain pools, and in still pools of intermittent streams, feeding on invertebrates.	**None.** There is one CNDDB occurrence within 2 miles of the site. The developed nature of the site makes it unsuitable upland habitat even if there were a nearby breeding area.
Reptiles			
Actinemys marmorata Northwestern pond turtle	Proposed FT/-- /CSC	Permanent or nearly permanent water (fresh to brackish) in a wide variety of habitat types. Requires basking sites such as steep banks, logs, or rocks. Upland areas with friable soils are required for egg laying.	**None.** There are six CNDDB occurrences within 2 miles of the site. There is no suitable aquatic or upland habitat on or adjacent to the site.

Table D.2: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Masticophis lateralis euryxanthus Alameda whipsnake (also known as Alameda striped racer, *Coluber lateralis euryxanthus*)	FT/CT/--	Lives primarily in scrub and chaparral communities but has also been observed in nearby grasslands and woodlands. Feeds primarily on lizards. Most active in the spring and fall. Retreats from hot temperatures in the summer and cold temperatures in the winter into burrows or other underground refuges.	**None.** There are two CNDDB occurrences within 2 miles of the site. The site does not provide suitable habitat and is separated from suitable habitat by significant barriers to dispersal.
Birds			
Athene cunicularia Burrowing owl	--/--/CSC	Nearly or quite level grassland, prairie, and desert floor with short or sparse vegetation. Subterranean nester that generally uses existing mammal burrows (especially of ground squirrels) but will also excavate its own burrows.	**None.** There are 20 CNDDB occurrences within 2 miles of the project site, including observations made in 2017 and 2018. There are no burrows on the site that could be used by burrowing owls and no prey base due to lack of vegetation.
Sterna antillarum browni California least tern	FE/CE/CFP	Nests in colonies on exposed tidal flats or beaches. In the San Francisco Bay Area, nesting typically occurs on abandoned salt flats.	**None.** There are no CNDDB records within 2 miles of the project site. There is no suitable besting habitat on the site.
Buteo swainsoni Swainson's hawk	--/CT/--	Nests primarily in dense trees in riparian areas. Forages in open areas, including agricultural fields.	**None.** There is only one CNDDB occurrence within 2 miles of the project site. There are no trees or shrubs suitable for nesting on or adjacent to the site. Due to the barren nature of the site, it is unlikely the species ever attempts to forage on the site.
Elanus leucurus White-tailed kite	--/--/CFP	Savannahs, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields. Nests in the upper third of trees 10–160 feet tall, usually near water.	**None.** There are trees on the site that could support a nest but they are not near water or part of a larger contiguous area of suitable habitat. There are two CNDDB occurrences of a nest within 2 miles of the site.
Gymnogyps californianus California condor	FE/--/--	Nests on cliff ledges or caves. Forages over wide areas to find carrion.	**None.** There is no suitable nesting or foraging habitat on the project site. There are no CNDDB occurrences within 2 miles of the site.

Table D.2: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Agelaius tricolor Tricolored blackbird	--/CT/CSC	Breeds in large colonies near freshwater, preferably emergent wetland such as cattails and tules but also in thickets of willow and other shrubs. Requires nearby foraging areas with large numbers of insects.	**None.** There are seven CNDDB occurrences within 2 miles of the site. The project site does not support any marshes with emergent vegetation.
Lanius ludovicianus Loggerhead shrike	--/--/CSC	Often nests in thorny vegetation, on average about 3 feet above the ground. Found in open areas with short vegetation with some shrubs or small trees. Feeds mainly on insects in the summer and small vertebrates in the winter.	**None.** There is one CNDDB occurrence within 2 miles of the site. The project site has no suitable nesting or foraging habitat.
Mammals			
Corynorhinus townsendii Townsend's big-eared bat	--/--/CSC	Found in humid coastal regions of northern and central California. Roosts in caves, mines, and buildings.	**None.** There is one CNDDB occurrence within 2 miles of the site. The occurrence was a maternity roost in a constructed cave that had been used for wine storage and then abandoned. There is no potential roosting habitat on or adjacent to the site.
Taxidea taxus American badger	--/--/CSC	Usually found in grasslands or drier open areas of most shrub and forest and habitats. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**None.** There are no burrows or suitable that could be used by badgers on the site. There is one CNDDB occurrence within 2 miles of the site.
Vulpes macrotis mutica San Joaquin kit fox	FE/CT/--	Found primarily in flat areas with short, sparse vegetation in the southern San Joaquin Valley. Feeds on kangaroo rats and other small rodent species, but will also consume insects, hares, mice, and lizards. Lives in dens that it either excavates itself or moves into atypical dens, including manmade structures.	**None.** There are no CNDDB occurrences within 2 miles of the site. No nearby occurrences have been recorded within the last 20 years. No potential dens are present on the site.

Table D.2: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Invertebrates			
Bombus occidentalis Western bumble bee		Feeds upon nectar and pollen from a variety of plant species but is most adapted to native plant species. Nests in abandoned rodent burrows and bird nests. The flight period in California is from early February to late November, peaking from June to September. Little is known about sites where queens overwinter. The species is currently restricted to high elevation sites in the Sierra Nevada and scattered coastal areas.	**None.** There are two CNDDB occurrences within 2 miles of the site, but they are based on collections made in 1957 and 1958. The species is likely extirpated from the Livermore area. Furthermore, the developed nature of the site means it provides little nectar or pollen.
Danaus plexippus Monarch butterfly	FC/--/--	Migrates through the San Joaquin Valley primarily in the spring and fall. Lays eggs on the larval host plant milkweed.	**None.** The CNDDB does not track monarch butterfly observations, except at coastal overwintering sites. No milkweed was seen on or near the site. Furthermore, the mostly barren nature of the site means it provides little nectar or pollen.
Branchinecta conservation Conservancy fairy shrimp	FE/--/--	Found only in vernal pools in California's Central Valley and one population in Ventura County.	**None.** No vernal pools are present on the project site. There are no CNDDB occurrences within 2 miles of the site.
Branchinecta lynchi Vernal pool fairy shrimp	FT/--/--	Inhabits vernal pools and swales during all stages of its life cycle.	**None.** No vernal pools are present on the site. There are three CNDDB occurrences within 2 miles of the site.

Source: Compiled by LSA (2025).
Status:
CE: California State listed as endangered
CFP: California Fully Protected
CSC: California species of special concern
CT: California State listed as threatened
FC: Federal candidate species
FE: Federally listed as endangered
FT: Federally listed as threatened
CDFW = California Department of Fish and Wildlife
CNDDB = California Natural Diversity Database