Appendix C

Biological Resources Evaluation Report

HELIX Environmental Planning

Raley Boulevard Truck Service and Parking Facility Project

Biological Resources Assessment

May 2024 | 08951.00001.001

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Table of Contents

Section **Page**

Table of Contents (cont.)

LIST OF APPENDICES

LIST OF FIGURES

Acronyms and Abbreviations

amsl	above mean sea level
BRA	Biological Resources Assessment
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSA	California Special Animals
CWA	Clean Water Act
DBH	diameter at breast height
FESA	Federal Endangered Species Act
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
OHWM	ordinary high water mark
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) conducted a Biological Resources Assessment (BRA) for the ±5.96-acre Raley Boulevard Truck Service and Parking Facility Project (Project) located at 5221 Raley Boulevard in Sacramento, California, within Assessor's Parcel Number 215-0250-061 (Study Area). The Study Area is situated in the Del Paso Land Grant, as depicted on the U.S. Geological Survey (USGS) *Rio Linda, CA* 7.5-minute quadrangle map. The approximate center of the Study Area is at latitude 38.6630521 and longitude -121.4304898, NAD 83, and is located at elevations between 45 and 56 feet (13 to 17 meters) above mean sea level.

The purpose of this BRA is to describe baseline conditions within the Study Area, summarize the general biological resources occurring or potentially occurring in the Study Area, to assess the suitability of the Study Area to support special-status species and sensitive vegetation communities or habitats, and to provide recommendations for regulatory permitting or further analysis that may be required prior to development activities occurring on the site.

The ±5.96-acre Study Area is located on a vacant lot and is surrounded by industrial and residential development, as well as undeveloped land. The Study Area is comprised of non-native annual grassland habitat (5.62 acres), seasonal wetlands (0.13 acre total), low terrace seasonal wetland (0.06 acre total), and low terrace (0.14 acre). Evidence of previous disturbance such as compacted soil, imported gravel, and disking/mowing were observed during the survey and are visible on aerial imagery. Several old concrete foundations and structures are present onsite. Surrounding land uses include industrial and residential development, roads, undeveloped land, and Sacramento McClellan Airport.

Known or potential biological constraints in the Study Area include:

- Potential habitat for special-status plants including dwarf downingia (*Downingia pusilla*), stinkbells (*Fritillaria agrestis*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), and legenere (*Legenere limosa*);
- Potential habitat for special-status invertebrates including vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardi*);
- Potential habitat for special-status reptiles including northwestern pond turtle (*Emys marmorata*) and giant garter snake (*Thamnophis gigas*);
- Potential habitat for special-status and migratory birds including tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and song sparrow "Modesto population" (*Melospiza melodia*); and
- Wetlands that may be potential waters of the U.S. and/or State subject to federal and State regulation.

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1.0 INTRODUCTION

This report summarizes the findings of a Biological Resources Assessment (BRA) completed by HELIX Environmental Planning, Inc. (HELIX) for the ±5.96-acre Raley Boulevard Truck Service and Parking Facility Project (Study Area). The Study Area is located at 5221 Raley Boulevard in Sacramento, California, within Assessor's Parcel Number (APN) 215-0250-061. This document addresses the on-site physical features, plant communities present, and the common plant and wildlife species occurring or potentially occurring in the Study Area. In addition, the suitability of habitats to support special-status species and sensitive habitats are analyzed, and recommendations are provided for any regulatory permitting or further analysis required prior to development activities occurring on the site.

1.1 PROJECT DESCRIPTION

HELIX understands the proposed Project includes development of a two-story, 6,090-square foot truck repair facility with three repair bays, administrative offices, reception area, employee breakroom, and utility/storage. The proposed building would be surrounded by a concrete apron supporting 14 vehicular parking spaces for employees/visitors (12 standard spaces and two Americans with Disabilities Act compliant spaces) and parking/storage for approximately 168 tractor trailers. The proposed facility would be set back from the surrounding streets and/or development per City code. Project construction would require the export of approximately 1,890 cubic yards of fill to an unknown location.

Ornamental landscaping is proposed within the set-back area and interior project site. Three stormwater retention basins are proposed in the northwest, southwest, and southeast corners of the parcel. The project site would be institutionally controlled with a concrete masonry block and wrought iron fence security system; a single driveway access point is proposed from Raley Boulevard.

2.0 REGULATORY FRAMEWORK

Federal, State, and local environmental laws, regulations, and policies relevant to the California Environmental Quality Act (CEQA) review process are summarized below. Applicable CEQA significance criteria are also addressed in this section.

2.1 FEDERAL REGULATIONS

2.1.1 Federal Endangered Species Act

The U.S. Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3) (19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harass is defined as actions that

create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

In the context of the proposed Project, FESA consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) would be initiated if development resulted in the potential for take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

2.1.2 Migratory Bird Treaty Act

Raptors, migratory birds, and other avian species are protected by a number of State and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

2.1.3 The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to "*take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.*" Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as "*to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.*"

2.2 STATE REGULATIONS

2.2.1 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW), when preparing CEQA documents. The purpose is to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species. It also directs CDFW to determine whether jeopardy would occur and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish and Game Code §2081).

2.2.2 California Department of Fish and Game Codes

A number of species have been designated as "fully protected" species under Sections 5515, 5050, 3511, and 4700 of the Fish and Game Code, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of fully protected species is prohibited. The California Fish and Game Code defines take as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*" Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

2.3 JURISDICTIONAL WATERS

2.3.1 Federal Jurisdiction

On May 25, 2023, the United States Supreme Court issued a decision in the case of *Sackett v. Environmental Protection Agency* (Supreme Court of the United States, 2023) which will ultimately influence how federal waters are defined. The May 25, 2023 Supreme Court decision in Sackett v. Environmental Protection Agency determined that "the Clean Water Act (CWA) extends to only those 'wetlands with a continuous surface connection to bodies that are "waters of the United States" in their own right,' so that they are 'indistinguishable' from those waters." The U.S. Environmental Protection Agency (USEPA) and the U.S. Army Corps of Engineers (USACE) issued a final rule to replace the 2023 rule that amends the Revised Definition of "Waters of the U.S." to conform key aspects of the regulatory text to the U.S. Supreme Court's May 25, 2023 decision in the case of *Sackett v. Environmental Protection Agency*.

Unless considered an exempt activity under Section 404(f) of the Federal Clean Water Act, any person, firm, or agency planning to alter or work in "waters of the U.S." including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403). Activities exempted under Section 404(f) are not exempted within navigable waters under Section 10.

The Clean Water Act (33 United States Code (USC) 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there were no practicable alternative that would have less adverse impacts.

2.3.2 State Jurisdiction

2.3.2.1 Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal Clean Water Act. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the certification for discharges requiring USACE permits for fill and dredge discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On May 28, 2020, the SWRCB implemented the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California (SWRCB 2019). The Procedures consist of four major elements:

I. A wetland definition;
II. A framework for determining if a feature that meets the wetland definition is a water of the state;
III. Wetland delineation procedures; and
IV. Procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the State" includes all "Waters of the U.S."

More specifically, a wetland is defined as: *"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."* The wetland definition encompasses the full range of wetland types commonly recognized

in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands (SWRCB 2019).

Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

2.3.2.2 California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds… except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends applying for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

2.4 CEQA SIGNIFICANCE

Section 15064.7 of the State CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study Checklist included in Appendix G of the State CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

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

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

- 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;

- 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;

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

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

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish or result in the loss of an important biological resource, or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

2.4.1 California Native Plant Society

The California Native Plant Society (CNPS) maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California*. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS Rare Plant Ranking System:

Rank 1A: Plants presumed Extinct in California and either rare or extinct elsewhere

Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere

Rank 2A: Plants presumed extirpated in California but common elsewhere

Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere

Rank 3: Plants about which we need more information – A Review List

Rank 4: Plants of limited distribution – A Watch List

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA. Furthermore, the CNPS Rare Plant Rankings include levels of threat for each species. These threat ranks include the following:

0.1 Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);

0.2 Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat); and

0.3 Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Threat ranks do not designate a change of environmental protections, so that each species (i.e., CRPR 1B.1, CRPR 1B.2, CRPR 1B.3, etc.), be fully considered during preparation of environmental documents under CEQA.

2.4.2 California Department of Fish and Wildlife Species of Concern

Additional fish, amphibian, reptile, bird, and mammal species may receive consideration by CDFW and lead agencies during the CEQA process, in addition to species that are formally listed under FESA and CESA or listed as fully protected. These species are included on the *Special Animals List*, which is maintained by CDFW. This list tracks species in California whose numbers, reproductive success, or habitat may be in decline. In addition to "Species of Special Concern" (SSC), the *Special Animals List* includes species that are tracked in the California Natural Diversity Database (CNDDB) but warrant no legal protection. These species are identified as "California Special Animals" (CSA).

2.5 LOCAL REGULATIONS

2.5.1 City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan (Plan) sets policy guidelines for everything from the physical boundaries of the City to its economic growth and physical development. The Plan is divided into elements which become the principal tool for the City to use when evaluating municipal service improvements and land use proposals Applicable sections of the Plan are outlined below (City of Sacramento 2015).

Water Resources: Policies in this section guide development and infrastructure practices to ensure protection of surface water and groundwater quality from runoff and pollution. Clean water is essential in sustaining present and future generations, as well as fisheries, plants, and animals that are a part of the ecosystem.

- **GOAL ER 1.1 Water Quality Protection**. Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American Rivers, and their shorelines.
    - *ER 1.1.1 Conservation of Open Space Areas*. The City shall conserve and where feasible create or restore areas that provide important water quality benefits such as riparian corridors, buffer zones, wetlands, undeveloped open space areas, levees, and drainage canals for the purpose of protecting water resources in the city's watershed, creeks, and the Sacramento and American rivers.
    - *ER 1.1.2 Regional Planning*. The City shall continue to work with local, State, and Federal agencies and private watershed organizations to improve water quality.
    - *ER 1.1.3 Stormwater Quality*. The City shall control sources of pollutants and improve and maintain urban runoff water quality through storm water protection measures consistent with the City's National Pollution Discharge Elimination System (NPDES) Permit.

- *ER 1.1.4 New Development*. The City shall require new development to protect the quality of water bodies and natural drainage systems through site design (e.g., cluster development), source controls, storm water treatment, runoff reduction measures, best management practices (BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the city's NPDES Permit.

- *ER 1.1.5 Limit Stormwater Peak Flows*. The City shall require all new development to contribute no net increase in stormwater runoff peak flows over existing conditions associated with a 100-year storm event.

- *ER 1.1.6 Post-Development Runoff*. The City shall impose requirements to control the volume, frequency, duration, and peak flow rates and velocities of runoff from development projects to prevent or reduce downstream erosion and protect stream habitat.

- *ER 1.1.7 Construction Site Impacts*. The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

Biological Resources: Policies in this section guide the location, design, and quality of development to protect important biological resources such as wildlife habitat, open space corridors, and ecosystems. Conservation and protection of important biological resources are integral to a healthy human population and contribute to regional economic advantages such as quality of life.

- **GOAL ER 2.1 Natural and Open Space Protection**: Protect and enhance open space, natural areas, and significant wildlife and vegetation in the City as integral parts of a sustainable environment within a larger regional ecosystem.

    - *ER 2.1.1 Resource Preservation.* The City shall encourage new development to preserve on-site natural elements that contribute to the community's native plant and wildlife species value and to its aesthetic character.

    - *ER 2.1.2 Conservation of Open Space.* The City shall continue to preserve, protect, and provide appropriate access to designated open space areas along the American and Sacramento Rivers, floodways, and undevelopable floodplains, provided access would not disturb sensitive habitats or species.

    - *ER 2.1.3 Natural Lands Management*. The City shall promote the preservation and restoration of contiguous areas of natural habitat throughout the city and support their integration with existing and future regional preserves.

    - *ER 2.1.4 Retain Habitat Areas*. The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g., sensitive habitats, special-status, threatened, endangered, candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors.

- *ER 2.1.5 Riparian Habitat Integrity*. The City shall preserve the ecological integrity of creek corridors, canals, and drainage ditches that support riparian resources by preserving native plants and, to the extent feasible, removing invasive nonnative plants. If not feasible, adverse impacts on riparian habitat shall be mitigated by the preservation and/or restoration of this habitat in compliance with State and Federal regulations or at a minimum 1:1 ratio, in perpetuity.

- *ER 2.1.6 Wetland Protection*. The City shall preserve and protect wetland resources including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands, to the extent feasible. If not feasible, the mitigation of all adverse impacts on wetland resources shall be required in compliance with State and Federal regulations protecting wetland resources, and if applicable, threatened or endangered species. Additionally, the City shall require either on- or off-site permanent preservation of an equivalent amount of wetland habitat to ensure no-net loss of value and/or function.

- *ER 2.1.7 Annual Grasslands*. The City shall preserve and protect native grasslands and vernal pools that provide habitat for rare and endangered species. If not feasible, the mitigation of all adverse impacts on annual grasslands shall comply with State and Federal regulations protecting foraging habitat for those species known to utilize this habitat.

- *ER 2.1.9 Wildlife Corridors*. The City shall preserve, protect, and avoid impacts to natural, undisturbed habitats that provides movement corridors for sensitive wildlife species. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value or enhanced to enable the continued movement of species.

- *ER 2.1.10 Habitat Assessments*. The City shall consider the potential impact on sensitive plants and wildlife for each project requiring discretionary approval. If site conditions are such that potential habitat for sensitive plant and/or wildlife species may be present, the City shall require habitat assessments, prepared by a qualified biologist, for sensitive plant and wildlife species. If the habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either (1) protocol-level surveys shall be conducted (where survey protocol has been established by a resource agency), or, in the absence of established survey protocol, a focused survey shall be conducted consistent with industry-recognized best practices; or (2) suitable habitat and presence of the species shall be assumed to occur within all potential habitat locations identified on the project site. Survey Reports shall be prepared and submitted to the City and the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS) (depending on the species) for further consultation and development of avoidance and/ or mitigation measures consistent with state and federal law.

