

LS POWER GRID CALIFORNIA, LLC
COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT
TERRESTRIAL BIOLOGICAL RESOURCES TECHNICAL REPORT

SEPTEMBER 2025

PREPARED FOR:



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LIST OF ATTACHMENTS

Attachment A: Collinsville Terrestrial Biological Resources Technical Report Addendum
Attachment B: Collinsville 500/230 Kilovolt Substation Project Aquatic Resources
Delineation Report
Attachment C: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report
Attachment D: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report
Addendum
Attachment E: Biological Resources Map
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1 – INTRODUCTION

LS Power Grid California, LLC (LSPGC) retained Insignia Environmental (Insignia) to conduct a pre-project survey for the Collinsville 500/230 Kilovolt (kV) Substation Project (Proposed Project). The Proposed Project would involve the construction of a new 500/230 kV substation (Collinsville Substation), the construction of two new 500 kV single-circuit transmission line segments that will loop Pacific Gas and Electric Company's (PG&E's) existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed Collinsville Substation, and the construction of one new 230 kV double-circuit transmission line that will connect the proposed Collinsville Substation to PG&E's existing Pittsburg Substation. The Proposed Project's general location is depicted in Figure 1: Project Overview Map and the Proposed Project components located within the survey area associated with this report are depicted in Figure 2: Project Components Map. The Proposed Project has been designed to address overloads on the existing Contra Costa-Newark 230 kV corridor and provide an additional supply into the northern greater San Francisco Bay Area to increase reliability to the area and advance additional renewable generation.

This Biological Resources Technical Report was prepared to identify any existing or potentially sensitive biological resources. (e.g., vegetation communities, hydrologic features, and special-status plant and animal species and their associated habitats) that may be present within or adjacent to the Proposed Project's survey area.¹

2 – PROJECT DESCRIPTION

2.0 PROJECT LOCATION

As depicted in Figure 2: Project Components Map, the Collinsville Substation will be near the unincorporated community of Collinsville, located in the southwestern portion of Solano County. The survey area is bordered on the south and southwest by the Sacramento River, where it debouches into the Suisun Bay; on the west by the Montezuma Hills and Suisun Marsh; and to the north and east by agricultural lands. The Proposed Project will create a connection to the existing Pittsburg Substation located in the City of Pittsburg in the northern portion of Contra Costa County.

2.1 PROJECT COMPONENTS

The main components of the Proposed Project are depicted on Figure 2: Project Components Map and include the following:

- Constructing a new 500/230 kV substation (the proposed LSPGC Collinsville Substation).

¹ The survey area primarily consists of all terrestrial areas of the Proposed Project area north of the Sacramento River, as well as an approximately 10-acre buffer. Terrestrial areas south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation, comprise a small portion of the survey area.

- Constructing two new approximately 1.2-mile-long, single-circuit 500 kV transmission line segments extending to interconnect (or “loop”) PG&E’s existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed LSPGC Collinsville Substation.
- Constructing a new approximately 6-mile-long, double-circuit 230 kV transmission line to connect the proposed LSPGC Collinsville Substation to PG&E’s existing Pittsburg Substation.
- Extending and connecting PG&E’s existing 12 kV Peabody 2107 Circuit distribution line to the proposed LSPGC Collinsville Substation.
- Constructing two new telecommunications paths to the proposed LSPGC Collinsville Substation, including a new microwave tower that would be constructed and owned by PG&E at the proposed substation, as well as a new fiber optic path consisting of two fiber optic cables for redundancy that would be installed between existing fiber in the city of Pittsburg and the proposed substation.
- Constructing three new PG&E 500 kV transposition structures, removing two existing lattice steel poles (LSPs), and replacing two existing lattice steel towers with two new three-pole dead-end tubular steel poles along PG&E’s existing Vaca Dixon-Tesla 500 kV Transmission Line.

All biological resource studies, including an assessment of any additional regulatory framework, associated with the PG&E 500 kV transposition structures are documented in Attachment A: Collinsville Terrestrial Biological Resources Technical Report Addendum. As a result, they are not discussed further in this report. The transposition structures are depicted on Figure 1: Project Overview Map and Figure 2: Project Components Map to provide regional context.

3 – REGULATORY FRAMEWORK

3.0 FEDERAL

3.0.0 Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects plant and wildlife species that are listed as endangered or threatened by the United States (U.S.) Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration’s (NOAA’s) National Marine Fisheries Service (NOAA Fisheries).

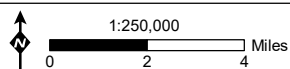
Under Section 9 of the FESA, any take of endangered wildlife is prohibited; “take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (16 U.S. Code [U.S.C.] 1532[19] and 1538). This can also include the modification of a species’ habitat. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land, as well as removing,



Figure 1: Project Overview Map

Collinsville 500/230 Kilovolt Substation Project

- | | |
|--|--|
| Proposed LSPGC Collinsville Substation | Proposed PG&E 12 kV Distribution Line |
| Existing PG&E Pittsburg Substation | Proposed LSPGC Telecommunications Line |
| Proposed PG&E 500 kV Transposition Structure | Existing PG&E Vaca Dixon-Tesla Transmission Line |
| Proposed Project Transmission Lines | Navigational Channel |



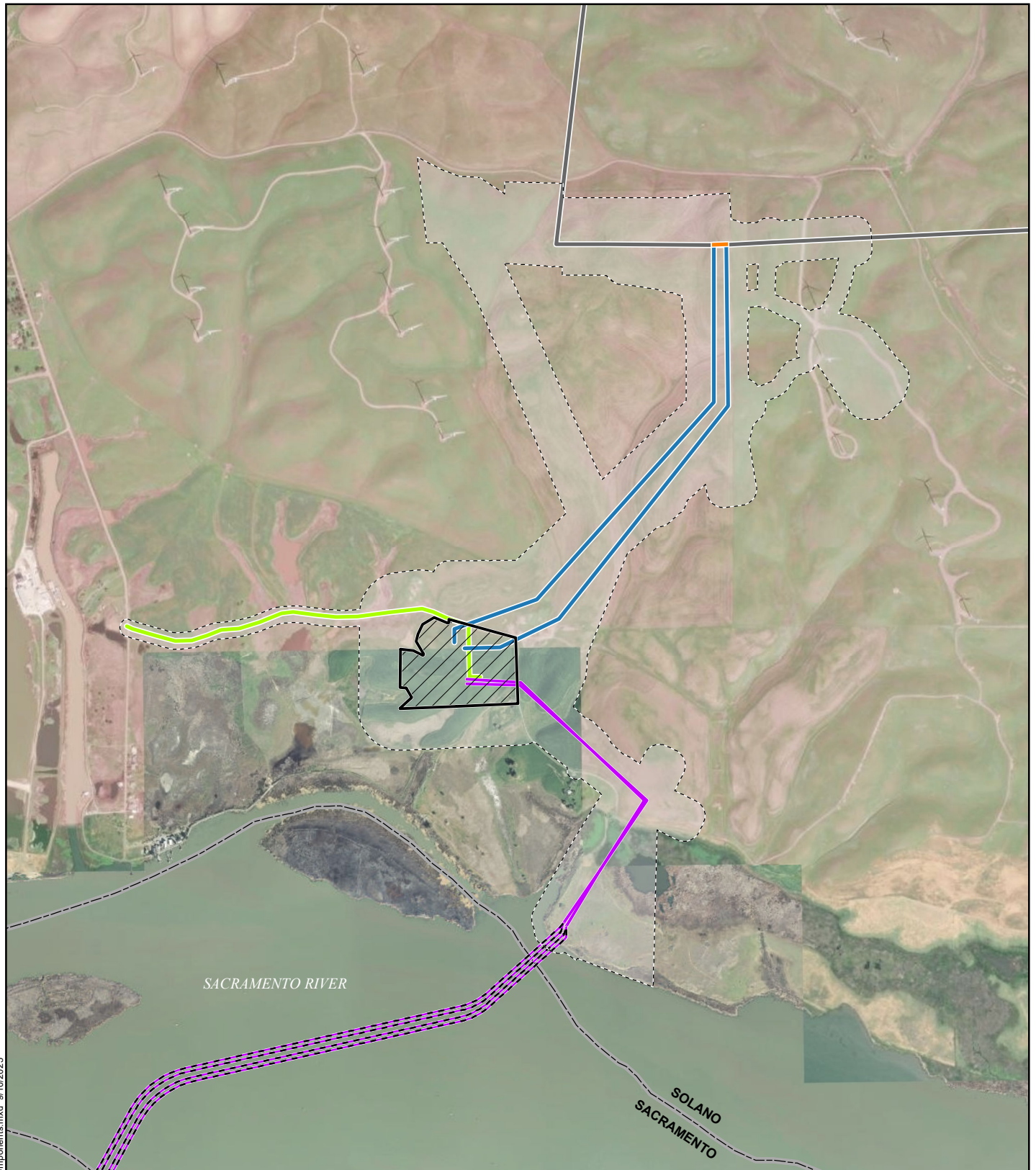


Figure 2: Project Components Map 1 of 6

Collinsville 500/230 Kilovolt Substation Project

- | | |
|---|----------------------------------|
| Existing PG&E 500 kV Overhead Transmission Line | County Boundary |
| Proposed LSPGC 230 kV Overhead Segment | Survey Area |
| Proposed LSPGC 230 kV Submarine Segment | Proposed Collinsville Substation |
| Proposed PG&E 12 kV Distribution Line | |
| Proposed PG&E 500 kV Interconnection | |
| Existing PG&E 500 kV Overhead Transmission Line to be Removed | |



1:20,000
0 500 1,000 Feet

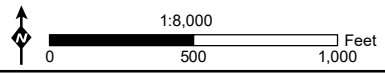
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Figure 2: Project Components Map 2 of 6

Collinsville 500/230 Kilovolt Substation Project

- Proposed LSPGC 230 kV Submarine Segment
- Proposed LSPGC 230 kV Underground Segment
- Proposed LSPGC Telecommunications Line
- Survey Area
- Existing PG&E Pittsburgh Substation
- Proposed Riser
- Proposed Utility Vault