- *ER 2.1.11 Agency Coordination*. The City shall coordinate with State and Federal resource agencies (e.g., California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers, and United States Fish and Wildlife Service (USFWS) to protect areas containing rare or endangered species of plants and animals.

3.0 METHODS

Available information pertaining to the natural resources of the region was reviewed prior to conducting the field survey. The following published information was reviewed for this BRA:

- California Department of Fish and Wildlife (CDFW). 2024. *California Natural Diversity Database* (CNDDB); For: *Rio Linda, Taylor Monument, Verona, Pleasant Grove, Roseville, Citrus Heights, Carmichael, Sacramento East,* and *Sacramento West* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [January 16, 2024];

- California Native Plant Society (CNPS). 2024. *Inventory of Rare and Endangered Plants* (online edition, v8-03 0.45) For: *Rio Linda, Taylor Monument, Verona, Pleasant Grove, Roseville, Citrus Heights, Carmichael, Sacramento East,* and *Sacramento West* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [January 16, 2024];

- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 1993. *Sacramento County, California*. USDA, NRCS, in cooperation with the Regents of the University of California (Agricultural Experiment Station);

- USDA, NRCS. 2024. *Web Soil Survey*. Available at: http://websoilsurvey.sc.egov.usda.gov. Accessed [January 16, 2024];

- U.S. Fish and Wildlife Service (USFWS). 2024. *Information for Planning and Consultation* (IPaC) *Raley Blvd.* Accessed [January 16, 2024]; and

- USGS. 2021. *Rio Linda, California*. 7.5-minute series topographic quadrangle. United States Department of Interior.

Prior to conducting the biological field survey, existing information concerning known habitats and special-status species that may occur in the Study Area was reviewed. The results of the database query and a nine quadrangle CNDDB query for the Study Area are included in Appendix A, *CNDDB, CNPS, and USFWS Lists of Regionally Occurring Special-Status Species*. The biological field survey was conducted on January 17, 2024, by HELIX biologists Christine Gonzalez and Greg Davis. The weather during the field survey was mostly cloudy with an average temperature of 54°F. The Study Area was systematically surveyed on foot to ensure total search coverage, with special attention given to portions of the Study Area with the potential to support special-status species and sensitive habitats. Binoculars were used to further extend site coverage and identify species observed. All plant and animal species observed were recorded, and all biological communities occurring on-site were characterized. All resources of interest were mapped with a Global Positioning System (GPS)-capable tablet equipped with GPS receivers running ESRI Field Maps for ArcGIS with sub-meter accuracy.

Following the field survey, the potential for each species identified in the database query to occur within the Study Area was determined based on the site survey, soils, habitats present within the Study Area, and species-specific information, as shown in Appendix B, *Special-Status Species with Potential to Occur in the Study Area*. Species observed within the Study Area during the survey are included in Appendix C, *Plant and Wildlife Species Observed in the Study Area,* and photographs taken during the survey are included in Appendix D, *Representative Site Photographs*.

4.0 RESULTS

4.1 SITE LOCATION AND DESCRIPTION

The ±5.96-acre Study Area is located at 5221 Raley Boulevard in Sacramento, California, within APN 215-0250-061. The Study Area is situated in the Del Paso Land Grant, as depicted on the U.S. Geological Survey (USGS) *Rio Linda, CA* 7.5-minute quadrangle map. The Study Area is located on a vacant lot and is surrounded by industrial and residential development, as well as undeveloped land.

The Study Area is currently a vacant lot dominated by non-native plant species. Several aquatic resources were mapped within the Study Area. Evidence of previous disturbance was observed in the Study Area in the form of compacted soil, imported gravel, and disking/mowing. Aerial imagery indicates the site has been disked/mowed consistently since at least 2002 and the vast majority of the site was disked at the time of the field survey (Google Earth 2024). Several old concrete foundations and structures are present onsite and historic imagery indicates buildings were present onsite in the 1960s but were demolished by the 1980s (Historic Aerials 2024). A site and vicinity map of the Study Area is included as Figure 1, *Site and Vicinity Map*; a topographic map of the Study Area is included as Figure 2, *USGS Topographic Map*; and an aerial image of the Study Area is included as Figure 3, *Aerial Map*.

4.2 PHYSICAL FEATURES

4.2.1 Topography and Drainage

The terrain in the Study Area is generally flat with small, undulating microtopography. Elevations range from approximately 45 to 56 feet (13 – 17 meters) above mean sea level (amsl). The Study Area is in the Lower American watershed (USGS Hydrologic Unit Code [HUC8] 18020111). Two aquatic features were observed in the northern portion of the Study Area and a low area indicative of seasonal wetlands peripheral to linear drainages intersects with the southern portion of the Study Area. The southern portion of the Study Area is sloped, with the lower portion of the slope occurring within a low terrace area. Magpie Creek is present just south of the Study Area and flows into a constructed canal that runs north along the western boundary of the Study Area. This canal continues north and flows into Rio Linda Creek. Rio Linda Creek is a tributary to the Natomas Ditch and Steelhead Creek, which drain directly to the Sacramento River, a traditional navigable water. The entire area between the southern boundary of the Study Area and Magpie Creek appears to be a low terrace. Run-off currently flows from the Study Area south and settles in this area or into Magpie Creek. The site has no apparent natural source of water other than occasional increased flows from the adjacent drainages and direct precipitation.

4.3 SOILS

Two soil map units are mapped within the Study Area: Hicksville loam, 0 to 2 percent slopes, occasionally flooded and San Joaquin fine sandy loam, 0 to 3 percent slopes (Figure 4, *Soils Map*). The general characteristics and properties associated with these soils are described below (NRCS 2024).

- **Hicksville loam, 0 to 2 percent slopes, occasionally flooded**: This soil unit has a parent material of alluvium and is typical of terraces and hills. A general soil profile is loam (0-13 inches), clay loam (13-43 inches), and sandy clay loam (43-64 inches). This soil unit is moderately well-drained, has a medium runoff class, occasional flooding frequency, and no frequency of ponding. Minor components of this soil unit are considered hydric.

- **San Joaquin fine sandy loam, 0 to 3 percent slopes:** This soil unit has a parent material of alluvium derived from granite and is typical of terraces. A general soil profile is fine sandy loam (0-13 inches), sandy clay loam (13-30 inches), clay loam (30-35 inches), indurated (35-60 inches), and stratified sandy loam to loam (60-67 inches). This soil unit is moderately well drained, has a high runoff class, and no frequency of flooding or ponding.

4.4 BIOLOGICAL COMMUNITIES

Two upland biological communities occur in the Study Area, non-native annual grassland and low terrace; and two aquatic resource types occur in the Study Area, seasonal wetland and low terrace seasonal wetland. A comprehensive list of all plant and wildlife species observed within the Study Area in these habitats is provided in Appendix C and representative site photographs are included in Appendix D.

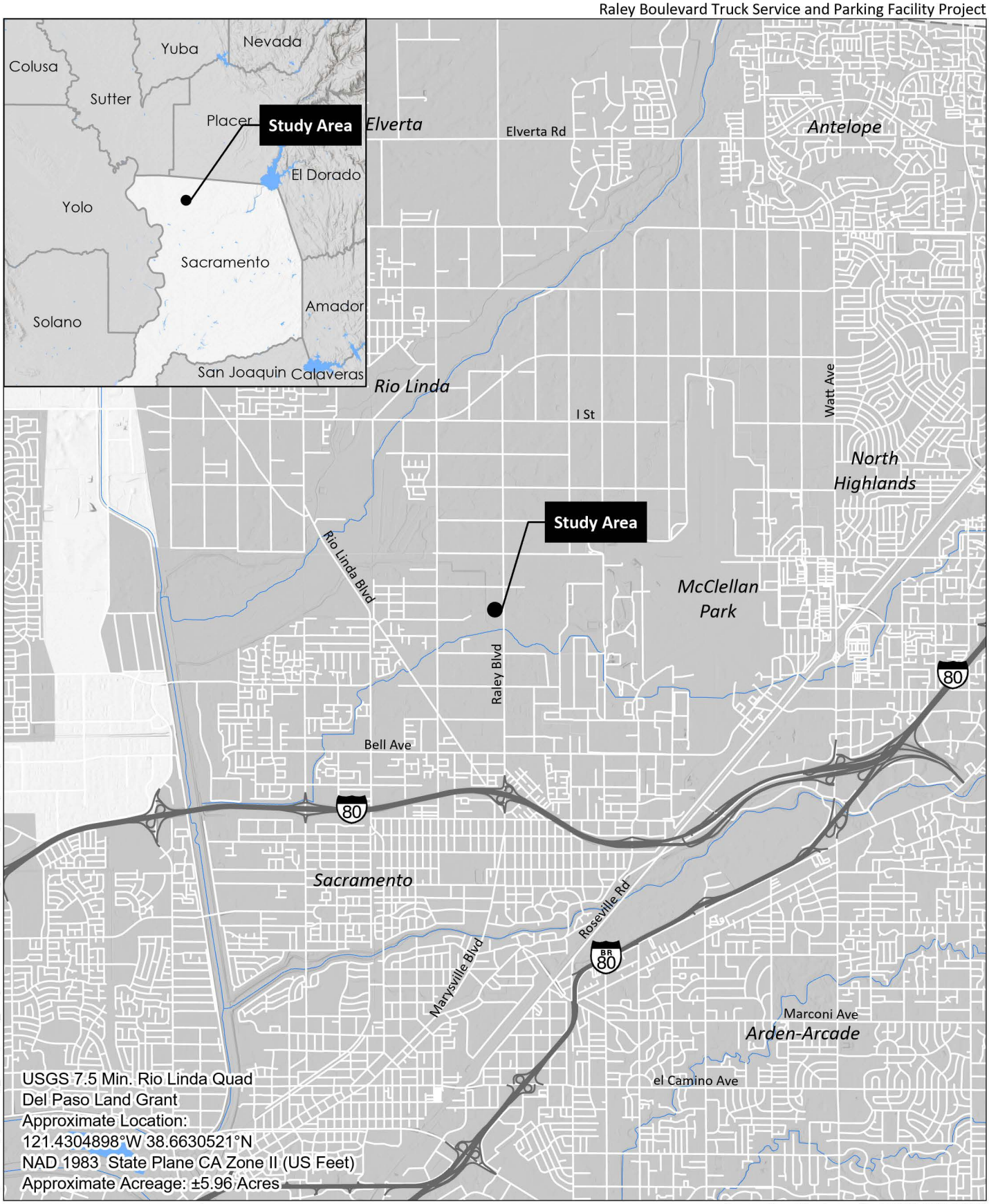
4.4.1 Non-Native Annual Grassland

Non-native annual grassland habitats are open grasslands composed primarily of non-native annual plant species. Species of grasses are the predominant component within this habitat type, with herbaceous plant species also present to varying degrees. Many of these species also occur as understory plants in oak woodland and other habitats. Structure in non-native annual grasslands depends largely on weather patterns and livestock grazing; dramatic differences in physiognomy, both between seasons and between years, are characteristic of this habitat. Introduced annual grasses are typically the dominant plant species in this habitat. Approximately 5.62 acres of non-native annual grassland habitat occurs in the Study Area (Figure 5, *Biological Communities*).

Dominant plant species observed within this habitat type during the field survey include Italian ryegrass (*Festuca perennis*), rattail sixweeks grass (*Festuca myuros*), wild oats (*Avena fatua*), prickly lettuce (*Lactuca serriola*), and wild radish (*Raphanus sativus*).

4.4.2 Low Terrace

Low terrace areas are low-lying grounds adjacent to waterways that may be subjected to periodic flooding. Historic natural movements of waterways can shape the landscape and floodplains and terraces are usually formed through these processes. Water may accumulate for short or long periods of time and the characteristics of the floodplain will be shaped by the duration and extent of flooding. The low terrace habitat is present in the southwest corner of the Study Area and is visible on aerial imagery (Google Earth 2024). A slope occurs along the low terrace area, likely preventing flooding into the northern portion of the Study Area. A vertical drain was observed in the low terrace area just outside of the southwest corner of the Study Area and likely drains the area when flooded. This portion of the low terrace habitat contained mostly facultative and upland vegetation that differentiated this community from upland non-native annual grassland described previously but evidence of hydric soils or wetland hydrology were not observed during the Aquatic Resources Delineation conducted for the site (HELIX 2024).



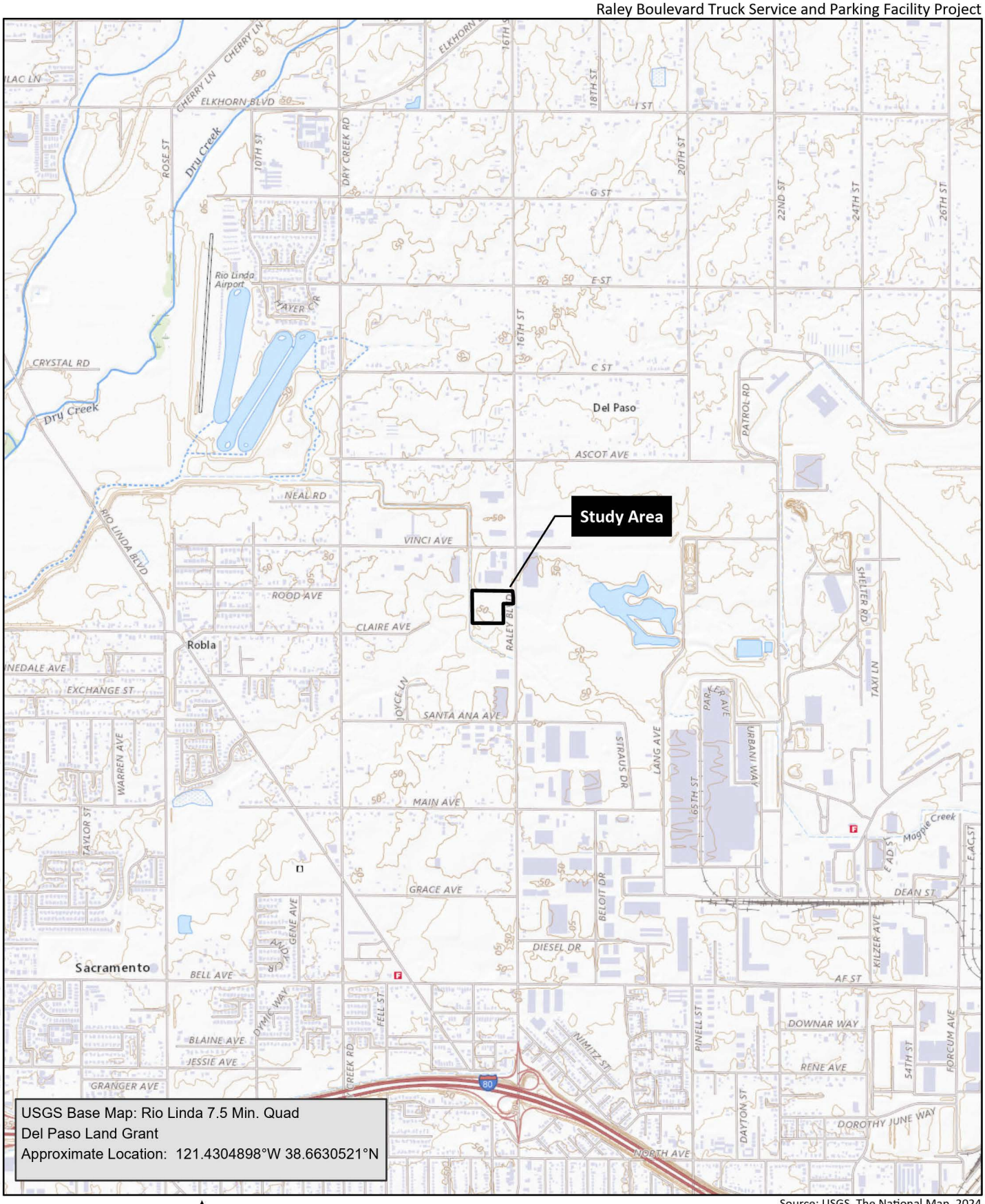
T:\PROJECTS\S\SHKGroup_08951\00001_RaleyBlvdTruckServiceParking\SMND\Map\RaleyBlvd.aprx 2/7/2024

Source: Base Map Layers (Esri, USGS, NGA, NASA)

HELIX Environmental Planning

Site and Vicinity Map

Figure 1



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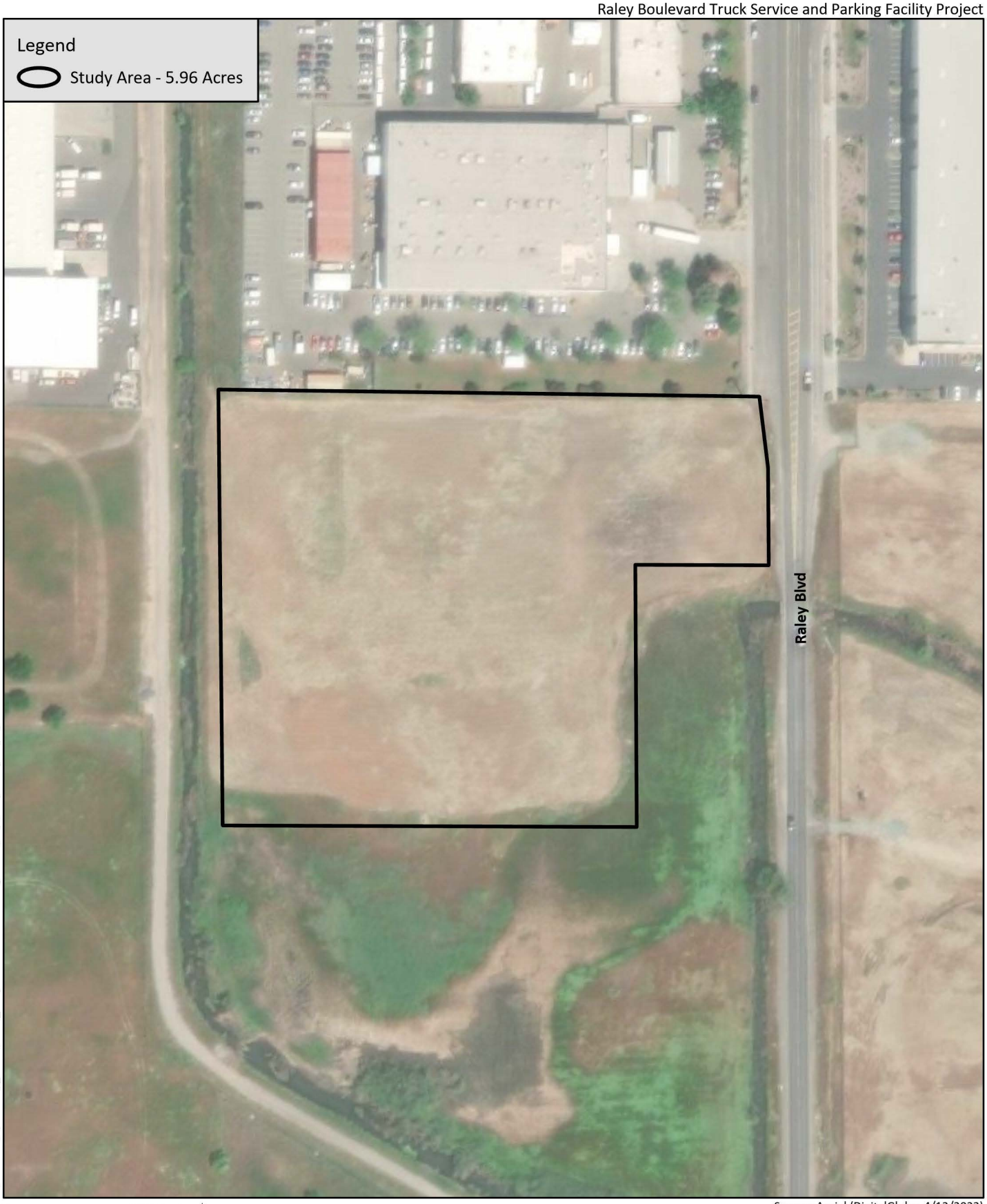
0 2,000 Feet

Source: USGS, The National Map, 2024

HELIX Environmental Planning

USGS Topographic Map

Figure 2



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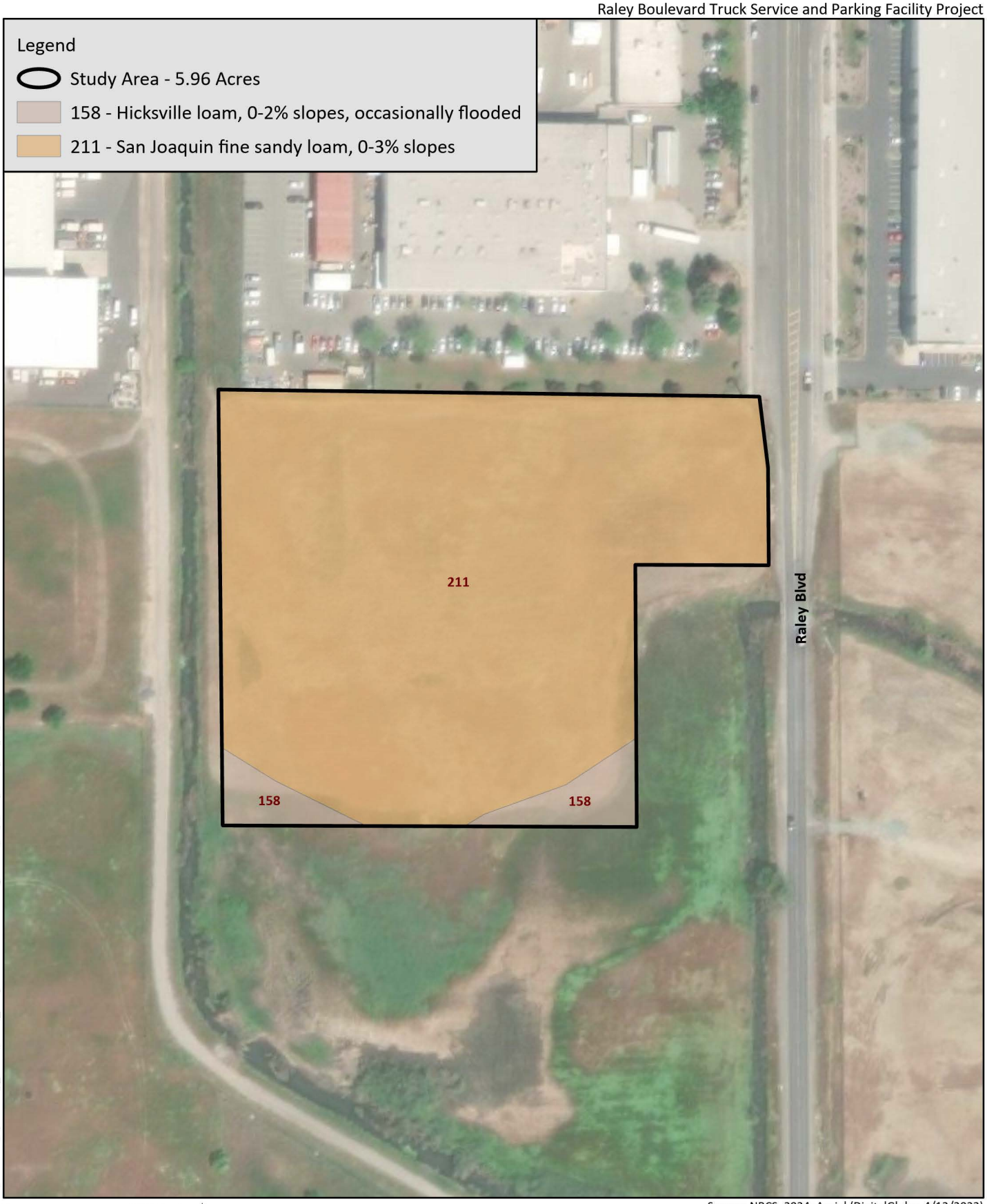
0 150 Feet

Source: Aerial (DigitalGlobe, 4/12/2022)

HELIX Environmental Planning

Aerial Map

Figure 3



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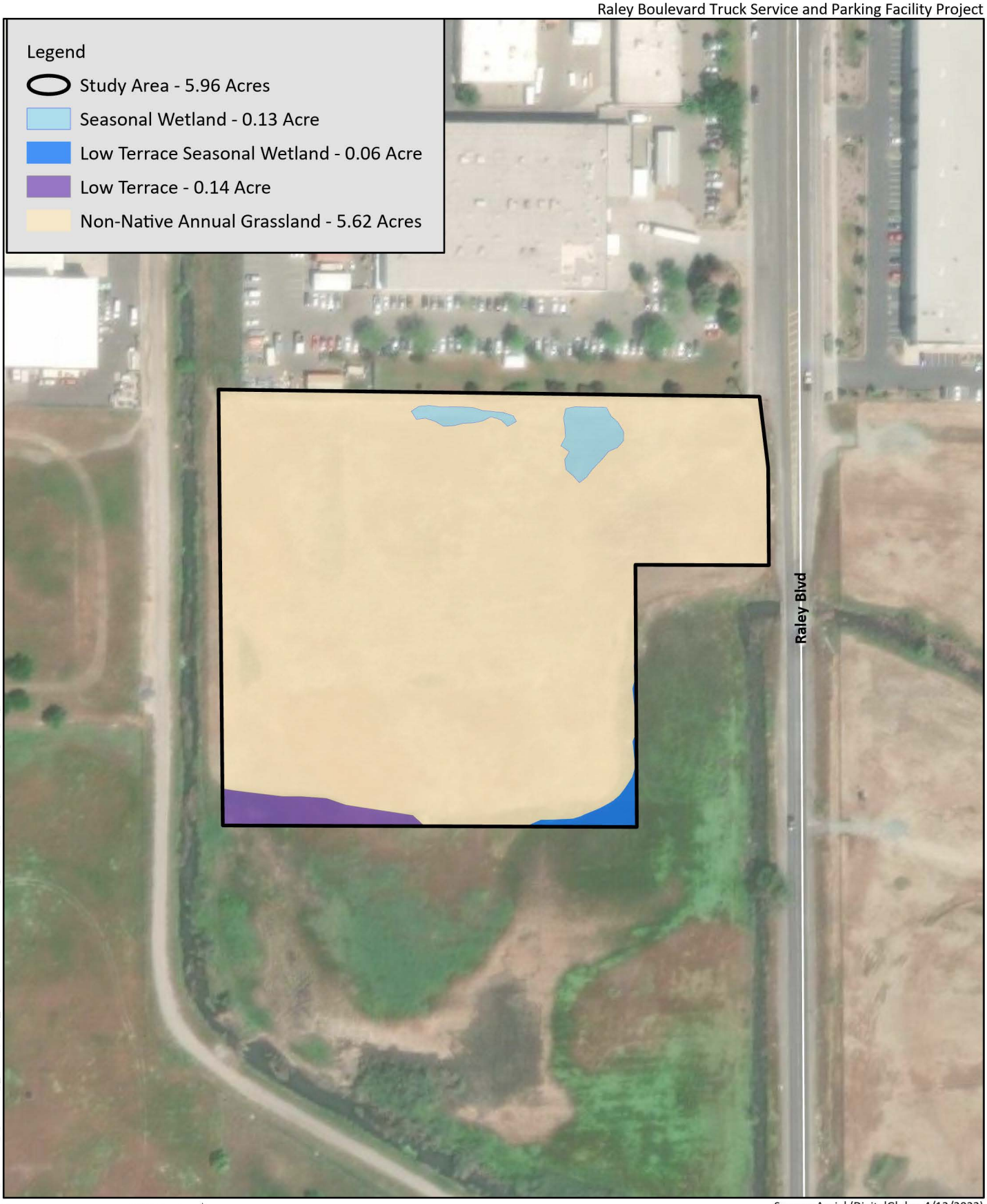
0 150 Feet

Source: NRCS, 2024; Aerial (DigitalGlobe, 4/12/2022)

HELIX Environmental Planning

Soils Map

Figure 4



HELIX Environmental Planning

Biological Communities

Figure 5

This area appears to flood on occasion but is drained before anaerobic conditions can form and is considered upland habitat. Approximately 0.14 acre of low terrace was mapped in the Study Area (Figure 5). Dominant plant species observed within this habitat type during the field survey include Italian ryegrass, Himalayan blackberry (*Rubus armeniacus*), and wild radish.