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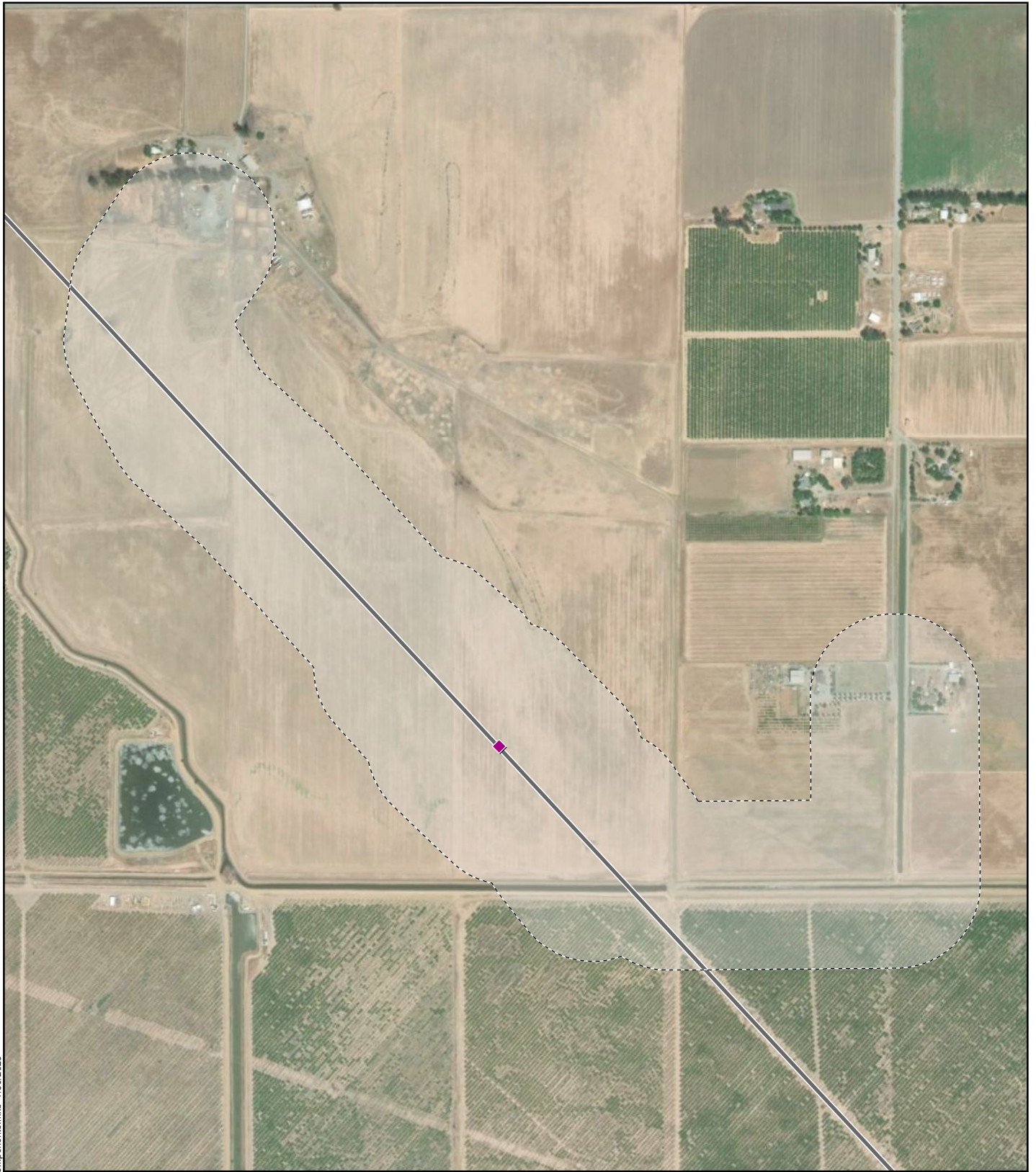
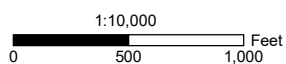


Figure 2: Project Components Map 3 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E 500 kV Transposition Structure
- Existing PG&E 500 kV Overhead Transmission Line
- Survey Area



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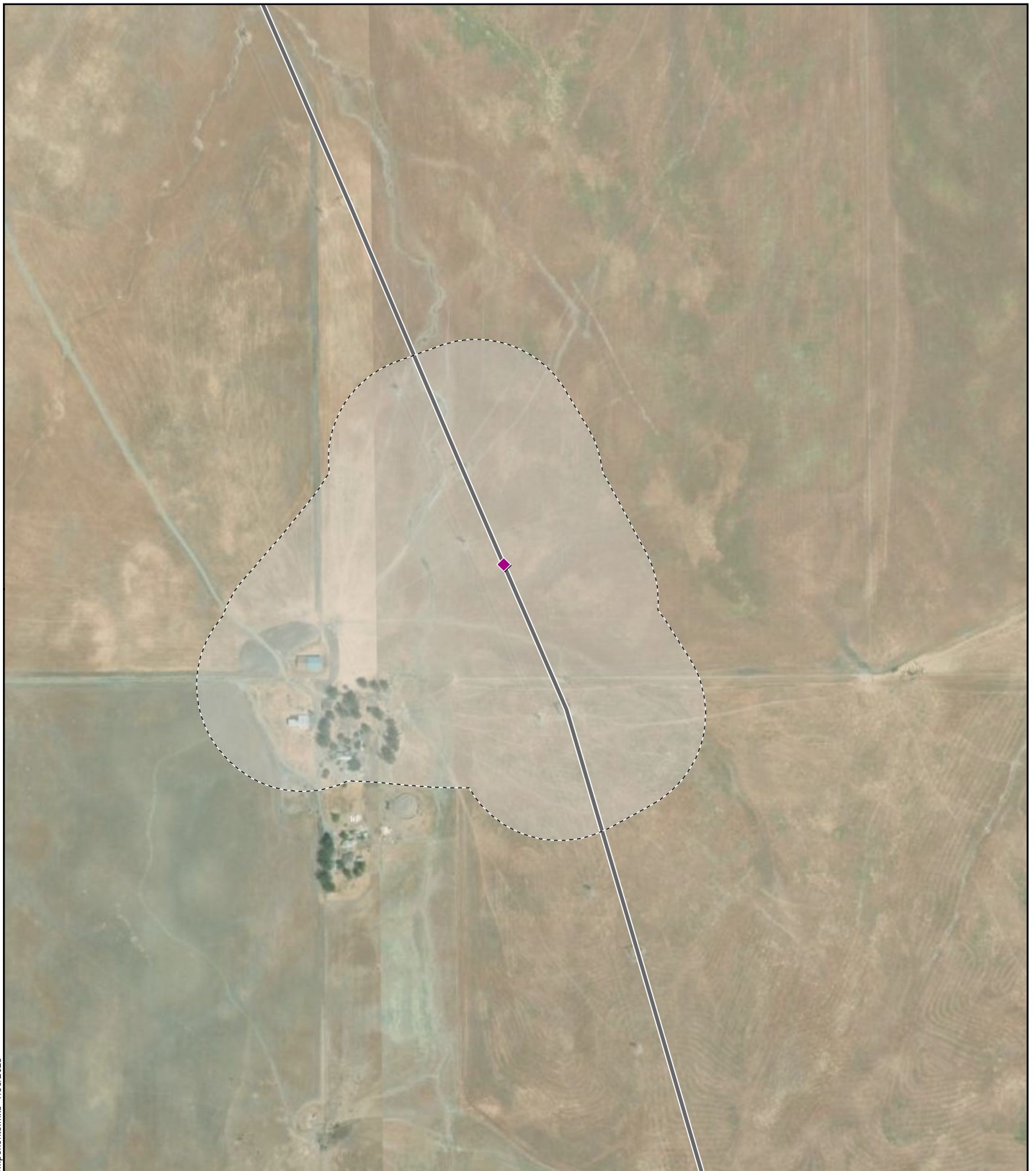
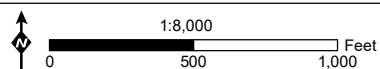


Figure 2: Project Components Map 4 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E 500 kV Transposition Structure
- Existing PG&E 500 kV Overhead Transmission Line
- - - Survey Area



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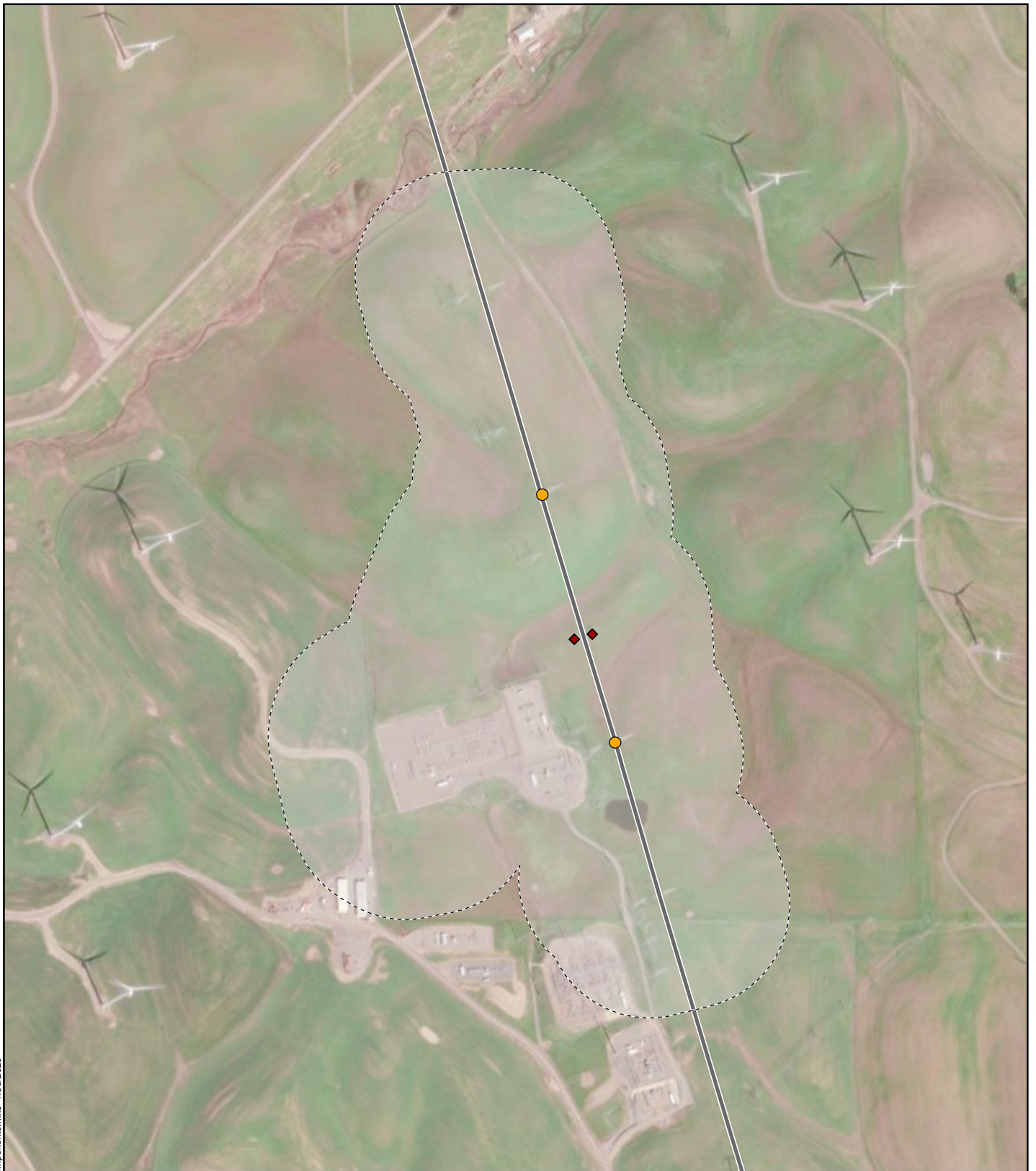
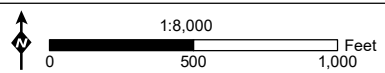


Figure 2: Project Components Map 5 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E LSP Removal
- Proposed PG&E Three-Pole Dead-End TSP
- Existing PG&E 500 kV Overhead Transmission Line
- - - Survey Area



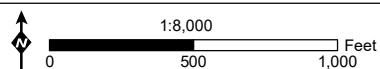
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Figure 2: Project Components Map 6 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E 500 kV Transposition Structure
- Existing PG&E 500 kV Overhead Transmission Line
- - - Survey Area



cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S.C. 1538[c]). Under Section 7 of the FESA, federal agencies are required to consult with the USFWS and/or NOAA Fisheries if their actions, including permit approvals or federal funding, could adversely affect a listed species (including plants) or its critical habitat. Through Section 7 consultation and the issuance of a Biological Opinion, the USFWS and/or NOAA Fisheries may issue an incidental take permit, allowing take of the species that is incidental to another authorized activity, provided that the action will not jeopardize the continued existence of the species.

Section 10 of the FESA provides for the issuance of incidental take permits for private actions that have no federal involvement through the development of a Habitat Conservation Plan (HCP).