4.4.3 Seasonal Wetland

Two seasonal wetlands were mapped within the Study Area, totaling approximately 0.13 acre (Figure 5). Seasonal wetlands are shallow depressions that collect surface runoff from surrounding terrain and stay inundated for a long enough duration to form hydric soil and support a dominance of hydrophytic vegetation. A restrictive soil layer may be present, weakly formed, or absent. These features are typically shallower than vernal pools and generally do not pond for as long a duration as vernal pools. Seasonal wetlands generally exhibit a hydrologic regime dominated by saturation, rather than inundation.

Dominant plant species observed within this habitat type during the field survey include stalked popcorn flower (*Plagiobothrys stipitatus*), hyssop loosestrife (*Lythrum hyssopifolia*), curly dock (*Rumex crispus*), Italian rye grass, and Mediterranean barley (*Hordeum marinum*).

4.4.4 Low Terrace Seasonal Wetland

Low terrace areas are low-lying grounds adjacent to waterways that are subjected to periodic flooding. Historic natural movements of waterways can shape the landscape and floodplains and terraces are usually formed through these processes. Water may accumulate for short or long periods of time and the characteristics of the floodplain will be shaped by the duration and extent of flooding. The low terrace habitat is present in the southern portion of the Study Area and is visible on aerial imagery (Google Earth 2024). A slope occurs along the low terrace, likely preventing flooding into the northern portion of the Study Area. The southeast corner of the Study Area contains wetland vegetation such as Italian ryegrass, curly dock, and English plantain, and hydric soils and drift deposits were also observed during the Aquatic Resources Delineation for the Project (HELIX 2024). No drain or culvert was observed in this area and water appears to saturate this area for sufficient periods to create wetland conditions. Approximately 0.06 acre of low terrace seasonal wetland was mapped in the Study Area (Figure 5). Dominant plant species observed within this habitat type during the field survey include Italian ryegrass, curly dock, and English plantain.

4.5 SPECIAL-STATUS SPECIES

Special-status species are plant and wildlife species that have been afforded special recognition by federal, State, or local resource agencies or organizations. They are generally of relatively limited distribution and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under CESA or FESA;
- Protected under other regulations (e.g., the PCCP, MBTA);
- Included on the CDFW Special Animals List or Watch List;

- Identified as Rare Plant Rank 1 to 3 by CNPS; or
- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on queries of the CNDDB, the USFWS, and CNPS ranked species (online versions) for the *Rio Linda, CA* USGS quadrangle and eight surrounding quadrangles (Appendix A). Appendix B includes the common name and scientific name for each species, regulatory status (federal, State, local, CNPS), habitat descriptions, and potential for occurrence within the Study Area. The following set of criteria has been used to determine each species' potential for occurrence within the Study Area:

Will Not Occur: Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the Study Area;

Not Expected: Species moves freely and might disperse through or across the Study Area, but suitable habitat for residence or breeding does not occur in the Study Area, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty;

Presumed Absent: Habitat suitable for residence and breeding occurs in the Study Area; however, focused surveys conducted for the current project were negative;

May Occur: Species was not observed on the site and breeding habitat is not present, but the species has the potential to utilize the site for dispersal;

High: Habitat suitable for residence and breeding occurs in the Study Area and the species has been recorded recently in or near the Study Area, but was not observed during surveys for the current project; and

Present: The species was observed during biological surveys for the current project and is assumed to occupy the Study Area or utilize the Study Area during some portion of its life cycle.

Only those species that are known to be present, have a high potential to occur, or may occur are discussed further in the following sections. Species that are not expected to occur or will not occur are included in Appendix B.

4.5.1 Listed and Special-Status Plants

According to the database query, 13 listed and/or special-status plants have the potential to occur onsite or in the vicinity of the Study Area (CDFW 2024 and CNPS 2024). Based on field observations, published information, and literature review, four special-status plants have potential to occur in the Study Area including dwarf downingia (*Downingia pusilla*), stinkbells (*Fritillaria agrestis*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), and legenere (*Legenere limosa*). The remainder of the regional special-status plants identified in the query occur on serpentine or alkaline soils or within other habitats which do not occur in the Study Area.

4.5.1.1 Special-Status Plants that May Occur

Dwarf Downingia

Dwarf downingia is an annual herb that is a California Rare Plant Rank (CRPR) 2B.2 by CNPS (see Section 2.4.1 for CNPS rating definitions). This species is native to California and occurs in vernal pools and mesic areas of valley and foothill grassland habitats. It blooms from May to July and is found at elevations ranging from 1 to 445 meters in elevation (CNPS 2024).

There are five documented occurrences of this species within five miles of the Study Area with the closest approximately 3.81 miles from the Study Area (CDFW 2024). The Study Area does not contain vernal pools in which this species typically occurs in, but the seasonal wetlands within the Study Area may provide suitable habitat for this species. Based on potential suitable habitat in the Study Area and nearby documented occurrences, dwarf downingia may occur in the Study Area.

Stinkbells

Stinkbells is a perennial herb that is rated 4.2 by CNPS. This rating describes plants that are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly but they are not listed under State or federal regulation. Stinkbells occur in cismontane woodland, chaparral, valley and foothill grasslands, and pinyon and juniper woodlands. It is mostly found in non-native grassland with clay or serpentine soils from 10-1,555 meters elevation. The blooming period is March to June (CNPS 2024).

There are two documented occurrences of this species within five miles of the Study Area with the closest approximately 0.35 mile from the Study Area (CDFW 2024). The non-native annual grassland within the Study Area may provide suitable habitat for this species and minor clay soil components were mapped within the Study Area. However, given that it is a list 4 plant, this species would not typically be subject to CEQA analysis unless the documented occurrence would be an expansion of the species' range or was found in a vegetation community where it was not known to previously occur. Therefore, this species will not be analyzed further in this report.

Boggs Lake Hedge-Hyssop

Boggs Lake hedge-hyssop is an annual herb that is listed as endangered under CESA and is rated 1B.2 by CNPS. This species is native to California and occurs on clay soils in vernal pools and on the margins of marshes, swamps, and lakes. It blooms from April to August and occurs at elevations ranging from 10 to 2,410 meters elevation (CNPS 2024).

There is one documented occurrence of this species within five miles of the Study Area, approximately 2.77 miles away (CDFW 2024). The Study Area does not contain vernal pools, marshes, swamps, or lake margins in which this species typically occurs in, but the seasonal wetlands within the Study Area may provide marginally suitable habitat for this species. Based on potential suitable habitat in the Study Area and nearby documented occurrences, Boggs Lake hedge-hyssop may occur in the Study Area.

Legenere

Legenere is an annual herb that is rated 1B.1 by CNPS. This species is endemic to California and is found in vernal pools. It blooms from April to June and is found at elevations ranging from 1 to 1,005 meters in elevation (CNPS 2024).

There are two documented occurrences of this species within five miles of the Study Area with the closest approximately 0.75 mile from the Study Area (CDFW 2024). The Study Area does not contain vernal pools in which this species typically occurs in, but the seasonal wetlands within the Study Area may provide suitable habitat for this species. Based on potentially suitable habitat in the Study Area and nearby documented occurrences, legenere may occur in the Study Area.

4.5.2 Listed and Special-Status Wildlife

According to the database query, 30 listed and/or special-status wildlife species have the potential to occur onsite or in the vicinity of the Study Area (CDFW 2024 and USFWS 2024a). Based on field observations, published information, and literature review, nine special-status wildlife species have the potential to occur within the Study Area: vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), northwestern pond turtle (*Emys marmorata*), giant garter snake (*Thamnophis gigas*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and song sparrow "Modesto population" (*Melospiza melodia*). These species are discussed in more detail below. In addition to these special-status wildlife species, other migratory birds and raptors protected under federal, State, and local laws/policies also have potential to occur within the Study Area.

The following species are not expected or may pass through the Study Area but are not expected to use the Study Area in any significant way and are not discussed further in this report: Monarch butterfly (*Danaus plexippus*), Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), purple martin (*Progne subis*), bank swallow (*Riparia riparia*), and least Bell's vireo (*Vireo bellii pusillus*).

4.5.2.1 Special-Status Wildlife with a High Potential to Occur

Tricolored Blackbird

The tricolored blackbird is listed as a threatened species under CESA and is also designated as a Species of Special Concern by CDFW. This species is common locally throughout central California and often occurs in grasslands and agricultural settings near water. Tricolored blackbirds' nest and seek cover in emergent wetland vegetation and thorny vegetation such as Himalayan blackberry (*Rubus armeniacus*) as well as cattails and tules. The nesting area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. This species forages on the ground in croplands, grassy fields, flooded land, and edges of ponds for insects (Shuford and Gardali 2008).

There are two documented occurrences of this species within five miles of the Study Area and one of the occurrences overlaps with the Study Area. This occurrence documents a nesting colony in 1998 and 2014 in the general area between Dry Creek Road and Patrol Road and south of Ascot Avenue, with a 3/5-mile accuracy (CDFW 2024). Himalayan blackberry brambles that could support nesting habitat are present in and adjacent to the Study Area. Willows and other emergent vegetation that could also support nesting occur along Magpie Creek just south of the Study Area. The entire Study Area provides

suitable foraging habitat for this species. Because suitable nesting and foraging habitat is present in the Study Area and this species has been documented within or near the Study Area, tricolored blackbird has a high potential to occur.

4.5.2.2 Special-Status Wildlife that May Occur

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp are listed as a federally threatened species and are endemic to California and the Agate Desert of southern Oregon. In California, this species is known from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County (additional disjunct populations exist at various locations throughout the state). This species generally occurs in vernal pools but may also be found in a variety of both natural and artificial wetlands such as alkali pools, seasonal wetlands, swales, stock ponds, and ditches (Helm and Vollmar 2002). Occupied wetlands are typically small and pond for a relatively short duration (3 to 4 weeks) (Eriksen and Belk 1999).

There are fourteen documented occurrences of this species within five miles of the Study Area with the closest approximately 0.65 mile from the Study Area (CDFW 2024). Vernal pools do not occur in the Study Area where this species is generally found, but the seasonal wetlands onsite may provide suitable habitat for this species. However, the features are fairly shallow and have been subject to disturbance which may reduce their suitability for this species. Based on potentially suitable habitat within the Study Area and the number of nearby documented occurrences, vernal pool fairy shrimp may occur in the Study Area.

Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp are listed as federally endangered and are endemic to California and a small portion of southern Oregon. In California, this species has a patchy distribution across the Central Valley, from Shasta County south to northwestern Tulare County, with isolated occurrences in Alameda and Contra Costa counties (USFWS 2024b). This species occurs in a variety of seasonally inundated habitats, particularly low-alkalinity seasonal pools in grasslands. It is known to occur in vernal pools, wetlands, and other freshwater habitats; generally, those that are larger, deeper features where dissolved oxygen levels are higher and the features remain inundated for longer periods (CDFW 2024).

There is one documented occurrence of this species within five miles of the Study Area, on the adjacent parcel to the Study Area across Raley Boulevard. This observation states vernal pool tadpole shrimp cysts were found in seasonal wetlands from this area in 1998. The observation also states development and disking are potential threats to this species (CDFW 2024). Vernal pools do not occur in the Study Area where this species is generally found, but the seasonal wetlands onsite may provide suitable habitat for this species. However, the features are fairly shallow and have been subject to disturbance which may reduce their suitability for this species. Based on potentially suitable habitat within the Study Area and nearby documented occurrences, vernal pool tadpole shrimp may occur in the Study Area.

Northwestern Pond Turtle

The northwestern pond turtle is designated as a Species of Special Concern by CDFW and is also proposed as threatened under the FESA. This species occurs in a variety of aquatic habitats such as ponds, creeks, ditches, lakes, and marshes. Areas with abundant vegetation and rocky or muddy substrate are preferred; and exposed banks or other basking areas, such as logs or cattail mats, are

required. This species is active from February to November, and breeding occurs from April to May. Overwintering occurs in upland terrestrial habitats close to water sources (approximately 300 feet), in which they will bury themselves under loose soil (CDFW 2024). Nesting sites in uplands may be as far as 400 meters (1,312 feet) or more from the aquatic habitat, although the distance is usually much less and is generally around 100 meters (328 feet) (Yolo HCP/NCCP 2018). In nonriverine habitats that experience little water level fluctuation, this species may overwinter underwater (Thomson *et al.* 2016).

There is one documented occurrence of this species within five miles of the Study Area, approximately 0.65 mile away (CDFW 2024). Suitable aquatic habitat is present for this species directly adjacent to the Study Area in Magpie Creek and the unnamed canal. While suitable aquatic habitat is not directly present in the Study Area, this species could utilize the Study Area for nesting, wintering, or basking, and could disperse through the Study Area. Based on potentially suitable upland habitat in the Study Area and suitable adjacent aquatic habitat, northwestern pond turtle may occur in the Study Area.

Giant Garter Snake

The giant garter snake is a federal and state threatened species that is endemic to the San Joaquin and Sacramento Valley floors. This species inhabits sloughs, marshes, low-gradient streams, flooded rice fields, ponds, irrigation ditches, and adjacent upland habitats. This species forages primarily at the interface between open water and emergent aquatic vegetation and is most often found in habitats with slow flowing or standing water, permanent summer water, mud bottoms, earthen banks, and an abundance of prey such as small fish, frogs, and tadpoles. Giant garter snakes use upland habitat with open, grassy or shrubby banks for basking and thermoregulation. They also use upland small mammal burrows and soil or rock crevices as nighttime refugia, daytime escape cover, and winter aestivation sites. Giant garter snakes typically emerge from winter retreats from late March to early April and can remain active through October. The timing of their annual activities is subject to varying seasonal weather conditions. While this species is strongly associated with aquatic habitats, individuals have been noted using burrows as much as 50 meters (164 feet) away from the water's edge (Wylie *et al.* 1997).