3.0.1 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) recognizes international treaties between the U.S. and other countries that have afforded protection to migratory birds and any of their parts, eggs, and nests, from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The MBTA prohibits acts to “pursue, hunt, take, capture, or kill, or attempt to take, capture, or kill” migratory birds and a range of buying, selling, and transporting activities (16 U.S.C. 703). “Take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to pursue or collect” a bird. Birds, nests, and eggs are all protected. The regulations governing migratory bird permits can be found in Title 50, Part 13 (General Permit Procedures) and Part 21 (Migratory Bird Permits) of the Code of Federal Regulations.

3.0.2 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) affords additional legal protection to bald eagles and golden eagles. This law prohibits the take, sale, purchase, barter, offer of sale, purchase, or barter, transport, export or import, at any time or in any manner of any bald or golden eagle, alive or dead, or any part, nest, or egg thereof (16 U.S.C. 668-668d). The BGEPA also defines “take” to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb,” and includes criminal and civil penalties for violating the statute. The USFWS further defines the term “disturb” as agitating or bothering an eagle to a degree that causes or is likely to cause injury, or a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior.

3.0.3 Clean Water Act

Section 404

Section 404 of the Clean Water Act (CWA) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity involving a discharge of dredged or fill material into waters of the U.S. Waters of the U.S. include the following:

- navigable waters of the U.S.,
- interstate waters,

- all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce,
- tributaries to any of these waters, and
- wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

Many surface waters and wetlands in California meet the criteria for waters of the U.S.

Section 402

CWA Section 402 regulates construction-related storm water discharges to surface waters through the National Pollutant Discharge Elimination System program, which is administered by the U.S. Environmental Protection Agency (EPA). In California, the State Water Resources Control Board is authorized by the EPA to oversee the program through the Regional Water Quality Control Boards (RWQCBs). The Proposed Project is within the jurisdiction of the Central Valley RWQCB (Region 5).

Section 401

Under CWA Section 401(a)(1), the applicant for a federal license or permit to conduct an activity that may result in a discharge into waters of the U.S. must provide the federal licensing or permitting agency with a certification that any such discharge will not violate state water quality standards. The RWQCBs administer the Section 401 program to prescribe measures for projects that are necessary to avoid, minimize, and mitigate adverse effects on water quality and ecosystems.

3.0.4 Plant Protection Act of 2000

Some non-native plant species are officially categorized as “noxious weeds” because they are highly invasive or interfere with an area’s management objectives, or both. Both the U.S. and California governments maintain lists of plants that are considered threats to the well-being of the nation or the state. The Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2801 et seq.; 88 Stat. 2148), established a federal program to control the spread of noxious weeds. The act was superseded by the federal Plant Protection Act of 2000 (7 U.S.C. 7701 et seq.; 114 Stat. 438), which consolidated and modernized all major statutes pertaining to plant protection and quarantine (e.g., the Federal Noxious Weed Act and Plant Quarantine Act).

The Plant Protection Act revised the original definition of a “noxious weed” as listed in the Federal Noxious Weed Act to include the following:

“any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment.”

Under the Plant Protection Act, the Secretary of Agriculture was authorized to designate plants as “noxious weeds” by regulation, and to prohibit or restrict all such weeds from entering the U.S. or moving through interstate commerce. The secretary was also given authority to inspect, seize, and destroy products and to quarantine areas, if necessary, to prevent the spread of such

weeds. The Secretary of Agriculture was also authorized to cooperate with other federal, state, and local agencies; farmers' associations; and private individuals in measures to control, eradicate, prevent, or retard the spread of such weeds.

3.1 CALIFORNIA

3.1.0 Fish and Game Code Sections 3511, 4700, 5050, and 5515

The state of California first began to designate species as “fully protected” prior to the creation of the California Endangered Species Act (CESA) and the FESA. Lists of fully protected species were initially developed to provide protection to animals (i.e., fish, amphibians, reptiles, birds, and mammals) that were rare or facing possible extinction. Most fully protected species have since been listed as threatened or endangered under the CESA and/or the FESA. Fully protected species may not be taken or possessed at any time, and incidental take permits cannot be issued for these species (California Fish and Game Code Section 4700).

3.1.1 Fish and Game Code Sections 3503, 3503.5, and 3513

California Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 specifies these protections for birds in the orders Falconiformes and Strigiformes (i.e., raptors). Section 3513 also makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

3.1.2 Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans, also known as basin plans. Each basin plan establishes numerical or narrative water quality objectives to protect established beneficial uses, which include wildlife, fisheries, and their habitats. Projects that affect wetlands or waters of the state, including groundwater, must meet the discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

3.1.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) (California Fish and Game Code Sections 1900-1913) was created with the intent to “preserve, protect, and enhance rare and endangered plants in this State.” The NPPA is administered by the California Department of Fish and Wildlife (CDFW). The California Fish and Game Commission has the authority to designate native plants as “endangered” or “rare” and to protect them from take. The NPPA also stipulates that no person may take or possess any endangered or rare native plant, or any part or product thereof. However, this does not apply to the removal of endangered or rare native plants within a right-of-way by the owner of the land or his/her agent, nor does it apply to the obligation of a publicly or privately owned public utility to provide service to the public.

3.1.4 California Code of Regulations

Title 14, Section 251.1 of the California Code of Regulations (CCR) restricts the harassment of nongame birds and mammals. Harassment is defined as an intentional act that disrupts an animal's normal behavior patterns, which includes, but is not limited to breeding, feeding, or sheltering. Sections 670.2 and 670.5 list animals designated as "threatened" or "endangered" in California. California Species of Special Concern (SSC) is a category conferred by the CDFW on species that are indicators of regional habitat changes or that are considered potential future protected species. SSCs do not have any special legal status, but this category is intended as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

3.2 LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 1995). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but county regulations are not applicable as Solano County does not have jurisdiction over the Proposed Project. This section includes a summary of local biological resources-related policies, plans or programs for informational purposes and to assist with CEQA review. Although LS Power Grid California, LLC (LSPGC) is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

3.2.0 Solano County General Plan

The Solano County General Plan Conservation Element and Open Space Element (Solano County 2008) include the following policies that may be applicable to resources affected by the Proposed Project:

- Policy RS.P-1: Protect and enhance the county's natural habitats and diverse plant and animal communities, particularly occurrences of special-status species, wetlands, sensitive natural communities, and habitat connections.
- Policy RS.P-2: Manage the habitat found in natural areas and ensure its ecological health and ability to sustain diverse flora and fauna.
- Policy RS.P-3: Focus conservation and protection efforts on high-priority habitat areas depicted in Figure RS-1 [of the Solano County General Plan].
- Policy RS.P-4: Together with property owners and federal and state agencies, identify feasible and economically viable methods of protecting and enhancing natural habitats and biological resources.

- Policy RS.P-5: Protect and enhance wildlife movement corridors to ensure the health and long-term survival of local animal and plant populations. Preserve contiguous habitat areas to increase habitat value and to lower land management costs.
- Policy RS.P-6: Protect oak woodlands and heritage trees and encourage the planting of native tree species in new developments and along road rights-of-way.
- Policy RS.P-7: Preserve and enhance the diversity of habitats in marshes, delta to maintain these unique wildlife resources.
- Policy RS.P-8: Protect marsh waterways, managed wetlands, tidal marshes, seasonal marshes, and lowland and grasslands because they are critical habitats for marsh-related wildlife and are essential to the integrity of the marshes.
- Policy RS.P-9: Encourage restoration of historic marshes to wetland status, either as tidal marshes or managed wetlands. When managed wetlands are no longer used for waterfowl hunting, restore them as tidal marshes.

3.2.1 Habitat Conservation Plans

Solano County Water Agency Solano Multispecies Habitat Conservation Plan

In October 2012, the Solano County Water Agency (SCWA) published a draft of the Solano Multispecies HCP (SCWA 2012), but the HCP has not yet been adopted. The draft HCP establishes a framework for complying with federal and state endangered species regulations while accommodating future urban growth, infrastructure development, and ongoing operations and maintenance for flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the plan participants in Solano County over the next 30 years (SCWA 2012). A total of 37 species are proposed to be covered under the HCP.

East Contra Costa County Habitat and Natural Community Conservation Plan

The East Contra Costa County Habitat Conservation Plan Association intends to use the East Contra Costa County Habitat and Natural Community Conservation Plan (HNCCP) to protect natural resources in eastern Contra Costa County while improving environmental permitting processes for impacts to endangered species and contributing to their recovery. The East Contra Costa County HNCCP covers the cities of Clayton, Pittsburg, Antioch, Oakley, and Brentwood, and the unincorporated areas between those cities. The Pittsburg Substation falls within the East Contra Costa County HNCCP. The East Contra Costa County HNCCP addresses comprehensive species, wetlands, and ecosystem conservation. Agencies involved with approving permits for endangered species within the county request from USFWS and California Department of Fish and Wildlife (CDFW) to have authorized 30-year take permits for species covered under the federal Endangered Species Act (ESA) and the Natural Community Conservation Planning Act (NCCPA).

PG&E Bay Area Operations and Maintenance Habitat Conservation Plan

This HCP is intended to avoid, minimize, and mitigate temporary and permanent impacts on threatened and endangered species resulting from PG&E's operations and management and minor new construction activities in the Plan Area. It additionally provides the basis for incidental take authorization pursuant to the ESA for PG&E's current and future operations and management activities and minor new construction in the Plan Area.

4 – PRELIMINARY AGENCY CONSULTATION

No pre-survey contact with applicable wildlife agencies was conducted with regards to this BRTR. No agency-approvals were required for biologists conducting surveys. Agency protocols and best practices applied to the survey effort are detailed in Section 5.2 Biological Resource Survey Method.

5 – METHODS

5.0 DEFINITIONS

The following definitions were used to define special-status resources within the survey area.

5.0.0 Special-Status Plants

Plants were considered special-status species if they met one or more of the following criteria:

- species listed or candidates for listing as threatened or endangered under the FESA;
- species listed or candidates for listing as threatened or endangered under the CESA;
- species meeting the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 CCR Section 15380) that may include species not found on either federal or state endangered species lists; and
- species considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California (i.e., California Rare Plant Ranks [CRPRs] 1A, 1B, 2A, 2B, and 3).

5.0.1 Sensitive Natural Communities and Habitats

Natural communities were considered sensitive if they met one or more of the following criteria:

- sensitive vegetation communities/habitats identified in local or regional plans, policies, or regulations, or designated as sensitive by the CDFW or USFWS (including communities assigned a State Rarity Rank of S1-S3 under the CDFW Vegetation Classification and Mapping Program);
- areas that provide habitat for locally unique biotic species/communities (e.g., oak woodlands, grasslands, and forests);

- habitat that contains or supports rare, endangered, or threatened wildlife or plant species as defined by the CDFW and USFWS;
- habitat that supports one or more CDFW Species of Special Concern;
- areas that provide habitat for rare or endangered species and that meet the definition in CEQA Guidelines Section 15380;²
- existing game and wildlife refuges and reserves;
- lakes, wetlands, estuaries, lagoons, streams, and rivers; and
- riparian corridors.

5.0.2 Special-Status Wildlife

Wildlife species were considered special-status species if they met one or more of the following criteria:

- species listed or candidates for listing as threatened or endangered under the FESA;
- species listed or candidates for listing as threatened or endangered under the CESA;
- species that are fully protected in California (California Fish and Game Code Sections 3511, 4700, 5050, and 5515);
- species meeting the definition of endangered, rare, or threatened under CEQA (14 CCR Section 15380) that may include species not found on either federal or state endangered species lists;
- migratory birds and any of their parts, eggs, and nests, as protected by the MBTA;
- birds of prey (California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800);
- species designated as an SSC or as fully protected by the CDFW;
- species protected under the BGEPA;
- species designated as Birds of Conservation Concern or Watch List species by the CDFW; and
- bats considered by the Western Bat Working Group to be “high” or “medium” priority species.

² California Code of Regulations Title 14; Division 6; Chapter 3; Section 15380 - Endangered, Rare or Threatened Species

5.0.3 Special-Status Species with Potential to Occur

Species identified from a literature search were assigned one of the following potentials to occur:

- Present: The species was observed during surveys.
- High Potential: Suitable habitat for the species is present within the survey area, and recent (i.e., within 30 years) occurrences have been reported within 1 mile of the survey area; or marginal habitat is present, and recent occurrences have been recorded within 0.25 mile of the survey area. For plants, recent occurrences have been recorded within 0.25 mile, but the species was not observed during floristic surveys or was surveyed for outside of the known bloom period for the species.
- Moderate Potential: Suitable habitat for the species is present, and the survey area is located within the species' known range, but no recent (i.e., within 30 years) occurrences have been recorded between 1 and 5 miles from the survey area; or marginal habitat is present, the survey area is located within the species' known range, and multiple recent occurrences have been recorded between 1 and 5 miles from the survey area. For plants, recent occurrences have been recorded within 1 mile, but the species was not observed during floristic surveys or was surveyed for outside of the known bloom period for the species.
- Low Potential: Poor or marginal habitat for the species exists, and at least one recent occurrence has been recorded between 1 and 5 miles from the survey area; barriers to migration/dispersal may be present; or suitable habitat for the species is present within the survey area, but either no recent occurrences have been recorded between 1 and 5 miles from the survey area or the survey area is located outside of the species' known range. For plants, recent occurrences have been recorded within 5 miles, but the species was not observed during floristic surveys or was surveyed for outside of the known bloom period for the species.
- No Potential: No habitat exists for the species; no occurrences have been recorded between 1 and 5 miles from the survey area, or the survey area is outside of the species' known geographic or elevation range; and/or the species has been confirmed to be extirpated from the area.

5.1 RECORDS SEARCH

A literature and database review, including a geographic information system (GIS) review of records from the California Natural Diversity Database (CNDDB) (CDFW 2023), was conducted of the U.S. Geological Survey 7.5-minute quadrangles within and adjacent to the survey area. Records for all known special-status species within 0.25 mile, 1 mile, and 5 miles of the Proposed Project were compiled and reviewed. The CNPS Inventory of Rare and Endangered Plants of California (CNPS 2023a) was reviewed to obtain additional information regarding special-status plant species. The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2023a) was queried for a list of federally threatened and endangered species known to occur within or near the Proposed Project and to determine the project's proximity to USFWS designated critical habitat.

Further, the USFWS National Wetlands Inventory (USFWS 2023b) and the USGS National Hydrography Dataset (USGS 2023) were queried to determine if potentially jurisdictional waters had been previously mapped within the survey area.

5.2 BIOLOGICAL RESOURCE SURVEY METHOD

The geographical boundaries of the survey area were provided by LSPGC in the form of GIS shapefiles. This survey area included land-based portions of the proposed substation sites, as well as proposed transmission line routes, staging areas, and access roads. Due to access constraints imposed by the property owner, the terrestrial areas south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation were not included in biological resource surveys.

On the dates of May 23 to 26, 30, and 31, June 9, and July 10, 11, and 12, September 21 and 22 2023, and December 19, 2023, Insignia biologists conducted surveys to characterize the existing conditions within the survey area and identify potential biological resources (e.g., habitat for special-status species, sensitive natural communities, and jurisdictional waters) that may occur. The survey area is shown in Attachment E: Biological Resources Map. Approximately 569.7 acres of terrestrial habitat and land cover were surveyed.

The biologists conducted a habitat assessment, floristic botanical surveys, and a preliminary assessment of water features potentially under the jurisdiction of the USACE, RWQCB, and CDFW within the approximately 325-acre survey area (original survey area) between May 23 and July 12, 2023. Following the initial surveys, the original survey area was expanded to include an additional approximately 244 acres (expanded survey area), as shown in Attachment E: Biological Resources Map. A habitat assessment and preliminary assessment of water features was conducted on September 21 and 22 and December 19 within this expanded survey area, which includes terrestrial areas north of the Sacramento River and terrestrial areas south of Suisun Bay in the vicinity of PG&E's existing Pittsburgh Substation. Floristic botanical surveys were completed in 2024 within the expanded survey area. All sensitive natural resources observed were photographed and recorded using a submeter-accurate Global Positioning System (GPS) unit.

Surveys were conducted during daylight hours with clear to partly cloudy skies and did not occur in inclement weather conditions or fog cover. Temperatures ranged from 65 to 91 degrees Fahrenheit with wind speeds between 5 and 20 miles per hour.

5.2.0 Habitat Assessment

A habitat assessment was conducted within the survey area to determine whether the Proposed Project contained habitat suitable to support special-status species. Insignia biologists searched for areas of potential habitat by walking meandering transects that covered 100 percent of the survey area that was accessible. Areas that were inaccessible due to tall, non-transparent fencing and/or lack of landowner permission were not surveyed. The areas not surveyed are shown in Attachment E: Biological Resources Map.

As part of the habitat assessment, natural communities were mapped to the alliance level, as described in *A Manual of California Vegetation Online* (CNPS 2023b). Other non-vegetative

land covers were documented as well. The biologists identified dominant species, assigned alliances, and mapped the natural community and land cover boundaries using a submeter-accurate GPS unit. Natural communities were evaluated using NatureServe's Heritage Methodology, the same system used to assign global and state rarity ranks for plant and animal species in the California Natural Diversity Database (CNDDDB). Sensitive natural communities are natural communities with ranks of S1, S2, or S3.

5.2.1 Special-Status Plant Surveys

Special-status plant surveys were conducted and covered 100 percent of the original survey area. The results of this survey are summarized in Section 6.3 Special-Status Plant Species. A more detailed description of these surveys is provided in Attachment C: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report. Following the botanical surveys in July 2023, the survey area was expanded by approximately 244 acres. This expansion also occurred after the bloom period for most of the special-status plants with potential to occur concluded. Surveys within the expanded survey area were completed in 2024 and are detailed in Attachment D: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report Addendum. These results supplement those summarized in Section 6.3 Special-Status Plant Species.

Transect spacing between surveyors was less than or equal to 10 meters. Surveys were fully floristic in nature. The surveys were conducted in accordance with guidelines published by the CNPS (2001), the CDFW (2009), and the USFWS (2000), which state the following:

- Surveys should be conducted at the proper time of year when locally significant plants are both evident and identifiable.
- Surveys must be floristic in nature, and the species, subspecies, or variety must be identified for every observed plant to determine the rarity status.
- Surveys must be conducted in a manner that is consistent with conservation ethics and accepted plant collection and documentation techniques.

Field surveys were conducted within the bloom period for all but four special-status plant species with the potential to occur within the survey area; these special-status species are discussed further in Section 6 – Results. If present within the original survey area, the likelihood of encountering these four species was considered reasonably high; two of these species are perennial and observable year-round and the other two are annual species that have bloom periods extending into April. Given the unusually protracted rainy season and the associated cooler temperatures of the preceding winter, it was assumed that annual plants would delay their bloom periods by approximately 1 month (Moore and Laurenroth 2017).

5.2.2 Preliminary Jurisdictional Determination

Potentially jurisdictional waters assessments were conducted by walking meandering transects that were spaced no more than 15 meters apart and covered 100 percent of the survey area. Insignia biologists used guidance from *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008) to determine the location and size of linear water features potentially under the jurisdiction of the USACE, RWQCB, and/or CDFW. Photographs were taken for each linear water feature to record downstream and upstream conditions. OHWM indicators and measurements of each

jurisdictional linear water feature were recorded on electronic data sheets. Top of bank (TOB) measurements were also noted for each linear water feature to assess the areas that may be CDFW-jurisdictional under Section 1600 of the California Fish and Game Code.

Potentially jurisdictional wetland features were identified through combined observations of visible hydrology, vegetation typically associated with wetlands, and elevation relative to the surrounding topography.

Formal wetland delineations of all potential wetlands identified in this report were conducted in 2024. The results of these delineations are detailed in Attachment A: Collinsville Terrestrial Biological Resources Technical Report Addendum and supersede the data associated wetlands identified in Attachment E: Biological Resources Map and Attachment K: Potentially Jurisdictional Water Features Table.

6 – RESULTS

6.0 GEOGRAPHY, CLIMATE, AND HYDROLOGY

The Proposed Project area receives an average of 23 inches of rainfall per year, with the majority of precipitation falling between November and March. Average annual temperatures range from 48 to 73 degrees Fahrenheit (NOAA 2023). The elevation ranges from 3 to 250 feet above sea level.

6.1 RECORDS SEARCH

Results of the initial desktop analysis indicated that the upland areas around the proposed Collinsville Substation and transmission line routes are mainly grassland habitat and agricultural areas. Grassland habitats, in general, may provide suitable habitat for special-status plants. The survey area along the northern shore of the Sacramento River supports native riparian habitat areas and freshwater/estuarine wetlands. Areas adjacent to PG&E's existing Pittsburg Substation in Contra Costa County may have some fringe marsh habitat near the shoreline, but the majority of the facility is developed (e.g., graveled or paved) and rip-rap is present along much of the shoreline.

From this records search, Insignia compiled a list of 28 special-status plant species and 32 special-status wildlife species that have the potential to occur within 5 miles of the survey area. Eight potentially jurisdictional waters were identified within the survey area during USGS National Wetland Inventory database review.

6.2 VEGETATION COMMUNITIES

Twenty-two vegetation community alliances and land cover types were identified in the survey area, as presented in Table 1: Vegetation Community Alliances and Land Cover Types. The vegetation community and land cover locations are documented in Attachment E: Biological Resources Map. Photographs are provided in Attachment F: Habitat Assessment Photographs. The natural communities observed in the Survey Area are ranked S3, S4, S5, and semi-natural alliance (SNA) (semi-natural stands dominated by non-native species). Six of the 15 natural

Table 1: Vegetation Community Alliances and Land Cover Types

Vegetation Community Alliance or Land Cover Type	Approximate Size in Area Surveyed (acres)
<i>Baccharis pilularis</i> Shrubland Alliance	0.1
Bare Ground	1.6
<i>Brassica nigra</i> – <i>Centaurea (solstitialis, melitensis)</i> Herbaceous SNA	29.3
Developed	28.9
<i>Distichlis spicata</i> Herbaceous Alliance	17.5
Disturbed	16.6
<i>Frankenia salina</i> Herbaceous Alliance*	3.8
<i>Juncus arcticus</i> (var. <i>balticus, mexicanus</i>) Herbaceous Alliance	1.5
<i>Lepidium latifolium</i> – <i>Lactuca serriola</i> Herbaceous SNA	7.9
<i>Lolium perenne</i> Herbaceous SNA	394.2
Open Water	7.4
Ornamental Vegetation	2.9
<i>Polygonum lapathifolium</i> – <i>Xanthium strumarium</i> Herbaceous Alliance	0.1
Rip-Rap	0.5
<i>Rosa californica</i> Shrubland Alliance*	3.2
<i>Salix exigua</i> Shrubland Alliance	2.6
<i>Sarcocornia pacifica</i> (<i>Salicornia depressa</i>) Herbaceous Alliance*	1.0
<i>Schoenoplectus (acutus, californicus)</i> Herbaceous Alliance*	17.6
<i>Schoenoplectus acutus</i> / <i>Rosa californica</i> Association*	2.1
<i>Schoenoplectus americanus</i> Herbaceous Alliance*	0.3
<i>Typha (angustifolia, domingensis, latifolia)</i> Herbaceous Alliance	<0.1
Not Surveyed**	2.0
Total***	569.7

* CDFW-designated sensitive natural community (State Rarity Rank S1-S3).