There are nine documented occurrences of this species within five miles of the Study Area with the closest approximately 3.75 miles from the Study Area. This occurrence documents one adult snake observed near rice fields in 1996 (CDFW 2024). This species has primarily been documented in/near rice fields in the vicinity of the Study Area, but suitable aquatic habitat is present for this species in Magpie Creek and the unnamed canal immediately adjacent to the Study Area. Suitable burrow/refuge habitat was not observed in the Study Area which appears to be subjected to routine soil disturbance; however, this species could bask in uplands in the Study Area and disperse along the banks of the aquatic habitats adjacent to the Study Area. Based on potentially suitable upland habitat in the Study Area and suitable adjacent aquatic habitat, giant garter snake may occur in the Study Area.

Grasshopper Sparrow

The grasshopper sparrow is designated as a CDFW Species of Special Concern. This species occurs in California primarily as a summer migrant and is known from Los Angeles, Mendocino, Orange, Placer, Sacramento, San Diego, San Luis Obispo, Solano, and Yuba counties (CDFW 2024). It occurs in large, dense, dry, or well-drained grasslands, especially native grasslands with scattered shrubs or other perching areas. This species nests on the ground at base of an overhanging clump of grass or sedge and may nest in small colonies (Audubon 2024).

There are no documented occurrences of this species within five miles of the Study Area, the closest occurrence is approximately 16.5 miles from the Study Area (CDFW 2024). However, potentially suitable dense grassland habitat may be present in portions of the Study Area that are not mowed/disked. Several structures and tall patches of vegetation occur in the Study Area that could provide perching areas, or this species could nest at the base of those features. Based on potentially suitable habitat in the Study Area, grasshopper sparrow may occur.

Swainson's Hawk

Swainson's hawk is listed as a state threatened species. Swainson's hawks are long-distance migrants with nesting grounds in western North America, and wintering grounds in Mexico and South America. Swainson's hawks typically arrive in the California Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to August, peaking in late May through July (Zeiner *et al*. 1988-1990). In the Central Valley, Swainson's hawks generally nest in isolated trees, small groves of trees in agricultural land, or in large woodlands next to open grasslands, riparian habitat, or agricultural fields. This species typically nests near riparian areas and suitable foraging habitat; however, it has been known to nest in urban areas as well. In the Central Valley, the most commonly used trees include Fremont cottonwood (*Populus fremontii*), sycamores (*Platanus* spp.), valley oaks (*Quercus lobata*), walnut (*Juglans* spp.), and occasionally gum trees (*Eucalyptus* spp.), redwood (*Sequoia* spp.) and pine (*Pinus* spp.) (Woodbridge 1998). Nest locations are usually in close proximity to suitable foraging habitat, which include fallow fields, all types of grasslands, irrigated pastures, alfalfa and other hay crops, and low-growing row crops, especially post-harvest when the height of the vegetation is short and easy to observe prey (Bechard *et al*. 2010 and SAIC 2012). Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom and Van De Water 1994).

There are twelve documented occurrences of this species within five miles of the Study Area with the closest approximately 1.2 miles from the Study Area (CDFW 2024). No trees are present in the Study Area so this species will not nest within the Study Area, but it could nest in trees offsite and potentially forage in the Study Area. However, this species would generally be expected to forage in larger, intact tracts of suitable foraging habitat. The Study Area is a fairly small site that is mostly bound by development. Large, open areas more suitable for foraging occur in undeveloped areas outside of the Study Area. Trees suitable for nesting occur approximately 800 feet from the Study Area and there are additional suitable trees in the surrounding vicinity. Based on potentially suitable foraging habitat within the Study Area, nearby potential nest trees, and documented occurrences in the area, Swainson's hawk may occur in the Study Area.

White-Tailed Kite

The white-tailed kite is classified as Fully Protected by CDFW. This species occurs in a variety of habitats including grasslands, savannah, oak woodland, riparian woodland, open suburban areas, and agricultural fields. Nest trees typically have a dense canopy or are within a dense group of trees, such as riparian forest or oak woodland. Foraging habitat consists of a variety of open habitats that contain a high rodent population; especially grasslands, pastures, alfalfa fields, and other agricultural crops/fields.

There are nine documented occurrences within five miles of the Study Area with the closest approximately 0.85 mile away (CDFW 2024). No trees are present in the Study Area so this species will not nest within the Study Area, but it could nest in trees offsite and potentially forage in the Study Area.

However, this species would generally be expected to forage in larger, in-tact tracts of suitable foraging habitat. The Study Area is a fairly small site that is mostly bound by development. Large, open areas more suitable for foraging occur in undeveloped areas outside of the Study Area. Trees suitable for nesting occur approximately 800 feet from the Study Area and there are additional suitable trees in the surrounding vicinity. Based on potentially suitable foraging habitat within the Study Area, nearby potential nest trees, and documented occurrences in the area, white-tailed kite may occur in the Study Area.

Song Sparrow "Modesto Population"

The song sparrow "Modesto Population" is designated as a Species of Special Concern by CDFW. This species is a unique population of song sparrow that inhabits the central lower basin of the Great Valley and breeds in riparian thickets in shrubs or vines near fresh or saline emergent wetland habitat. Nests are typically situated low to the ground or on the ground under dense riparian vegetation (Shuford and Gardali 2008). This species is known from Colusa County south to Stanislaus County and east of Suisun Marshes.

There is one documented occurrence within five miles of the Study Area, approximately 1.95 miles away (CDFW 2024). Riparian habitat does not occur in the Study Area, but some riparian and emergent wetland vegetation is present along Magpie Creek and the unnamed canal adjacent to the Study Area. This species could potentially nest along those features adjacent to the Study Area and forage within the Study Area. Based on potentially suitable nesting habitat adjacent to the Study Area and potential foraging habitat within the Study Area, song sparrow "Modesto Population" may occur in the Study Area.

4.5.2.3 Other Nesting Migratory Birds and Raptors

Migratory birds are protected under the MBTA of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10; this also includes feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Additionally, Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs; and Section 3513 specifically states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

A number of migratory birds and raptors in addition to those described above have the potential to nest in or adjacent to the Study Area. Suitable nest locations within and adjacent to the Study Area include trees, grass, artificial structures, and bare ground.

4.6 SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA; Section 1600 of the California Fish and Game Code, which includes riparian areas; and/or Sections 401 and 404 of the Clean Water Act, which include wetlands and other waters of the U.S. Sensitive habitats or resource types within the Study Area are discussed below.

4.6.1 Aquatic Resources

A total of 0.19 acre of aquatic resources have been delineated in the Study Area (HELIX 2024). Wetlands in the Study Area consist of two seasonal wetlands (0.13 acre total) and one low terrace seasonal wetland (0.06 acre). The seasonal wetlands may be isolated features and do not have an apparent continuous surface connection to Magpie Creek. The low terrace seasonal wetland appears to be hydrologically connected to Magpie Creek; however, the area appears to only occasionally flood and may not have an apparent continuous surface connection to Magpie Creek.

4.6.2 Wildlife Migration Corridors

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. This fragmentation of habitat can also occur when a portion of one or more habitats is converted into another habitat; for instance, when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or construction activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The Study Area is located within a mostly developed area and is surrounded by industrial and residential development as well as busy roads. Although wildlife may disperse through the Study Area on a local level, the Study Area is not considered a wildlife migration or movement corridor.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The ±5.96-acre Study Area is located on a vacant lot and is surrounded by industrial and residential development, as well as undeveloped land. The Study Area is comprised of non-native annual grassland habitat (5.62 acres), seasonal wetlands (0.13 acre total), low terrace seasonal wetland (0.06 acre total), and low terrace (0.14 acre).

No special-status plants or special-status wildlife species were observed within the Study Area during the field survey on January 15, 2024. However, suitable habitat is present for several special-status species and there is potential these species may occur within the Study Area. Aquatic resources within the Study Area may also be considered waters of the U.S. and/or State subject to USACE and/or RWQCB jurisdiction under Sections 404 and 401 of the CWA. Recommendations, including avoidance and minimization measures to limit or avoid impacts to special-status species and sensitive habitats are included below.

Known or potential biological constraints in the Study Area include:

- Potential habitat for special-status plants including dwarf downingia, stinkbells, Boggs Lake hedge-hyssop, and legenere;

- Potential habitat for special-status invertebrates including vernal pool fairy shrimp and vernal pool tadpole shrimp;

- Potential habitat for special-status reptiles including northwestern pond turtle and giant garter snake;

- Potential habitat for special-status and migratory birds including tricolored blackbird, grasshopper sparrow, Swainson's hawk, white-tailed kite, and song sparrow "Modesto population;" and

- Wetlands that may be potential waters of the U.S. and/or State subject to federal and State regulation.

5.1 RECOMMENDATIONS

5.1.1 Special-Status Plants

The Study Area contains suitable habitat for dwarf downingia, stinkbells, Boggs Lake hedge-hyssop, and legenere within the seasonal wetlands. To avoid potential impacts to these species, the following measures are recommended:

- A qualified botanist should conduct a special-status plant survey within the appropriate identification (blooming) period prior to the initiation of any ground-disturbing activities. A survey conducted in May will satisfy the blooming period for all potential species. If no special-status plants are observed, then a letter report documenting the survey results should be prepared and submitted to the project proponent and no further measures are recommended.

- If special-status plants are observed within the Study Area, the location of the special-status plants should be marked with pin flags or other highly visible markers and may also be marked by GPS. The project proponent should determine if the special-status plant(s) onsite can be avoided by project design or utilize construction techniques to avoid impacts to the special-status plant species. All special-status plants to be avoided should have exclusion fencing or other highly visible material marking the avoidance area and the avoidance area should remain in place throughout the entire construction period.

- If special-status plants are found within the Study Area and cannot be avoided, the project proponent should consult with the CDFW and/or the USFWS as appropriate and depending on the status of the plant species in question and determine appropriate measures to mitigate for the loss of special-status plant populations. These measures may include gathering seed from impacted populations for planting within nearby appropriate habitat, preserving or enhancing existing offsite populations of the plant species affected by the project, or restoring suitable habitat for special-status plant species habitat as directed by the regulatory agencies.

5.1.2 Vernal Pool Branchiopods

The Study Area contains potentially suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp within the seasonal wetlands. Listed invertebrate species are assumed to be present in suitable habitat within their range unless a complete protocol-level survey, consisting of one wet-season survey and one dry-season survey, results in no evidence of the listed species. If protocol surveys are conducted, surveys should follow the (2017) USFWS Survey Guidelines for the Listed Large Branchiopods and be conducted by a USFWS-approved biologist.

- If the species are found to be absent with survey results and the USFWS accepts the survey findings, then no mitigation for listed vernal pool invertebrates is likely required. If the species are present, or if the project proponent decides to assume presence without conducting the surveys, then mitigation for listed vernal pool invertebrates would be required for project-related impacts to suitable habitat. Assumed presence may be decided by the project proponent prior to construction and mitigation for assumed presence would be determined by the USFWS and CDFW.

- If mitigation for vernal pool invertebrates is required and the project has a federal nexus (e.g., is pursuant to a USACE permit, is federally funded, or occurs on federal land), impacts can be addressed through Section 7 consultation with the USFWS. If the project does not have a federal nexus, the project proponent, through coordination with the USFWS, can prepare a Habitat Conservation Plan under Section 10 of FESA. Possible mitigation opportunities include offsite preservation of occupied offsite habitat or purchase of habitat credits at a qualified mitigation bank.

5.1.3 Special-Status Reptiles

Suitable aquatic habitat for northwestern pond turtle and giant garter snake is present in Magpie Creek and the unnamed canal immediately adjacent to the Study Area. These species may occur in the features and may utilize the Study Area as upland habitat. To avoid potential impacts to these species, the following measures are recommended:

- Ground-disturbing work should take place during the active season of these species, if feasible, while northwestern pond turtle and giant garter snake are more likely to avoid potential disturbances. The general active season window for both species is May 1 – October 1 but seasonal weather patterns should be considered during construction to provide flexibility.

- A qualified biologist should conduct a pre-construction survey within 24 hours prior to the start of grading or land disturbing activities. If the survey shows that there is no evidence of these species, then a letter report should be prepared to document the survey and be provided to the project proponent and no additional measures are recommended. If development does not commence within 24 hours of the survey, or halts for more than 7 days, then an additional survey is required prior to starting or resuming work.

  If any of these species are observed during the survey, no work shall occur until the appropriate agency has been consulted to determine appropriate mitigation and avoidance measures.

- Wildlife exclusion fencing should be installed around the project area prior to construction, especially along Magpie Creek and the unnamed canal. General silt fencing or other solid fencing is recommended. Fencing should be trenched into the soil at least six (6) inches and the soil must be carefully compacted against both sides of the fence for its entire length to prevent animals from entering the construction area. Exclusion fencing should be inspected daily for the duration of construction to ensure it remains intact and any holes, tears, or gaps should be repaired immediately. Fencing should be removed upon construction completion.

- If any of these species are observed within the project area during work, specifically within the construction zone, all work shall immediately halt in the vicinity of the animal and the animal will be allowed to leave the area of its own will. If the animal is in immediate danger, an agency approved biologist will relocate the animal outside of the construction zone, at a safe distance from all construction-related activities, and within suitable habitat. No one other than an approved biologist shall handle, take, or otherwise harass the animal. No work shall resume until the animal has moved or been removed from areas of potential disturbance.

- A qualified biologist should conduct an environmental awareness training for all project-related personnel prior to the initiation of work. The training should include identification of these species, required practices before the start of construction, general measures that are being implemented to protect the species as they relate to the project, penalties for non-compliance, and boundaries of the permitted disturbance zones. Upon completion of the training, all construction personnel should sign a form stating that they have attended the training and understand all the measures. Proof of this instruction should be kept on file on site and a copy kept with the project proponent.