** Areas that were inaccessible due to tall, non-transparent fencing and/or lack of landowner permission were not surveyed.

*** Due to rounding, total may not sum.

communities observed are considered sensitive. The following subsections describe each vegetation community identified within the survey area.

Approximately 2 acres of the survey area were inaccessible to Insignia biologists due to tall, non-transparent fencing and lack of landowner permission, as shown in Attachment E: Biological Resources Map. Based on aerial imagery from Google Earth, the unsurveyed areas are at an elementary school and are suspected to include both developed and bare ground.

6.2.0 *Baccharis pilularis* Shrubland Alliance (S5)

The *Baccharis pilularis* Shrubland Alliance can be found in coastal bluffs, terraces, stabilized dunes, and river mouths with variable soils ranging from sandy to relatively heavy clay. Coyote brush (*Baccharis pilularis*) is the dominant plant species; it generally occupies at least 50 percent of the shrub canopy or is co-dominant with silk tassel bush (*Garrya elliptica*) or coffeeberry (*Frangula californica*). This community was observed within the survey area south of Suisun Bay near PG&E's existing Pittsburg Substation and alongside non-native forbs.

6.2.1 *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

This community is typically associated with disturbed areas where black mustard (*Brassica nigra*) and short-pod mustard (*Hirshfeldia incana*) achieve 80 percent relative cover in the herbaceous layer. Similar ruderal forbs, including tocolote (*Centaurea melitensis*) and yellow star thistle (*Centaurea solstitialis*), may achieve dominance or co-dominance. Within the survey area, this community was generally observed in dense colonies between stands of non-native grassland in areas where heavy cattle grazing historically occurred.

6.2.2 *Distichlis spicata* Herbaceous Alliance (S4)

The *Distichlis spicata* Herbaceous Alliance is found commonly in alkaline or saline ecosystems adjacent to estuarine marshes or other wetland habitats that may be tidally influenced. Salt grass (*Distichlis spicata*) typically contains greater than 30 percent relative cover in the herbaceous layer; however, it can be co-dominant with other halophytes, including spear-leaved orache (*Atriplex prostrata*) and alkali heath (*Frankenia salina*). The herbaceous layer is continuous and typically leaves an undeveloped or sparse shrub layer. This community was generally observed north of the Sacramento River within standing water in tidally influenced brackish areas.

6.2.3 *Frankenia salina* Herbaceous Alliance (S3)

The *Frankenia salina* Herbaceous Alliance is found commonly adjacent to coastal salt marshes or brackish marshes. Typically, alkali heath contains greater than 30 percent relative cover in the herbaceous layer and stands are often found in the high marsh where soils are intermittently or seasonally flooded. Pickleweed (*Salicornia pacifica*) is often found among this community in lower percentages of 5 to 10 percent. This community was observed in the portion of the survey area located on the northern shore of the Sacramento River at the highest point of the marsh and adjacent to water that seasonally and tidally inundates this community.

6.2.4 *Juncus arcticus* (var. *balticus*, *mexicanus*) Herbaceous Alliance (S4)

The *Juncus arcticus* (var. *balticus*, *mexicanus*) Herbaceous Alliance varies widely in species composition based on the geographic location, but it typically includes greater than 30 percent relative cover in the shrub layer of arctic rush (*Juncus arcticus*) or Baltic rush (*Juncus balticus*). This community generally occurs in wet meadows with poor draining soils between estuarine marshes and sloughs. This community was observed in the portion of the survey area located on the northern shore of the Sacramento River adjacent to the shoreline and in upland areas of the marsh between sloughs.

6.2.5 *Lolium perenne* Herbaceous Semi-Natural Alliance

This community contains Italian rye grass (*Festuca perennis*) that is dominant or co-dominant with other non-natives in the herbaceous layer, including rip-gut brome (*Bromus diandrus*), sea barley (*Hordeum marinum*), and wild oat (*Avena fatua*). Typically, the herbaceous layer is continuous and often forms monocultures, which contributes to a poorly developed shrub layer. Within the survey area, this community is the most widespread and is found in upland areas that lack native species and have low species diversity. Additionally, this community shows evidence of heavy grazing, landowner maintenance, and agriculture use. During the September 2023 survey, large tracts of this community were being actively converted into access roads as part of the Solano 4 Wind Project.

6.2.6 *Polygonum lapathifolium* – *Xanthium strumarium* Herbaceous Alliance (S4)

This community contains rough cocklebur (*Xanthium strumarium*) that is dominant or co-dominant with lanceleaf water plantain (*Alisma lanceolatum*), Northern water plantain (*Alisma triviale*), Common sunflower (*Helianthus annuus*) as well as a variety of knotweeds and smartweeds (*Polygonum* spp.) in the herbaceous layer. Within the survey area, this community is dominated primarily by rough cocklebur and other smartweeds. During the September 2023 survey, one isolated community was found situated west of Stratton Lane and east of Latin Lane within stands of *Lolium perenne* Herbaceous Semi-Natural Alliance.

6.2.7 *Lepidium latifolium* – *Lactuca serriola* Herbaceous Semi-Natural Alliance

The *Lepidium latifolium* – *Lactuca serriola* Herbaceous SNA is dominated by non-native species in the shrub layer. This vegetation community can be found near disturbed or developed areas within the survey area south of Suisun Bay adjacent to PG&E's existing Pittsburg Substation. Species observed within this cover type include stinkwort (*Dittrichia graveolens*) as 30 percent of the ground cover, accompanied by Russian thistle (*Salsola* spp.), coyote brush, and various others to create an intermittent to continuous herbaceous layer.

6.2.8 *Rosa californica* Shrubland Alliance (S3)

The *Rosa californica* Shrubland Alliance is commonly found in creek bottoms, stream terraces, and bordering sloughs and channels. California wild rose (*Rosa californica*) typically contains greater than 50 percent relative cover in the shrub canopy and may be co-dominant with Himalayan blackberry (*Rubus armeniacus*). The shrub layer is thick and continuous while the herbaceous layer is open. Emergent trees, including willows (*Salix* spp.), may be present in low quantities. This community is found within the survey area on the northern shore of the Sacramento River adjacent to intertidal sloughs. Himalayan blackberry was commonly observed,

and in some cases co-dominant, among thick patches of California wild rose. Isolated red willows (*Salix laevigata*) were observed scattered throughout this community.

6.2.9 *Salix exigua* Shrubland Alliance (S4)

The *Salix exigua* Shrubland Alliance is widespread in California and contains significant variation when determining habitat and shrub composition. Often the shrub layer is intermittent to continuous dominated by sandbar willow (*Salix exigua*) and contains greater than 20 percent absolute cover in the shrub layer. In a high-quality habitat, sandbar willow may be co-dominant with other willow species and emergent riparian trees may be present at a low cover. Within the survey area, this community was observed between tidally influenced sloughs and estuarine marshes containing sandy soil. Heavy cattle grazing was observed to have a direct impact on this community, leading to a sparse shrub layer dominated by sandbar willows that are in the process of re-growing.

6.2.10 *Sarcocornia pacifica* (*Salicornia depressa*) Herbaceous Alliance (S3)

The *Sarcocornia pacifica* (*Salicornia depressa*) Herbaceous Alliance is found almost exclusively in coastal salt marsh and alkaline flat habitats and typically contains greater than 50 percent cover of pickleweed (*Sarcocornia pacifica*) in the herbaceous layer. Other salt-tolerant marsh plants such as alkali heath (*Frankenia salina*) and salt grass (*Distichlis spicata*) are frequently associated with this community. Within the survey area, this community was observed within dry salt flats adjacent to grazed and cultivated Italian ryegrass fields. Along the margins of these communities, pickleweed was codominant with annual grasses.

6.2.11 *Schoenoplectus (acutus, californicus)* Herbaceous Alliance (S3S4)

This community is found in a variety of wetland habitats, including brackish marshes, freshwater ponds, sloughs, swamps, and roadside ditches. The herbaceous layer is intermittent to continuous, forming thick stands that often result in a poorly developed shrub layer. Hardstem bulrush (*Schoenoplectus acutus*) or giant bulrush (*Schoenoplectus californicus*) typically contain greater than 50 percent relative cover in the herbaceous layer. Within the survey area, this community was observed adjacent to the north shore of the Sacramento River, within sloughs, and in tidally influenced areas that are semi-brackish. Species composition varied depending on the salinity of the water and proximity to the shoreline, as hardstem bulrush is generally less tolerant of brackish conditions.

6.2.12 *Schoenoplectus acutus/Rosa californica* Association (S3S4)

Schoenoplectus acutus/Rosa californica Association occurs on tidal sloughs that are seasonally or tidally inundated with brackish or semi-brackish water. This association contains greater than 50 percent relative cover of hardstem bulrush and giant bulrush with as low as 5 percent absolute cover of California wild rose. Within the survey area, this habitat occurred primarily on man-made earthen levees bordering sloughs adjacent to the shoreline. California wild rose was observed in high quantities growing among stands of bulrush (*Schoenoplectus* spp.), sometimes achieving 20 to 30 percent relative cover.

6.2.13 *Schoenoplectus americanus* Herbaceous Alliance (S3)

Similar to the *Schoenoplectus (acutus, californicus)* Herbaceous Alliance, this community is found in a variety of wetland habitats, including brackish marshes, freshwater ponds, sloughs, swamps, and roadside ditches. The herbaceous layer is intermittent to continuous, forming thick stands. Chairmaker's bulrush (*Schoenoplectus americanus*) typically make up greater than 50 percent of relative cover. Within the survey area, this community was observed within wetlands adjacent to Stratton Lane and immediately adjacent to dense stands of *Schoenoplectus acutus*.

6.2.14 *Typha (angustifolia, domingensis, latifolia)* Herbaceous Alliance (S5)

Typha (angustifolia, domingensis, latifolia) Herbaceous Alliance occurs in semi-permanently flooded freshwater or brackish marshes. This alliance contains 50 percent or greater of various *Typha* spp. along with saltgrass and smartweed comprising the remainder of the herbaceous layer. Within the survey area, this community occurred within wetland habitats immediately adjacent to Stratton Lane.

6.3 SPECIAL-STATUS PLANT SPECIES

Background research conducted for the Proposed Project generated a list of 28 special-status plant species that have a potential to occur in the survey area. This list was generated by comparing the species' ranges and habitat requirements with the location of the Proposed Project and habitat types within it. These species are presented in Table 2: Special-Status Plant Species with the Potential to Occur, which provides the listing status, life history, and bloom period for each species. Special-status plant surveys were fully floristic. CNDDDB occurrences of special-status wildlife are presented in Attachment G: CNDDDB Occurrences of Special-Status Plant Species.³

Reference checks were performed for recorded populations of special-status plant species. Eight reference sites were visited by the botanical survey team prior to floristic botanical surveys within the survey area. Many locations with historically documented occurrences of special-status plants have been converted to active agriculture, which is extensive and is the primary land use within 5 miles of the survey area. Further, reference populations for many special-status plant species were located on private property that was inaccessible to the survey team. No special-status plants were observed during field reference checks.

To supplement field reference checks, local botanists working in areas adjacent to the Proposed Project were consulted. Four special-status plant species (*Fritillaria liliacea*, *Helianthella castanea*, *Centromadia parryi* ssp. *parryi*, and *Senecio aphanactis*) were confirmed to be blooming in habitats adjacent to the Proposed Project before or during the May and July survey periods (H. Bartosh 2023).

³ The findings pertaining to the presence of special-status plants presented in this report are supplemented by those documented in Attachment C: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report.