5.1.4 Swainson's Hawk

The Study Area provides potential foraging habitat for this species and suitable nest trees are present in the vicinity of the Study Area. To avoid potential impacts to Swainson's hawk, the following measures are recommended:

- If construction activities will begin during the Swainson's hawk nesting season (March 20 to September 15), a qualified biologist should conduct at least the minimum number of surveys called for within at least two survey periods prior to the initiation of construction in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) or the current CDFW-approved protocol. Current survey periods specified by the Guidelines are March 20 to April 5, April 5 to April 20, April 21 to June 10, and June 10 to July 30. All potential nest trees within 0.25-mile of the proposed Project footprint should be visually examined for potential Swainson's hawk nests, as accessible.

- If no active Swainson's hawk nests are identified on or within 0.25-mile of the proposed project, a letter report documenting the survey methodology and findings should be submitted to the project proponent and no additional mitigation measures are recommended.

- If active Swainson's hawk nests (a nest becomes active once the first egg is laid and remains active until the fledged young are no longer dependent on the nest [USFWS 2018]) are found within 0.25-mile of the Project footprint, a survey report should be submitted to CDFW, and an avoidance and minimization plan should be developed for approval by CDFW prior to the start of construction. The avoidance plan should identify measures to minimize impacts to the active Swainson's hawk nest depending on the location of the nest relative to the project footprint. These measures may include:

- Conduct a worker awareness training program prior to the start of construction;
- Establish a buffer zone and work schedule to avoid impacting the nest during critical periods. If possible, no work will occur within 200 yards of the nest while it is in active use. If work will occur within 200 yards of the nest, then construction will be monitored by a qualified biologist to ensure that no work occurs within 50 yards of the nest during incubation or within 10 days after hatching (Swainson's Hawk Technical Advisory Committee 2000);
- Have a biological monitor conduct regular monitoring of the nest during construction activities; and
- Should the project biologist determine that the construction activities are disturbing the nest; the biologist should halt construction activities until the CDFW is consulted.

- The Study Area contains grassland habitat which provides suitable foraging habitat for Swainson's hawks although the Study Area's relatively small size and surrounding development reduce the potential for this species to utilize the Study Area. CDFW has provided guidelines for mitigating impacts to Swainson's hawk foraging habitat as summarized below (CDFW 1994). The City of Sacramento would make a final determination if mitigation were required for Swainson's hawk foraging habitat.

  a) Projects within 1 mile of an active nest tree shall provide:

     - One acre of foraging habitat for each acre of development at a ratio of 1:1. Mitigated lands shall consist of 10 percent of the land requirements met by fee title acquisition or a conservation easement allowing for the active management of the habitat, and the remaining 90 percent of the land protected by a conservation easement on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk (grasslands, rangeland, etc.) and no requirements for active management of the habitat; or
     - One-half acre of foraging habitat for each acre of development authorized at a ratio of 0.5:1. All the land requirements shall be met by fee title acquisition or a conservation easement, which allows for the active management of the habitat for prey production on the land. Prey abundance and availability is determined by land and farming patterns including crop types, agricultural practices, and harvesting regimes. Actively managed land for prey production may result in the land becoming less valuable for crop production due to management limitations but increases the value for Swainson's hawk through functional lift.

  b) Projects within 5 miles of an active nest tree but greater than 1 mile from the nest tree shall provide 0.75 acre of foraging habitat for each acre of urban development at a ratio of 0.75:1. All foraging habitat may be protected through fee title acquisition or conservation easement on agricultural lands or other suitable habitats.

c) Projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree shall provide 0.5 acre of Habitat Management land for each acre of urban development at a ratio of 0.5:1. All foraging habitat may be protected through fee title acquisition or a conservation easement on agricultural lands or other suitable habitat.

The CEQA lead agency (in this case the City of Sacramento) will make the final determination as to the extent of the proposed project's impacts to Swainson's hawk foraging habitat and any appropriate mitigation that might be necessary associated with project development. Mitigation bank credits could also be used to satisfy Swainson's hawk mitigation requirements as approved by the lead agency, as necessary.

5.1.5 Tricolored Blackbird, Grasshopper Sparrow, White-Tailed Kite, Song Sparrow "Modesto Population" and Other Special-Status Birds and Nesting Migratory Birds and Raptors

Special-status birds and migratory birds and raptors protected under federal, State, and/or local laws and policies have potential to nest and forage within the Study Area including tricolored blackbird, grasshopper sparrow, white-tailed kite, and song sparrow "Modesto Population." Although no active nests were observed during the field survey, the Study Area and adjacent land contain suitable habitat to support a variety of nesting birds within trees, shrubs, structures, and on bare ground.

Active nests and nesting birds are protected by the California Fish and Game Code Sections 3503 and 3503.5, 3513 and the MBTA. Ground-disturbing and other development activities including grading, vegetation clearing, tree removal/trim, and construction could impact nesting birds if these activities occur during the nesting season (generally February 1 to August 31). To avoid impacts to nesting birds, all ground disturbing activity should be completed between September 1 and January 31, if feasible. If construction cannot occur outside of the nesting season, the following measures are recommended:

- If construction activities occur during the nesting season, a qualified biologist should conduct a nesting bird survey to determine the presence of any active nests within the Study Area. Additionally, the surrounding 500 feet of the Study Area should be surveyed for active raptor nests, and up to 0.25 mile for Swainson's hawk nests where accessible. The nesting bird survey should be conducted within 14 days prior to commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, then a letter report should be prepared to document the survey and be provided to the project proponent and no additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than 14 days, then an additional survey is required prior to starting or resuming work within the nesting season.

  If active nests are found, then the qualified biologist should establish a species-specific buffer to prohibit development activities near the nest to and minimize nest disturbance until the young have successfully fledged or the biologist determines that the nest is no longer active. Buffer distances may range from 30 feet for some songbirds up to 0.25 mile for Swainson's hawk. Nest monitoring may also be warranted during certain phases of construction to ensure nesting birds are not adversely impacted. If active nests are found within any trees slated for removal, then an appropriate buffer should be established around the tree and all trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and/or is no longer active.

- A qualified biologist should conduct environmental awareness training that is given to all onsite personnel prior to the initiation of work.

- If construction occurs outside of the nesting bird season (September 1 to January 31) a nesting bird survey and environmental training for nesting birds would not be required.

5.1.6 Aquatic Resources

A total of 0.19 acre of aquatic features were mapped within the Study Area. Prior to initiation of any construction activities which could result in impacts to potentially regulated aquatic features, the extent of the features within the Study Area should be verified by the USACE and applicable permits should be prepared and submitted to the appropriate regulatory agencies for any project-related impacts to these features. Any conditions included in the final permits, including prescribed mitigation measures, would be required to be implemented prior to filling or impacting these features.

Section 404 authorization from the USACE and a Section 401 Water Quality Certification from the RWQCB may be required prior to the start of construction that will impact any waters of the U.S. Any waters of the U.S. or jurisdictional wetlands that would be lost or disturbed should be replaced or rehabilitated on a "no-net-loss" basis in accordance with the USACE mitigation guidelines and City of Sacramento requirements. Habitat restoration, rehabilitation, and/or replacement should be at a location and by methods agreeable to the agencies.

If a 404 permit is required for the proposed project, then water quality concerns during construction would be addressed in the Section 401 water quality certification from the Regional Water Quality Control Board. A Storm Water Pollution Prevention Plan (SWPPP) would also be required during construction activities. SWPPPs are required in issuance of a National Pollutant Discharge Elimination System (NPDES) construction discharge permit by the U.S. Environmental Protection Agency. Implementation of Best Management Practices (BMPs) during construction is standard in most SWPPPs and water quality certifications. Examples of BMPs include stockpiling of debris away from regulated wetlands and waterways; immediate removal of debris piles from the site during the rainy season; use of silt fencing and construction fencing around regulated waterways; and use of drip pans under work vehicles and containment of fuel waste throughout the site during construction.

If the aquatic features are determined to not be subject to federal jurisdiction, then these features may still be subject to waste discharge requirements under the Porter-Cologne Water Quality Control Act. Section 13260(a) of the Porter-Cologne Water Quality Control Act (contained in the California Water Code) requires any person discharging waste or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste discharge. The discharge of dredged or fill material into the ditches may constitute a discharge of waste that could affect the quality of waters of the State. A report of waste discharge will be filed for impacts to non-federal waters, if required.

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Appendix A

CNDDB, CNPS, and USFWS Lists of Regionally Occurring Special-Status Species

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Rio Linda (3812164) OR Taylor Monument (3812165) OR Verona (3812175) OR Pleasant Grove (3812174) OR Roseville (3812173) OR Citrus Heights (3812163) OR Carmichael (3812153) OR Sacramento East (3812154) OR Sacramento West (3812155))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Alkali Meadow Alkali Meadow	CTT45310CA	None	None	G3	S2.1	
Alkali Seep Alkali Seep	CTT45320CA	None	None	G3	S2.1	
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Andrena subapasta An andrenid bee	IIHYM35210	None	None	G1G2	S1S2	
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Archoplites interruptus Sacramento perch	AFCQB07010	None	None	G1	S1	SSC
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Astragalus tener var. ferrisiae Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
Chloropyron molle ssp. hispidum hispid salty bird's-beak	PDSCR0J0D1	None	None	G2T1	S1	1B.1
Cicindela hirticollis abrupta Sacramento Valley tiger beetle	IICOL02106	None	None	G5TH	SH	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T3	S3	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Elderberry Savanna Elderberry Savanna	CTT63440CA	None	None	G2	S2.1	
Emys marmorata western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
Fritillaria agrestis stinkbells	PMLIL0V010	None	None	G3	S3	4.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Great Valley Cottonwood Riparian Forest Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hydrochara ricksecker Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Juncus leiospermus var. ahartii Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
Juncus leiospermus var. leiospermus Red Bluff dwarf rush	PMJUN011L2	None	None	G2T2	S2	1B.1
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S3	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Melospiza melodia pop. 1 song sparrow ("Modesto" population)	ABPBXA3013	None	None	G5T3?Q	S3?	SSC
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
Nycticorax nycticorax black-crowned night heron	ABNGA11010	None	None	G5	S4	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 11 chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 7 chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	G5T1Q	S2	
Orcuttia viscida Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020	None	None	G3	S3	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S3	

Record Count: 61

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: January 16, 2024
Project Code: 2024-0036695
Project Name: Raley Boulevard Truck Service and Parking Facility

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

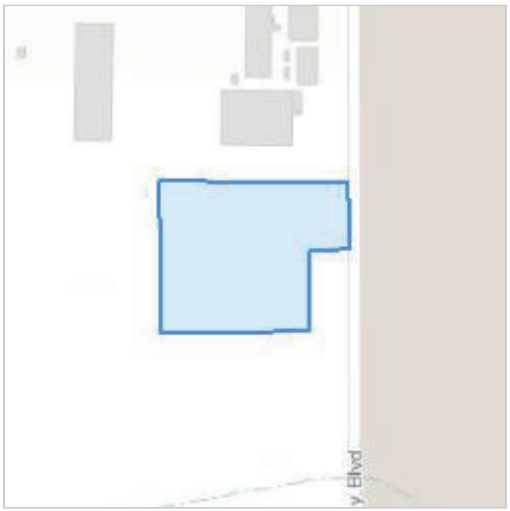
This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2024-0036695
Project Name: Raley Boulevard Truck Service and Parking Facility
Project Type: Commercial Development
Project Description: Private development.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.6626324,-121.4306190391769,14z



Counties: Sacramento County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

REPTILES

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

AMPHIBIANS

NAME	STATUS
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened
Western Spadefoot *Spea hammondii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

INSECTS

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

CRUSTACEANS

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

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	HELIX Environmental Planning Inc.
Name:	Christine Heckler
Address:	1677 Eureka Road Suite 100
Address Line 2:	Suite 100
City:	Roseville
State:	CA
Zip:	95661
Email	christineh@helixepi.com
Phone:	9164351202

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

1 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [**1A:1B:2A:2B:3:4**] Fed List is one of [**FE:FT:FC**] **and** State List is one of [**CE:CT:CR:CC**] , Quad is one of [**3812164:3812165:3812175:3812174:3812173:3812163:3812153:3812154:3812155**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © Rick York and CNPS

Showing 1 to 1 of 1 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 16 January 2024].

Appendix B

Special-Status Species With Potential to Occur in the Study Area

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Plants			
Astragalus tener var. *ferrisiae* Ferris' milk-vetch	--/--/1B.1	An annual herb found in vernally mesic meadows and seeps and subalkaline flats in valley and foothill grassland, from 2 to 75 meters elevation. Previously thought extinct and rediscovered in 1989; currently known from 13 locations in the Sacramento Valley. Blooms April to May (CNPS 2024).	**Not expected**. Vernal pools and alkaline habitat do not occur in the Study Area. The Study Area is outside of this species' current known range and it is not known to occur in Sacramento County. The seasonal wetlands onsite may provide suitable habitat for this species but because it is not known to occur in the region it is not expected to occur.
Balsamorhiza macrolepis big-scale balsamroot	--/--/1B.2	A perennial herb often found in serpentine soils within chaparral, cismontane woodland, and valley and foothill grassland habitats from 35 - 1,465 meters elevation. Blooming period: March to June (CNPS 2024).	**Will not occur.** Serpentine soils do not occur in the Study Area and the Study Area is below the known elevational range of this species.
Chloropyron molle ssp. *Hispidum* hispid salty bird's-beak	--/--/1B.1	An annual hemi-parasitic herb found on alkaline soils in meadows, seeps, playas, and valley and foothill grasslands from 1 to 155 meters elevation. Generally occurs in damp alkaline soils, especially in alkaline meadows and alkali sinks with *Distichlis*. Blooms July through November (CNPS 2024).	**Will Not Occur.** The Study Area does not contain alkaline soils or habitats.
Downingia pusilla dwarf downingia	--/--/2B.2	An annual herb found in vernal pools and mesic microsites in valley and foothill grassland from 1 to 445 meters elevation. Blooms March to May (CNPS 2024).	**May occur.** Vernal pools do not occur in the Study Area but the seasonal wetlands onsite may provide suitable habitat for this species. Five documented occurrences within five miles of the Study Area (CDFW 2024).
Fritillaria agrestis stinkbells	--/--/4.2	A perennial herb that occurs in cismontane woodland, chaparral, valley and foothill grasslands, and pinyon and juniper woodlands. Mostly found in non-native grassland with clay or serpentine soils from 10-1,555 meters elevation. Blooming period: March – June (CNPS 2024).	**May occur.** Preferred woodland and chaparral habitats do not occur in the Study Area and serpentine soils are also absent. However, the non-native annual grassland may provide suitable habitat for this species and minor clay soil components were mapped within the Study Area. Two documented occurrences within five miles of the Study Area (CDFW 2024).

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Gratiola heterosepala Boggs Lake hedge-hyssop	--/SE/1B.2	An annual herb found on clay soils in vernal pools and on the margins of marshes, swamps, and lakes from 10 to 2,410 meters elevation. Blooms April to August (CNPS 2024).	**May occur.** Vernal pools and other typical habitats do not occur in the Study Area. However, the seasonal wetlands onsite may provide suitable habitat for this species and minor clay soil components were mapped within the Study Area. One documented occurrence within five miles of the Study Area (CDFW 2024).
Hibiscus lasiocarpos var. *occidentalis* woolly rose-mallow	--/--/1B.2	A perennial rhizomatous emergent herb found in freshwater marshes and swamps from 0 to 120 meters elevation, often in riprap along levees. Blooms June to September (CNPS 2024).	**Will not occur.** Marsh or swamp habitat is not present in the Study Area.
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--/--/1B.2	An annual herb found in vernal pools within mesic areas of valley and foothill grasslands from 30 to 229 meters elevation. Blooms March – May (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area and the Study Area is below the known elevational range of this species.
Juncus leiospermus var. *leiospermus* Red Bluff dwarf rush	--/--/1B.2	An annual herb found on vernally mesic sites in chaparral, cismontane woodland, meadows, seeps, vernal pools, and valley and foothill grassland from 35 to 1,250 meters elevation. Blooms March – May (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area and the Study Area is below the known elevational range of this species.
Legenere limosa legenere	--/--/1B.1	An annual herb found in vernal pools from 1 to 1,000 meters elevation. Blooms April to June (CNPS 2024).	**May occur.** Vernal pools do not occur in the Study Area, but the seasonal wetlands onsite may provide suitable habitat for this species. Two documented occurrences within five miles of the Study Area (CDFW 2024).
Orcuttia viscida Sacramento Orcutt grass	FE/SE/1B.1	An annual herb found in vernal pools from 15 to 100 meters elevation. Blooms from April-July (September) (CNPS 2024).	**Not Expected.** Vernal pools do not occur in the Study Area. The seasonal wetlands within the Study Area are not expected to support this species because this species typically occurs in vernal pools with long hydroperiods.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Sagittaria sanfordii Sanford's arrowhead	--/--/1B.2	An emergent, perennial, rhizomatous herb found in standing or slow-moving freshwater ponds, marshes, and ditches from 0 to 605 meters elevation. Blooms April to October (CNPS 2024).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. However, this species could occur outside of the Study Area in adjacent Magpie Creek or the unnamed canal. Four documented occurrences within five miles of the Study Area (CDFW 2024).
Symphyotrichum lentum Suisun Marsh aster	--/--/1B.2	A perennial rhizomatous herb found in freshwater and brackish marsh from 0 to 3 meters elevation. Blooms May to November (CNPS 2024).	**Will not occur.** Marsh habitat is not present in the Study Area and the Study Area is above the known elevational range of this species. One documented occurrence within five miles of the Study Area (CDFW 2024).
Animals			
Invertebrates			
Branchinecta lynchi vernal pool fairy shrimp	FT/--/--	Generally occurs in vernal pools but may also be found in seasonal wetlands, swales, and alkali pools. Typically found in turbid water but also occurs in clear water with abundant aquatic vegetation (CDFW 2024).	**May occur.** The seasonal wetlands within the Study Area may provide suitable habitat for this species. However, the features are fairly shallow and have been subject to disturbance which may reduce the potential for this species to occur onsite. Fourteen documented occurrences within five miles of the Study Area (CDFW 2024).
Danaus plexippus pop. 1 monarch - California overwintering population	FCE/--/--	Overwintering populations of monarch butterflies roost in wind protected tree groves, especially *Eucalyptus* spp., and species of pine or cypress with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed (*Asclepias* sp.; Nial *et al*. 2019 and USFWS 2020). Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring.	**Not expected.** Suitable overwintering habitat is not present in or near the Study Area. One milkweed plant was observed in the Study Area which could be utilized by this species during migration but Monarch butterfly is not expected to use the site in any substantial way.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
		The overwintering population is located along the Coast while summer breeding areas occur in interior California and North America with spring breeding areas located further east (USFWS 2020).	
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT/--/--	Depends on elderberry shrubs (*Sambucus* spp.) and typically occurs near rivers or streams. Stems at least a 1-inch diameter or greater are necessary for larvae and pupae development. Adults emerge in spring until early summer and exit holes are visible on shrub stems year-round (CDFW 2024).	**Will not occur.** Elderberry shrubs are not present in the Study Area. Three documented occurrences within five miles of the Study Area (CDFW 2024).
Lepidurus packardi vernal pool tadpole shrimp	FE/--/--	Occurs in a variety of seasonally inundated habitats, particularly low-alkalinity seasonal pools in grasslands. Known to occur in vernal pools, wetlands, and other freshwater habitats. Generally occurs in larger, deeper features where dissolved oxygen levels are higher and features remain inundated for longer periods (CDFW 2024).	**May occur.** The seasonal wetlands within the Study Area may provide suitable habitat for this species. However, the features are fairly shallow and have been subject to disturbance which may reduce the potential for this species to occur onsite. One documented occurrence within five miles of the Study Area (CDFW 2024).
Fishes			
Acipenser medirostris pop. 1 green sturgeon southern DPS	FT/--/--	Spawn in freshwater streams, in fast, deep water over gravel, cobble, or boulders. Juveniles inhabit estuarine waters for 1-4 years until dispersing into coastal marine waters as adults. Adults return to spawn in fresh water every 6-10 years. The Sacramento River watershed, including the Feather River, is the only known historical and present spawning areas for green sturgeon (CDFW 2024 and NMFS 2018).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. This species is not known to occur in Magpie Creek which occurs just south of the Study Area.
Archoplites interruptus Sacramento perch	--/--/SSC	Extinct in its native range, all known populations of this species are the result of introductions. The species is adapted for life in sloughs, slow moving rivers, and large lakes in the Central Valley, and can tolerate high temperatures and salinities as well as high pH (Crain and Moyle 2011).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. This species is not known to occur in Magpie Creek which occurs just south of the Study Area.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Oncorhynchus mykiss pop. 11 Central Valley steelhead DPS	FT/--/--	This distinct population segment includes all naturally spawned anadromous steelhead populations below impassable barriers in the Sacramento and San Joaquin rivers and their tributaries, excluding steelhead from San Francisco and San Pablo Bays and their tributaries, as well as two artificial propagation programs: the Coleman NFH, and Feather River Hatchery steelhead hatchery programs. Steelhead spawn in rivers and streams with cool, clear, water and suitable silt free substrate (NMFS 2016).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. This species is not known to occur in Magpie Creek which occurs just south of the Study Area. One documented occurrence within five miles of the Study Area (CDFW 2024).
Oncorhynchus tshawytscha pop. 11 Central Valley chinook salmon spring-run ESU	FT/ST/--	Central Valley spring-run Chinook salmon spawn in rivers and streams with cool, clear, water and suitable cobble and gravel substrate. Historically occurred in all major rivers and tributaries of the Central Valley. Spawning is currently located in tributary streams of the Sacramento River. Immigration of adults through the Delta and lower Sacramento River occurs from March through September. Spawning occurs between late-August through October (NMFS 2014).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. This species is not known to occur in Magpie Creek which occurs just south of the Study Area.
Oncorhynchus tshawytscha pop. 7 Sacramento River chinook salmon winter-run ESU	FE/SE/--	Sacramento River winter-run Chinook salmon spawn in rivers and streams with cool, clear, water and suitable cobble and gravel substrate. Immigration of adults through the Delta and lower Sacramento River occurs from December through July. Spawning is currently limited to the Sacramento River downstream of Keswick Dam and upstream of the Red Bluff Diversion and the lower reaches of Battle Creek. Spawning occurs between late-April through mid-August (NMFS 2014).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. This species is not known to occur in Magpie Creek which occurs just south of the Study Area.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Pogonichthys macrolepitodus Sacramento splittail	--/--/SSC	Endemic to the Central Valley and occurs below the Red Bluff Diversion Dam in Tehama County to the downstream reaches of the Sacramento and American rivers. Also occurs in the lower reaches of the Feather, Merced, Tuolumne, and San Joaquin rivers. This species is largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and Sacramento-San Joaquin estuary. Occurs predominantly in freshwater estuarine systems and prefers low-salinity, shallow-water habitats. Species abundance is strongly tied to outflows because spawning occurs over flooded vegetation (Moyle *et. al.* 2015).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. This species is not known to occur in Magpie Creek which occurs just south of the Study Area. One documented occurrence within five miles of the Study Area (CDFW 2024).
Spirinchus thaleichthys longfin smelt	FC/ST/--	The longfin smelt is a pelagic estuarine fish that spawns in freshwater and then moves downstream to brackish water to rear. Longfin smelt in the Bay-Delta may spawn as early as November and as late as June, although spawning typically occurs from January to April. The specific spawning substrate remains unknown. The known range of the longfin smelt extends from the San Francisco Bay-Delta northward to Alaska. Longfin smelt have been observed in their winter and spring spawning period as far upstream as Colusa State Park in the Sacramento River, the City of Lathrop in the San Joaquin River system, Hog Slough off the South-Fork Mokelumne River, and in the South Delta near Old River south of Indian Slough (USFWS 2022).	**Will not occur.** Suitable aquatic habitat for this species is not present in the Study Area.
Amphibians			
Ambystoma californiense California tiger salamander	FT/ST/--	This species is generally restricted to vernal pools and seasonal ponds, including many constructed stock ponds, in grassland and oak savannah plant communities from sea level to about 1,500 feet in central California. This species spends the majority of its life in upland areas in the vicinity of suitable breeding ponds, where it inhabits rodent burrows.	**Will not occur.** The seasonal wetlands in the Study Area may provide suitable breeding habitat for this species but no burrows or other suitable upland habitat were observed in the Study Area and the Study Area has been subject to routine soil disturbance.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
		In order to provide suitable habitat for this species, suitable breeding habitat must be present in combination with suitable upland habitat. In the Coastal region, populations are scattered from Sonoma County in the northern San Francisco Bay Area to Santa Barbara County, and in the Central Valley and Sierra Nevada foothills from Yolo to Kern counties (USFWS 2017b).	The Study Area is also isolated from other potential suitable habitat by development and impassible aquatic features. Additionally, this species is not known to occur in the vicinity of the Study Area.
Spea hammondii western spadefoot	FPT/--/SSC	Occurs in a variety of open habitats including grasslands, coastal sage scrub, chaparral, sandy washes, and playas. Can also be found in valley-foothill woodlands. Appears to prefer open areas with sandy or gravelly soils. This species spends the majority of its life underground and typically emerges between October to May to breed. Breeding occurs in vernal pools, depressional wetlands, and sometimes puddles. Breeding sites must remain inundated for at least 30 days for larvae to mature (CDFW 2024).	**Will not occur**. The seasonal wetlands in the Study Area may provide suitable breeding habitat for this species but no burrows were observed in the Study Area and the Study Area has been subject to routine soil disturbance. Open areas and sandy and gravelly soils are also absent from the Study Area. In addition, the Study Area is isolated from other potential suitable habitat by development and impassible aquatic features, and this species is not known to occur in the vicinity of the Study Area.
Reptiles			
Emys marmorata northwestern pond turtle	FPT/--/SSC	Occurs in a variety of aquatic habitats; typically, permanent ponds, lakes, streams, irrigation ditches, canals, marshes, or pools in intermittent drainages. Prefers areas lined with abundant vegetation and either rocky or muddy substrates. Requires basking sites such as logs, rocks, cattail mats or exposed banks. Active from February to November, and breeding occurs from April to May. Overwintering occurs in upland terrestrial habitats close to water sources (approximately 300 feet), in which they will bury themselves under loose soil (CDFW 2024). Nesting sites in uplands may be as far as 400 meters (1,312 feet) or more from the aquatic habitat,	**May occur.** Suitable aquatic habitat is present for this species adjacent to the Study Area in Magpie Creek and the unnamed canal. While suitable aquatic habitat is not present in the Study Area, this species could utilize the Study Area for nesting, wintering, or basking, and could travel through the Study Area during dispersal from adjacent aquatic habitat. One documented occurrence within five miles of the Study Area (CDFW 2024).

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
		although the distance is usually much less and is generally around 100 meters (328 feet) (Yolo HCP/NCCP 2018). In nonriverine habitats that experience little water level fluctuation, this species may overwinter underwater (Thomson *et al.* 2016).	
Thamnophis gigas giant garter snake	FT/ST/--	Endemic to the San Joaquin and Sacramento Valley floors. Inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands. Requires adequate water during its active season (early spring through mid-fall) to provide food and cover, emergent, herbaceous wetland vegetation for foraging and cover, grassy banks and openings in waterside vegetation for basking, and higher elevation uplands for cover and refuge from flood waters during its dormant season (winter). Inhabits small mammal burrows and other soil crevices with sunny exposure along south and west facing slopes, above prevailing flood elevations when dormant. Primarily found in marshes and sloughs as well as slow-moving creeks but absent from large rivers (USFWS 2024).	**May occur.** Suitable aquatic habitat is present for this species adjacent to the Study Area in Magpie Creek and the unnamed canal. Suitable burrow/refuge habitat was not observed in the Study Area but this species could bask in uplands in the Study Area and disperse along the banks of the aquatic habitats adjacent to the Study Area. Nine documented occurrences within five miles of the Study Area (CDFW 2024).
Birds			
Accipiter cooperii Cooper's hawk	--/--/WL	Nests in woodlands and sometimes in suburban trees. Preys on medium-sized birds and small mammals. Forages in open woodland and habitat edges (Zeiner *et al.* 1990).	**Not expected.** Suitable wooded habitat is not present in or around the Study Area. Some trees along nearby industrial parking lots may provide suitable nesting habitat but no trees/nesting habitat are present in the Study Area. This species would not be expected to regularly forage in the Study Area as it lacks tree cover. One documented occurrence within five miles of the Study Area (CDFW 2024).