Table 2: Special-Status Plant Species with the Potential to Occur

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Alkali milkvetch	<i>Astragalus tener</i> var. <i>tener</i>	1B.2	This species occurs in alkali playas, valley and foothill grasslands, vernal pools, and wetlands at elevations between 5 and 195 feet.	March to June	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Antioch Dunes buckwheat	<i>Eriogonum nudum</i> var. <i>psychicola</i>	1B.1	This species occurs in Interior dunes at elevations between 0 to 65 feet.	July to October	Perennial herb	This species has been documented between 1 and 5 miles from the expanded survey area and suitable habitat and conditions for this species are present within the expanded survey area; however, no observations were recorded during floristic field surveys in May and July 2023. No Potential

⁴ Explanation of federal and state listing codes:

Federal listing code: CNPS CRPRs:

-FE: Federally listed as endangered
 -1A: Presumed Extinct in California and rare/extinct elsewhere
 -1B: Rare or endangered in California and elsewhere
 -2B: Rare, threatened, or endangered in California, but more common elsewhere

State listing code:

-SE: State-listed as endangered
 CRPR Threat Code:
 -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 to 80 percent of occurrences threatened, moderate degree and immediacy of threat)

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Antioch Dunes evening-primrose	<i>Oenothera deltoides</i> ssp. <i>howellii</i>	FE, SE, 1B.1	This species occurs in Interior dunes at elevations between 0 to 100 feet.	March to September	Perennial herb	Suitable habitat and conditions for this species are not present within the expanded survey area, and no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 1 mile of the expanded survey area south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation, but is otherwise found between 1 and 5 miles from the remainder of the expanded survey area. Low Potential
Bearded popcornflower	<i>Plagiobothrys hystriculus</i>	1B.1	This species occurs in Valley & foothill grassland, Vernal pool, Wetland at elevations between 0 to 900 feet.	April to May	Annual herb	This species has been documented between 1 and 5 miles from the expanded survey area and suitable habitat and conditions for this species are present within the expanded survey area; however, no observations were recorded during floristic field surveys in May and July 2023. Low Potential
Big tarplant	<i>Blepharizonia plumosa</i>	1B.1	This species occurs in Valley & foothill grassland at elevations between 100 to 1,655 feet.	July to October	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Bolander's water-hemlock	<i>Cicuta maculata</i> var. <i>bolanderi</i>	2B.1	This species occurs in Marsh & swamp, Salt marsh, Wetland at elevations between 0 to 655 feet.	July to September	Perennial herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 0.25 mile of the expanded survey area. High Potential
Brittlescale	<i>Atriplex depressa</i>	1B.2	This species occurs in Alkali playa, Chenopod scrub, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland at elevations between 5 to 1,050 feet.	April to October	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Carquinez goldenbush	<i>Isocoma arguta</i>	1B.1	This species occurs in Valley & foothill grassland at elevations between 5 to 65 feet.	August to December	Perennial shrub	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Chaparral ragwort	<i>Senecio aphanactis</i>	2B.2	This species occurs in Chaparral, Cismontane woodland, Coastal scrub at elevations between 50 to 2,625 feet.	January to April	Annual herb	This species has been documented between 1 and 5 miles from the expanded survey area however suitable habitat and conditions for this species are not present within the expanded survey area; no observations were recorded during floristic field surveys in May and July 2023. No Potential

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE, 1B.1	This species occurs in Alkali playa, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland at elevations between 0 to 1,540 feet.	March to June	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Contra Costa wallflower	<i>Erysimum capitatum</i> var. <i>angustatum</i>	FE, SE, 1B.1	This species occurs in Interior dunes at elevations between 10 to 65 feet.	March to July	Perennial herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Welsh mudwort	<i>Limosella australis</i>	2B.1	This species occurs in Brackish marsh, Freshwater marsh, Marsh & swamp, Riparian scrub, Wetland at elevations between 0 to 10 feet.	May to August	Perennial stoloniferous herb	Suitable habitat is present within the expanded survey area. Multiple observations of this species were made during floristic field surveys. Present
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	1B.2	This species occurs in Freshwater marsh, Marsh & swamp, Wetland at elevations between 0 to 15 feet.	May to July	Perennial herb	Suitable habitat is present within the expanded survey area. Multiple observations of this species were made during floristic field surveys. Present

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Diablo Helianthella	<i>Helianthella castanea</i>	1B.2	This species occurs in Broadleaved upland forest, Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland at elevations between 195 to 4,265 feet.	March to June	Perennial herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Diamond-petaled California poppy	<i>Eschscholzia rhombipetala</i>	1B.1	This species occurs in Valley & foothill grassland at elevations between 0 to 3,200 feet.	March to April	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Dwarf downingia	<i>Downingia pusilla</i>	2B.2	This species occurs in Valley & foothill grassland, Vernal pool, Wetland at elevations between 5 to 1,460 feet.	March to May	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential
Fragrant fritillary	<i>Fritillaria liliacea</i>	1B.2	This species occurs in Cismontane woodland, Coastal prairie, Coastal scrub, Ultramafic, Valley & foothill grassland at elevations between 10 to 1,345 feet.	February to April	Perennial bulbiferous herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 5 miles of the expanded survey area. Low Potential

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Hall's bush-mallow	<i>Malacothamnus hallii</i>	1B.2	This species occurs in Chaparral, Coastal scrub, Ultramafic at elevations between 35 to 2,495 feet.	May to September	Perennial deciduous shrub	This species has been documented between 1 and 5 miles from the expanded survey area; however, suitable habitat and conditions for this species are not present within the expanded survey area. In addition, this species was not observed during floristic field surveys in May and July 2023. No Potential
Heartscale	<i>Atriplex cordulata</i> var. <i>cordulata</i>	1B.2	This species occurs in Chenopod scrub, Meadow & seep, Valley & foothill grassland at elevations between 0 to 1,835 feet.	April to October	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential
Hoover's cryptantha	<i>Cryptantha hooveri</i>	1A	This species occurs in Interior dunes, Valley & foothill grassland at elevations between 30 to 490 feet.	April to May	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential
Keck's checkerbloom	<i>Sidalcea keckii</i>	FE, 1B.1	This species occurs in Cismontane woodland, Ultramafic, Valley & foothill grassland at elevations between 245 to 2,135 feet.	April to June	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	1B.1	This species occurs in Freshwater marsh, Marsh & swamp, Riparian scrub, Wetland at elevations between 0 to 35 feet.	April to November	Perennial rhizomatous herb	Suitable habitat is present within the Project area. Multiple observations of this species were made during floristic field surveys. Present
Mt. Diablo buckwheat	<i>Eriogonum truncatum</i>	1B.1	This species occurs in Chaparral, Coastal scrub, Valley & foothill grassland at elevations between 10 to 1,150 feet.	April to September	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential
Papoose tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	1B.2	This species occurs in Chaparral, Coastal prairie, Meadow & seep, Marsh & swamp, Valley & foothill grassland at elevations between 0 to 1,380 feet.	May to November	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential
San Joaquin spearscale	<i>Extriplex joaquinana</i>	1B.2	This species occurs in Alkali playa, Chenopod scrub, Meadow & seep, Valley & foothill grassland at elevations between 5 to 2,740 feet.	April to October	Annual herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential

Common Name	Scientific Name	Listing Status ⁴	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Showy golden madia	<i>Madia radiata</i>	1B.1	This species occurs in Cismontane woodland, Valley & foothill grassland at elevations between 80 to 3,985 feet.	March to May	Annual herb	This species has been documented between 1 and 5 miles from the expanded survey area and suitable habitat and conditions for this species are present within the expanded survey area; however, no observations were recorded during floristic field surveys in May and July 2023. No Potential
Soft salty bird's-beak	<i>Chloropyron molle</i> ssp. <i>molle</i>	FE, 1B.2	This species occurs in Marsh & swamp, Salt marsh, Wetland at elevations between 0 to 10 feet.	June to November	Annual herb (hemiparasitic)	Suitable habitat and conditions for this species are not present within the expanded survey area, and no observations were recorded during floristic field surveys in May and July 2023. This species has been documented between 1 and 5 miles from the expanded survey area. Low Potential
Suisun Marsh aster	<i>Symphyotrichum lentum</i>	1B.2	This species occurs in Brackish marsh, Freshwater marsh, Marsh & swamp, Wetland at elevations between 0 to 10 feet.	April to November	Perennial rhizomatous herb	Suitable habitat and conditions for this species are present within the expanded survey area, but no observations were recorded during floristic field surveys in May and July 2023. This species has been documented within 0.25 mile of the expanded survey area. High Potential

Three special-status plant species were observed during field surveys of the original survey area: Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), and Welsh mudwort (*Limosella australis*). The locations of these plants and the boundaries of the original survey area are shown in Attachment E: Biological Resources Map. All observed occurrences of special-status plants were along the northern shore of the Sacramento River within potentially jurisdictional wetland habitat.

Four special-status plants with the potential to occur within the survey area have bloom periods that were not captured during this botanical survey. These include:

- Carquinez goldenbush (*Isocoma arguta*)
- Chaparral ragwort (*Senecio aphanactis*)
- Diamond-petaled California poppy (*Eschscholzia rhombipetala*)
- Fragrant fritillary (*Fritillaria liliacea*)

Two of these species (Carquinez goldenbush and fragrant fritillary) are perennial species and would be observable within the survey area year-round. However, the remaining two species (Diamond-petaled California poppy and chaparral ragwort) are annual herbs and, if present within the survey areas, may not have been readily identifiable during the survey periods of May and July. Chaparral ragwort was confirmed to be in bloom on March 3, 2023 in surrounding areas (H. Bartosh 2023), however as described in Table 2: Special-Status Plant Species with the Potential to Occur, no suitable habitat for this species is found within the original survey area. The results of these surveys are detailed further in Attachment C: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report.

Supplemental targeted surveys were conducted within the original survey area in 2024 during the bloom period for diamond-petaled California poppy (March to April). Additionally, floristic surveys were conducted in 2024 within the expanded survey area. The findings pertaining to those surveys are detailed in Attachment D: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report Addendum and supplement the results of this report.

6.3.0 Species Present within the Survey Area

Welsh Mudwort

Welsh mudwort (*Limosella australis*) can be observed on large patches of tidal mudflats with brackish or tidal freshwater, as well as alkali playa, cismontane woodland, valley and foothill grasslands, vernal pools, and wetlands. The plant will generally grow grass-like leaves in clumps of 5-10, with short, white flowers about an inch tall. This species was observed during the survey several times along the northern intertidal margins of the Sacramento River.

Delta Tule Pea

The Delta Tule Pea (*Lathyrus jepsonii* var. *jepsonii*) can be found in wetlands and dunes, among other suitable habitats. The plant can be identified via its pink to purple inflorescence or based on characteristics of its family (Fabaceae) such as branched tendrils, lance-shaped leaflets, or legume pods. Multiple observations of this species were made during the survey, usually closely associated with *Rosa californica* in close proximity to the northern shore of the Sacramento

River. Several additional observations of this species were made on the southern shore of the Sacramento River along a metal fence within rip rap.

Mason's Lilaeopsis

Mason's Lilaeopsis (*Lilaeopsis masonii*), endemic to California, is found in freshwater and brackish marshes and other estuary habitats. The species spreads laterally by rhizomatous growth and grows linear leaves averaging around 2-7 centimeters long. It has small, white or greenish flowers in numbers of 3-8 per umbel. Multiple observations of this species were made along the northern intertidal margins of the Sacramento River.