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Agelaius tricolor tricolored blackbird	--/ST/SSC	Common locally throughout central California. Nests and seeks cover in emergent wetland vegetation and thorny vegetation such as Himalayan blackberry (*Rubus armeniacus*) as well as cattails and tules. Nesting area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. Forages on the ground in croplands, grassy fields, flooded land, and edges of ponds for insects (Shuford and Gardali 2008).	**High**. Himalayan blackberry brambles that could support nesting habitat are present in and adjacent to the Study Area. Willows and other emergent vegetation that could also support nesting occur along Magpie Creek just south of the Study Area. The entire Study Area provides suitable foraging habitat for this species. Two documented occurrences within five miles of the Study Area (CDFW 2024).
Ammodramus savannarum grasshopper sparrow	--/--/SSC	A summer resident of foothills and lowlands west of the Cascade-Sierra Nevada crest. Occurs in grasslands with scattered shrubs or other tall structures which it utilizes as singing perches. Nests on the ground in dense grass with overhanging taller grasses and forbs (Zeiner *et al.* 1990).	**May occur.** Potentially suitable dense grassland habitat may be present in portions of the Study Area that are not mowed/disked. Several structures and tall patches of vegetation occur in the Study Area that provide perching areas.
Aquila chrysaetos golden eagle	--/FP/--	Occurs in a variety of open and semi-open habitats; generally rolling foothills, mountain areas, sage-juniper flats, and deserts. Typically nests in canyons, along cliffs, and in large trees. They avoid developed areas and uninterrupted stretches of forest. They are found primarily in mountains up to 12,000 feet, canyonlands, rimrock terrain, and riverside cliffs and bluffs (CDFW 2024 and Sibley 2014).	**Not expected.** Suitable habitat is not present in the Study Area. This species could soar over the Study Area but is not expected to occur or use the site in any substantial way.
Athene cunicularia burrowing owl	--/--/SSC	Occurs in a variety of open habitats; typically grasslands, desert scrub, agricultural fields, washes, and disturbed areas such as golf courses or vacant lots. Forages in suitable habitat where burrowing mammals are abundant with low and sparse vegetation. Nests in burrows, especially those of California ground squirrel (*Otospermophilus beecheyi*), but will also use other refuge sites such as rubble piles, pipes, and culverts. In the Central Valley of California, most foraging occurs within a 600-m radius of the nest (Gervais *et al.* 2003).	**Not expected.** The Study Area contains suitable sparse vegetation when disked, but no burrows were observed in the Study Area and the Study Area appears to be routinely disturbed. The entire Study Area was disked at the time of the field survey. Because the site lacks burrows and appears to be routinely disturbed, burrowing owl is not expected to occur. Twelve documented occurrences within five miles of the Study Area (CDFW 2024).

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Buteo regalis ferruginous hawk	--/--/WL	In California, this species is known to breed in the upper northeast portion of the State and occurs throughout most of the State as a winter migrant. Occurs in arid and semi-arid open grasslands, sagebrush flats, desert scrub, low foothills, and areas of pinyon and juniper habitat. Preys upon ground squirrels, rabbits, mice, and gophers. (Dechant *et al.* 1999).	**Not expected.** This species is a winter migrant and will not nest in the Study Area. However, this species could soar over the Study Area while moving between suitable foraging habitats.
Buteo swainsoni Swainson's hawk	--/ST/--	This species occurs in a variety of open habitats including expansive grasslands, agricultural areas, and open woodlands. Breeds in California and winters in Mexico and South America. Swainson's hawks usually arrive in the Central Valley between March 1 and April 1 and migrate south between September and October. This species usually nests in trees adjacent to suitable foraging habitat but is known to forage in areas away from the nest. Nests are usually located in trees near the edges of riparian stands, in lone trees or groves of trees in agricultural fields, and in mature roadside trees. Mature oak and riparian trees are the most used nest trees, typically associated with high quality foraging habitat (CDFW 2024). Suitable foraging areas for Swainson's hawk include native grasslands or lightly grazed pastures, alfalfa and other hay crops, idle land, certain grain and row croplands, and ruderal lands. Swainson's hawks primarily feed on voles; but will take a variety of prey including small mammals, birds, and insects (CDFW 1994).	**May occur.** No trees are present in the Study Area but some trees in the surrounding vicinity may provide suitable nesting habitat for this species. This species may forage in the Study Area but would generally be expected to forage in larger, in-tact tracts of suitable foraging habitat. The Study Area is a fairly small site that is mostly bound by development. Large, open areas suitable for foraging occur in undeveloped areas outside of the Study Area. Twelve documented occurrences within five miles of the Study Area (CDFW 2024).

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE/--	Occurs at isolated sites in the Sacramento Valley, and along the Kern and Colorado River systems in southern California. Frequents valley foothill and desert riparian habitats dominated by willows. Inhabits riparian habitats with dense understory foliage along river bottoms or other mesic habitats with high humidity. Prefers dense willows for roosting but will use adjacent orchard in the Sacramento Valley. Typically requires expansive riparian habitat for nesting (Zeiner *et al.* 1990).	**Will not occur**. Suitable riparian habitat is not present in the Study Area. One documented occurrence within five miles of the Study Area (CDFW 2024).
Elanus leucurus white-tailed kite	--/FP/--	Occurs in a variety of habitats including grasslands, savannah, oak woodland, riparian woodland, open suburban areas, and agriculture fields. Nest trees typically have a dense canopy or are within a dense group of trees, such as riparian forest or oak woodland. Foraging occurs within un-grazed or lightly-grazed fields, agricultural areas, and open grasslands (CDFW 2024).	**May occur.** No trees are present in the Study Area but some trees in the surrounding vicinity may provide suitable nesting habitat for this species. This species may forage in the Study Area but would generally be expected to forage in larger, in-tact tracts of suitable foraging habitat. The Study Area is a fairly small site that is mostly bound by development. Large, open areas suitable for foraging occur in undeveloped areas outside of the Study Area. Nine documented occurrences within five miles of the Study Area (CDFW 2024).
Laterallus jamaicensis coturniculus California black rail	--/ST/FP	Inhabits brackish marsh, primarily in the upper marsh zone dominated by alkali heath (*Frankenia salina*), cattail, and rush; prefers lower salinity environments. However, small, isolated populations are known in the Sierra Nevada foothills. In the Sierra Nevada foothills, black rail is a year-round resident along wetland edges where water is 1.2 inches or less. In this habitat, black rail is typically associated with perennial wetlands associated with flowing water such as irrigation canals, perennial streams and springs with dense vegetation. Forages on the ground, under cover of dense vegetation (Richmond *et al.* 2010).	**Will not occur.** Marsh habitat does not occur in the Study Area and the Study Area is outside of this species' known range.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Melospiza melodia song sparrow (Modesto Population)	--/--/SSC	Occurs in the Central lower basin of the Great Valley, from Colusa County south to Stanislaus County and east of Suisun Marshes. Breeds in riparian thickets in shrubs or vines near fresh or saline emergent wetland habitat. Nests are typically situated low to the ground or on the ground under dense riparian vegetation (Shuford and Gardali 2008).	**May occur.** Riparian habitat does not occur in the Study Area but this species may nest along Magpie Creek or the unnamed canal adjacent to the Study Area and forage within the Study Area. One documented occurrence within five miles of the Study Area (CDFW 2024).
Progne subis purple martin	--/--/SSC	Nests in cavities in open areas with low canopy cover at the height of the nest, near large bodies of water that support high densities of large insects. Martins use a variety of cavities including in bridges, large tree snags, and collapsed lava tubes. The species is very sensitive to competition from European starlings and is extirpated from most low-elevation areas by starlings (Shuford and Gardali 2008).	**Not expected.** Suitable cavity habitat does not occur in the Study Area. This species may pass through the Study Area but is not expected to occur or use the site in any substantial way. Three documented occurrences within five miles of the Study Area (CDFW 2024).
Riparia riparia bank swallow	--/ST/--	Found primarily in riparian and lowland habitats in California. Nests in colonies along cliffs or steep riverbanks in holes. In California, a majority of the population is situated along the Sacramento River and the Feather River. Other smaller populations persist near Monterey and north of Shasta counties (Zeiner *et al*. 1990).	**Not expected.** Suitable nesting habitat is not present in or near the Study Area. This species may pass through the Study Area but is not expected to occur or use the site in any substantial way.
Vireo bellii pusillus least Bell's vireo	FE/SE/--	This species is a summer migrant in California and usually arrives to breeding grounds in mid-March to early April from their wintering grounds in Mexico, and typically departs in late July but may stay until September (YOLO HCP/NCCP 2018). Riparian obligate species and typically inhabits dense and structurally diverse woodlands, including cottonwood-willow woodlands/forests, oak woodlands, and mule fat scrub (USFWS 1998). Previously considered to be limited to southern California, this species is now known to breed in Salinas Valley and in Yolo County (NatureServe 2024 and CDFW 2024).	**Not expected**. Riparian and woodland habitat is not present in the Study Area. Dense and structurally diverse habitat does not occur in the Study Area or along Magpie Creek or the unnamed canal. This species may pass through the Study Area but is not expected to use the Study Area in any substantial way.

Scientific Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur[3]
Mammals			
Taxidea taxus American badger	--/--/SSC	Inhabits drier open stages of most shrub, forest, and herbaceous habitats with loose, friable soils. Preys on a wide variety of mammals, reptiles, birds, and carrion, and hunts mostly by digging out fossorial prey. Occasionally takes prey on the surface. Not tolerant of cultivation. No longer occurs in the Central Valley except in the extreme western edge (Williams 1986).	**Will not occur.** Suitable habitat is not present in the Study Area, which is surrounded by developed land and appears to be routinely disked. No burrows or potential den sites were observed in the Study Area during the field survey.

[1] Sensitive species reported in CNDDB or CNPS on the "*Rio Linda*" and eight surrounding USGS quads, or in USFWS lists for the project site.

[2] Status is as follows: Federal (ESA) listing/State (CESA) listing/other CDFW status or CRPR. F = Federal; S = State of California; E = Endangered; T = Threatened; C = Candidate; PT = Proposed Threatened; FP=Fully Protected; SSC=Species of Special Concern; WL=Watch List.

[3] Status in the Project site is assessed as follows. **Will Not Occur**: Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs on the project site; however, focused surveys conducted for the current project were negative; **May Occur**: Species was not observed on the site and breeding habitat is not present but the species has the potential to utilize the site for dispersal, **High**: Habitat suitable for residence and breeding occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Present**: The species was observed during biological surveys for the current project and is assumed to occupy the project site or utilize the project site during some portion of its life cycle.

CRPR = California Rare Plant Rank: 1B to rare, threatened, or endangered in California and elsewhere; 2B to rare, threatened, or endangered in California but more common elsewhere. Extension codes: .1 to seriously endangered; .2 to moderately endangered.

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Appendix C

Plant and Wildlife Species Observed in the Study Area

Family	Scientific Name	Common Name
Native		
Asteraceae	*Centromadia fitchii*	spikeweed
	Holocarpha virgata	narrow tarweed
Euphorbiaceae	*Croton setiger*	turkey-mullein
Onagraceae	*Epilobium brachycarpum*	annual fireweed
Non-native		
Amaranthaceae	*Salsola tragus*	Russian thistle
Asteraceae	*Carduus pycnocephalus*	Italian thistle
	Centaurea solstitialis	yellow star-thistle
	Dittrichia graveolens	stinkwort
	Lactuca serriola	prickly lettuce
Brassicaceae	*Brassica nigra*	black mustard
	Raphanus sativus	wild radish
Fabaceae	*Vicia sativa*	common vetch
	Trifolium hirtum	rose clover
Geraniaceae	*Erodium botrys*	big heron bill
	Geranium dissectum	wild geranium
Poaceae	*Avena fatua*	wild oat
	Bromus diandrus	ripgut brome
	Bromus hordeaceous	soft brome
	Elymus caput-medusae	medusahead
	Festuca perennis	Italian ryegrass
	Hordeum marinum	Mediterranean barley
	Hordeum murinum	barley
Plantagaceae	*Plantago lanceolata*	English plantain
Polygonaceae	*Rumex crispus*	curly dock
	Rumex pulcher	fiddle dock
Rosaceae	*Rubus armeniacus*	Himalayan blackberry
Solanaceae	*Solanum elaeagnifolium*	silverleaf nightshade

Appendix D

Representative Site Photographs

Photo 1. Representative view of Study Area and seasonal wetlands along the northern boundary; facing west. Photo taken 1/17/24.

Photo 2. Representative view of Study Area along the southern boundary; facing east. The wetland low terrace floodplain is visible in the northeast corner below the line of tall vegetation. Photo taken 1/17/24.

Photo 3. Representative view of the wetland low terrace floodplain; facing north. Note the line of wrack from previous flooding. Photo taken 1/17/24.

Photo 4. Representative view of Himalayan blackberry bramble and upland floodplain terrace; facing southwest. Photo taken 1/17/24.

Photo 5. View of upland low terrace floodplain and the unnamed canal adjacent to the Study Area; facing south. Photo taken 1/17/24.

Photo 6. Representative view of the unnamed canal adjacent to the Study Area; facing north. Photo taken 1/17/24.

Photo 7. View of abandoned structure within Study Area; facing northeast. Photo taken 1/17/24.

Photo 8. View of abandoned structure within Study Area; facing northeast. Photo taken 1/17/24.

Photo 9. Representative view of Study Area and offsite trees; facing west. Photo taken 1/17/24.

Photo 10. Representative view of Study Area; facing north. Photo taken 1/17/24.