6.3.1 Species with a High Potential to Occur

Bolander's water-hemlock

Bolander's Water hemlock (*Circuta maculata* var. *bolanderi*) will often be associated with ditches, stream banks, pond margins, and marshes among other suitable habitats like valley and foothill grasslands, vernal pools, and other wetlands. Water birds often consume the round fruits of the plant. The small white flowers of this species comprise an umbel atop tall stems, which are accompanied by fern-like leaves. There is suitable habitat within the survey area in wetlands immediately adjacent to the northern shore of the Sacramento River and recent CNDDDB observations for this plant have been recorded within 0.25 mile of the survey area, thus making it highly likely that this species will occur within the survey area.

Suisun Marsh Aster

The Suisun Marsh Aster (*Symphyotrichum lentum*), an endemic species to Suisun Marsh, is a spreading herb that can grow up to 4 feet tall. Like other members of Asteraceae, this species features an inflorescence with yellow flowers in the middle, surrounded by white flowers on the outside. It can be found in brackish or freshwater marshes and alongside the backs of sloughs and watercourses. This species prefers soils with higher clay and loam contents and attracts butterflies. Suitable wetland habitat for the species was observed within the survey area in wetlands immediately adjacent to the northern shore of the Sacramento River. Observations within 0.25 of a mile of the survey area have been recently documented. This species has a high potential to occur within the survey area.

6.4 SPECIAL-STATUS WILDLIFE SPECIES

Based on the literature and database review, 32 special-status wildlife species were identified that have the potential to occur within the survey area. The species name, listing status, life history, known locations, and a brief assessment of the potential to occur within the survey area are provided for each species in Table 3: Special-Status Wildlife Species with the Potential to Occur. CNDDDB occurrences of special-status wildlife are presented in Attachment H: CNDDDB Occurrences of Special-Status Wildlife Species. The approximate nest location is shown in Attachment E: Biological Resources Map.

Table 3: Special-Status Wildlife Species with the Potential to Occur

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Amphibians				
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	This highly aquatic species typically inhabits quiet pools of streams, marshes and ponds, preferring habitat with extensive shoreline vegetation. Its diet is highly variable and may include various invertebrates, amphibians, and small mammals. In Northern California, breeding usually takes place between March and July.	Suitable wetland habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles from the survey area. This species was not observed during the field survey. Low Potential
California tiger salamander – central California Distinct Population Segment (DPS)	<i>Ambystoma californiense</i> pop. 1	FT, ST, WL	This species occupies grassland, savanna, or open woodland habitats and spends much of the year in underground refuges, especially ground squirrel (<i>Ammospermophilus beechyi</i>) burrows. Vernal pools or other seasonal water sources are required for breeding and egg laying. Adults may travel hundreds of meters across upland habitat to reach breeding ponds following seasonal rains during November to February. Its diet is highly variable and may include invertebrates, amphibians, or small mammals.	Annual grassland habitat is present within the survey area; however, no suitable refuge burrows were observed during field surveys. Further, no suitable vernal pools were observed within the survey area. These findings are consistent with previous habitat assessments for this species within the survey area. These protocol-level assessments concluded that the survey area lacks suitable aquatic habitat (Jennings 2010), contains multiple barriers to movement/dispersal (Area West Environmental [AWE] 2017), has land use practices that inhibit dispersal (AECOM 2018b), and has a scarcity of suitable burrows refugia. This species has been recently documented between 1 and 5 miles from the survey area. This species was not observed during the field survey. Low Potential

⁵ Explanation of federal and state listing codes:

Federal listing codes:

-FE: Federally listed as endangered
 -FT: Federally listed as threatened
 -BCC: USFWS Bird of Conservation Concern

State listing codes:

-SE: State-listed as endangered
 -ST: State-listed as threatened
 -FP: Fully protected species

-SSC: Species of special concern
 -WL: Watch list species
 -WBWG-H: Western Bat Working Group high designation

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Birds				
American peregrine falcon	<i>Falco peregrinus anatum</i>	FP	This species can be found occupying several biomes throughout California year-round. Breeding takes place from April to June. A majority of nests are constructed on ledges on relatively tall cliffs in remote areas with minimal human disturbance and are often reused from year to year. Foraging occurs in a variety of habitat types, and its diet consists almost exclusively of other birds.	Suitable nesting habitat does not occur in or near the survey area. Foraging and migrating individuals may occur in or near the survey area; however, because this species is highly mobile, any potential Proposed Project-related encounters are not likely to impact this species. This species was not observed during the field survey. No Potential (Nesting) Low Potential (Foraging/Migration)
Burrowing owl	<i>Athene cunicularia hypugaea</i>	SSC, BCC	This species can be found in a variety of open habitat types, including grassland, savanna, desert scrub, agricultural, and urban areas. Breeding occurs from March through October, and nesting takes place within abandoned burrows dug by burrowing mammals. This species preys on large insects and small mammals.	Grassland habitat suitable for foraging is found in the survey area north of the Sacramento River; however, burrows suitable for species occupation and breeding were not observed during the field surveys. Migrating individuals have been reported to occur within the survey area during winter months (AECOM 2018a), and all CNDDDB occurrences north of the Sacramento River were recorded during the non-breeding season. Nesting habitat is limited and marginal given the ongoing agricultural activity north of the Sacramento River, but ground squirrels may recolonize and provide suitable burrow habitat if the fields are left fallow or grazed (AECOM 2018a). This species was not observed during the field surveys. Moderate Potential (Nesting) High Potential (Foraging/Migration)

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
California black rail	<i>Laterallus jamaicensis coturniculus</i>	ST, FP	This species is found in tidal emergent wetlands dominated by pickleweed (<i>Salicornia</i> spp.) or in brackish marshes supporting bulrushes in association with pickleweed. Breeding occurs from March to June, and nests are concealed in dense vegetation (often pickleweed) near the upper limits of tidal flooding.	Suitable habitat capable of supporting foraging individuals is present in the survey area adjacent to the Sacramento River. Wetland habitats within the survey area lack large stands of pickleweed and tidal flux preferred by the species for breeding sites. This species has been recently documented within 1 mile of the survey area, but was not observed during the field survey. Moderate Potential (Nesting) High Potential (Foraging)
California least tern	<i>Stemula antillarum browni</i>	FE, SE, FP	This species is found throughout California and requires undisturbed stretches of beach and coastline. Adults forage in bays and estuaries for a variety of fish species. The California least tern nests in colonies on relatively open beaches where vegetation is limited by natural scouring from tidal action. However, to avoid humans, tern colonies have been known to move to inland mud flats and dredge fill sites. The breeding season typically begins in early to mid-May, and nests are constructed directly on the ground.	Suitable foraging habitat for this species is found adjacent to the survey area within the Sacramento River and Suisun Bay. However, no suitable breeding habitat is found within the survey area. This species has been documented between 1 and 5 miles from the survey area; however, all records are more than 30 years old. This species was not observed during the field survey. No Potential (Nesting) Moderate Potential (Foraging/Migration)

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Northern harrier	<i>Circus cyaneus</i>	SSC, BCC	This species is found in a variety of open grassland, wetland, and agricultural habitats. Open wetland habitats used for breeding include marshy meadows, wet and lightly grazed pastures, and freshwater and brackish marshes. Breeding habitat also includes dry upland habitats, such as grassland, cropland, drained marshland, and shrub-steppe in cold deserts. Wintering habitat includes open areas dominated by herbaceous vegetation, such as grassland, pastures, cropland, coastal sand dunes, brackish and freshwater marshes, and estuaries.	Suitable foraging and nesting habitat are present in the survey area, and two individuals were observed foraging within the survey area in wetland habitat adjacent to the northern shore of the Sacramento River. This species has been documented between 1 and 5 miles from the survey area. High Potential (Nesting) Present (Foraging)
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	SSC, BCC	This species occurs in freshwater and saltwater marshes. It requires thick, continuous cover down to the water surface for foraging, and tall grasses, tule patches, and willows for nesting.	Suitable habitat for this species is present within the portion of the survey area located on the northern shore of the Sacramento River. This species has been documented within 1 mile of the survey area, but was not observed during the field survey. High Potential (Nesting) High Potential (Foraging)
Short-eared owl	<i>Asio flammeus</i>	SSC, BCC	This species occurs in agricultural fields, grazed and ungrazed grasslands, and freshwater and saltwater marshes. This species requires open country that supports concentrations of microtine rodents and herbaceous cover sufficient to conceal its nest from predators. Its nests are built on the ground. This species' diet consists of small mammals and is particularly affected by the 3- to 4-year cycle of the California vole (<i>Microtus californicus</i>). Its breeding season occurs from April through July.	Suitable foraging and breeding habitat is present in the survey area. This species has been documented between 1 and 5 miles from the survey area; however, all records are more than 30 years old. This species was not observed during the field survey period. Low Potential (Nesting) Low Potential (Foraging)

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Song sparrow ("Modesto" population)	<i>Melospiza melodia</i> pop. 1	SSC	This species inhabits freshwater marshes, riparian thickets, sparsely vegetated irrigation canals, and valley oak restoration sites. It seeks cover and nests in willow and nettle thickets, growths of tules and cattails, and riparian oak forests with a sufficient understory of blackberry.	Suitable breeding and foraging habitat for this species is within the portion of the survey area located on the northern shore of the Sacramento River. This species has been documented between 1 and 5 miles from the survey area; however, all records are over 30 years old. This species was not observed during the field survey. Low Potential (Nesting) Low Potential (Foraging)
Suisun song sparrow	<i>Melospiza melodia maxillaris</i>	SSC	This species occurs throughout California, primarily in saltwater and brackish marshes. The species requires dense vegetation as protection from predators and high tide, for perching, and for nesting habitat. Breeding season is from early March through July.	Suitable breeding and foraging habitat for this species can be found within the portion of the survey area located on the northern shore of the Sacramento River. This species has been documented within 1 mile of the survey area south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation and within 5 miles of the survey area along the northern shore of the Sacramento River, but was not observed during the field survey. High Potential (Nesting) High Potential (Foraging)
Swainson's hawk	<i>Buteo swainsoni</i>	ST	This species occurs in open grasslands, prairies, and farmlands that have nearby trees for nesting. It nests in bushes and in several tree species, including oaks (<i>Quercus</i> spp.), willow, and eucalyptus, and usually nests in trees in riparian areas near open fields. This species primarily hunts small rodents, rabbits, birds, and reptiles during the breeding season. It largely lives off insects, such as grasshoppers and beetles, during the non-breeding season. It reproduces from March through April, incubates for 34 to 35 days, and fledges 6 weeks later.	An adult male hawk was observed flying overhead during field surveys. Suitable foraging and breeding habitat is present, and multiple occurrences of the species have been documented between 1 and 5 miles from the survey area. High Potential (Nesting) Present (Foraging/Migration)

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Tricolored blackbird	<i>Agelaius tricolor</i>	ST, SSC, BCC	This highly colonial species requires open water, protected nesting substrate, and foraging areas adjacent to the colony with insect prey. Breeding occurs near fresh water, often in emergent wetlands with tall, dense cattails or tules, but also in thickets of willow; blackberry; wild rose; or tall, dense forbs. Seeds and cultivated grains, such as rice and oats, compose most of its fall and winter diet. Tricolored blackbird forages on the ground in croplands, grassy fields, flooded land, and along edges of ponds. The breeding season usually occurs from mid-April to late July.	Some marginal willow thicket and wild rose habitat is present within the survey area; however, fresh waterbodies suitable for nesting are not present. Suitable foraging habitat is present in the northern portion of the survey area. This species has been documented between 1 and 5 miles from the survey area; however, all records are over 30 years old. This species was not observed during the field survey. Low Potential (Nesting) Moderate Potential (Foraging)
White-tailed kite	<i>Elanus leucurus</i>	FP	This species nests in riparian or oak woodland adjacent to undisturbed, open fields and grasslands, meadows, farmlands, and emergent wetlands, where it hunts rodents. Breeding generally occurs from February through October. White-tailed kite lays three to five eggs, which it incubates for 30 to 32 days, after which fledging occurs at 5 to 6 weeks of age.	Suitable foraging habitat for the species is present in the survey area; however, oak woodland suitable for nesting is not present. This species has been documented between 1 and 5 miles from the survey area, but was not observed during the field survey. Low Potential (Nesting) Moderate Potential (Foraging)
Yellow rail	<i>Coturnicops noveboracensis</i>	SSC	This species breeds in densely vegetated, shallow freshwater marshes and wet meadows. Breeding occurs from May through September. Wintering birds frequent mature salt marshes well above the water line.	Marginal breeding habitat and suitable wintering habitat are present within the survey area. This species has been documented between 1 and 5 miles from the survey area, but was not observed during the field survey. Low Potential (Nesting) Moderate Potential (Foraging/Wintering)

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Fish				
Delta smelt	<i>Hypomesus transpacificus</i>	FT, SE	Delta smelt are a euryhaline species (i.e., a species adapted to living in fresh and brackish water) that occupies estuarine areas with salinities below 2 parts per thousand. This species is found only from the San Pablo Bay upstream through the Sacramento-San Joaquin River Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. Delta smelt spawn in shallow, fresh, or slightly brackish water upstream from the brackish water habitat associated with the mixing zone.	Critical habitat and documented occurrences of this species can be found within the waters adjacent to the survey area. However, no suitable aquatic/estuarine habitat for this species was present within the survey area. No Potential
Green sturgeon - southern DPS	<i>Acipenser medirostris</i> pop. 1	FT	This species is found in a variety of estuarine and freshwater habitats within the San Francisco Bay, San Pablo Bay, and Sacramento-San Joaquin River Delta. Spawning occurs in the Sacramento, Feather, and Yuba rivers in cool (11 to 15 degrees Celsius) sections of mainstem rivers in deep pools (i.e., 8 to 9 meters) with substrate containing small- to medium-sized sand, gravel, cobble, or boulders.	Suitable habitat and documented occurrences of this species can be found within the waters adjacent to the survey area. However, suitable aquatic/estuarine habitat for this species is not present within the survey area. No Potential

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Longfin smelt	<i>Spirinchus thaleichthys</i>	ST	The known range of this species extends from the San Francisco Bay Estuary and Sacramento-San Joaquin Delta (Bay-Delta) in California northward to the Cook Inlet in Alaska. In the Bay-Delta, longfin smelt spawn primarily in freshwater in the lower reaches of the Sacramento and San Joaquin rivers. Juvenile and adult longfin smelt have been found throughout the year in salinities ranging from pure freshwater to pure seawater. Once past the juvenile stage, they are typically collected in waters with salinities ranging from 14 to 28 parts per thousand. The life cycle of most longfin smelt generally requires estuarine conditions. Longfin smelt occur in the Bay-Delta typically from January to April.	Suitable habitat and documented occurrences of this species can be found within the waters adjacent to the survey area. However, suitable aquatic/estuarine habitat for this species is not present within the survey area. No Potential
Sacramento perch	<i>Archoplites interruptus</i>	SSC	This freshwater fish species is endemic to California's Central Valley. It inhabits a range of aquatic habitats, including rivers, streams, lakes, reservoirs, and ponds. This species shows a preference for habitats with vegetated banks that provide both food sources and protective cover. Breeding typically occurs during the spring and early summer in shallow areas with gravel or sandy substrate. This species feeds primarily on small invertebrates but will opportunistically feed on small fish or fish eggs.	Suitable habitat and documented occurrences of this species can be found within the waters adjacent to the survey area. However, suitable aquatic/estuarine habitat for this species is not present within the survey area. No Potential

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Steelhead - Central Valley DPS	<i>Oncorhynchus mykiss irideus</i> pop. 11	FT	This DPS of steelhead represents a population that spawns in freshwater habitats located in California's Central Valley. This species is anadromous, meaning they are born in freshwater, migrate to the ocean to grow and mature, and return to their natal streams to spawn. Suitable freshwater breeding habitats include rivers, streams, and tributaries with clean, cold water and gravel substrate. After hatching, the young steelhead spend several years in fresh water before migrating to the ocean, where they feed on a variety of prey, including small fish, invertebrates, and plankton.	Suitable habitat and documented occurrences of this species can be found within the waters adjacent to the survey area. However, suitable aquatic/estuarine habitat for this species is not present within the survey area. No Potential
Invertebrates				
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE	This species occurs within vernal pool habitats in California's Central Valley. It mostly lives in relatively large, turbid freshwater vernal pools called playa pools. This species can be found at elevations ranging from 16 to 5,577 feet in grassland, rural, and wetland habitats. This species opportunistically filter-feeds on various planktonic food sources including algae and protozoa.	No suitable vernal pool habitat was observed during the field survey. It is possible that suitable vernal pool habitat for this species may develop during the rainy season and outside of this report's survey window. This species has been documented between 1 and 5 miles from the survey area, but was not observed during the field survey. Low Potential

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Lange's metalmark butterfly	<i>Apodemia mormo langei</i>	FE	This species is associated with the Antioch Dunes, a riverbank dune system along the San Joaquin River. Currently, this species can only be found in the Antioch Dunes National Wildlife Refuge, the last remnants of the Antioch Dunes. All life stages are closely associated with naked-stemmed buckwheat (<i>Eriogonum nudum</i> var. <i>psychicola</i>), which is the primary nectar source for adults, is used to lay eggs, and is a larval food plant. The leaves of the larval host plant provide both food and shelter throughout the larval instar phases.	Suitable habitat for this species is not present within the survey area. Further, while there are documented occurrences within 0.25 mile of the survey area, there were no observations of this species or its obligate host plant during field surveys. This species may occur incidentally within the survey area given the proximity of suitable habitat, but the lack of suitable foraging and breeding habitat within the survey area makes this unlikely. Low Potential
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	This species occurs within vernal pool habitats throughout California. Female vernal pool fairy shrimp carry fertilized eggs in a sac on the underside of their body. The eggs are either dropped to the pool bottom or remain in the brood sac until the mother dies and sinks to the bottom of the pool. This species opportunistically filter-feeds on various planktonic food sources, including algae and protozoa.	No suitable vernal pool habitat was observed during the field survey. It is possible that suitable vernal pool habitat for this species may develop during the rainy season and outside of this report's survey window. This species has been documented between 1 and 5 miles from the survey area, but was not observed during the field survey. Low Potential

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE	This species occurs within vernal pool habitats with a patchy distribution within California's Central Valley. Female vernal pool tadpole shrimp produce up to six clutches of eggs containing 32 to 61 eggs per clutch during each wet season. They carry fertilized eggs in a sac on the underside of their body. The eggs are either dropped to the pool bottom or remain in the brood sac until the mother dies and sinks to the bottom of the pool. This species opportunistically filter-feeds on other fairy shrimp (<i>Branchinecta</i> spp.), invertebrates, and waste from other vernal pool species.	No suitable vernal pool habitat was observed during the field survey. It is possible that suitable vernal pool habitat for this species may develop during the rainy season and outside of this report's survey window. This species has been documented between 1 and 5 miles from the survey area, but was not observed during the field survey. Low Potential
Mammals				
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, SE, FP	This species inhabits salt marshes in California and is adapted to live in marsh vegetation, including pickleweed and cordgrass, which provide cover, food sources, and breeding habitats. Breeding typically occurs between March and October. Its diet consists of marsh vegetation, including seeds, stems, and leaves.	Suitable salt marsh habitat for this species is present within the survey area in salt marshes north of the Sacramento River. This species has been documented within 0.25 mile of the survey area on both the north shore of the Sacramento River and south shore of the Suisun Bay, but was not observed during field surveys. High Potential
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE, ST	This species inhabits a variety of open habitats, including grasslands, chenopod scrublands, and semi-arid regions. Breeding occurs from January to March, with a gestation period of 49 to 55 days. The female constructs a den in the ground, often utilizing existing burrows dug by other animals. Its diet primarily consists of small mammals, such as rodents, rabbits, and ground squirrels.	Grassland habitat suitable for foraging is present within the survey area; however, no suitable breeding burrows/dens were encountered during the survey. This species has been documented between 1 and 5 miles from the survey area, but these records are more than 30 years old. Low Potential

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Western red bat	<i>Lasiurus blossevillii</i>	SSC, WBWG-H	This species occurs a variety of habitats, including forests, woodlands, and riparian areas. It roosts and forages among trees and vegetation and exhibits a preference for mixed coniferous and deciduous forests. Breeding occurs in the spring and early summer. This species typically seeks out tree foliage, such as leaves or branches, to create roosting sites. The diet consists mainly of insects, such as moths, beetles, and flies.	Marginally suitable roosting habitat is present in the survey area within the limited stands of trees, and suitable foraging habitat is present. This species has been documented between 1 and 5 miles from the survey area, but was not observed during field surveys. Moderate Potential (Roosting) Moderate Potential (Foraging)
Reptiles				
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	FT, ST	This species inhabits grasslands, chaparral, and oak woodlands within Alameda and Contra Costa counties. It is primarily diurnal, being active during the day and seeking shelter in vegetation or underground burrows at night. Breeding typically occurs in the spring and summer months. The diet consists of small vertebrates, including lizards, rodents, and birds.	Suitable grassland habitat is present; however, the survey area is outside of the geographic range for this species. The species has been documented between 1 and 5 miles from the survey area. No Potential
California glossy snake	<i>Arizona elegans occidentalis</i>	SSC	This species is typically found in desert scrub, grasslands, and rocky areas. It is primarily nocturnal, being active during the night and seeking shelter in burrows, crevices, or under rocks during the day. Breeding occurs in the spring and early summer. Females lay eggs in sandy soil or loose substrate, where they are left to incubate. Its diet consists mainly of small mammals, including rodents, lizards, and occasionally birds or eggs.	Suitable grassland habitat is present; however, the survey area is outside of the geographic range for this species. The species has been documented between 1 and 5 miles from the survey area, but all occurrences are more than 30 years old. No Potential

Common Name	Scientific Name	Listing Status ⁵	Habitat and Life History	Potential to Occur in the Survey Area
Giant gartersnake	<i>Thamnophis gigas</i>	FT, ST	This semi-aquatic species inhabits marshes, wetlands, and slow-moving bodies of water. It is often closely associated with water sources, which serve as its hunting grounds. Breeding typically occurs in the spring and early summer. After mating, females give birth to live young. The diet primarily consists of small fish, amphibians, and aquatic invertebrates.	Suitable wetland habitat is not present within the survey area. Although species has been documented between 1 and 5 miles from the survey area, these observations were made in habitats upstream of the survey area with far less salt-water intrusion. Further, extensive grazing and land modification over much of the project has greatly diminished potential upland refugia. The species was not observed during field surveys. Low Potential
Northern California legless lizard	<i>Anniella pulchra</i>	SSC	This species is found in grasslands, chaparral, and open woodlands and requires loose, friable soils for burrowing. Breeding typically occurs in the spring or early summer. Females lay small clutches of eggs in underground burrows or hidden areas. The diet primarily consists of small invertebrates, such as insects, spiders, and other arthropods.	Marginal grassland habitat for this species is present within the survey area. This species has been documented between 1 and 5 miles from the survey area, but was not observed during field surveys. Low Potential
Western pond turtle	<i>Emys marmorata</i>	SSC	This freshwater turtle species primarily inhabits ponds, lakes, and slow-moving streams with suitable basking sites. It spends a significant amount of time basking on logs or rocks. Breeding typically occurs in the spring and early summer. Females dig nests in sandy or gravelly areas near water, where they lay their eggs. The hatchlings emerge several months later and make their way to the water. The diet is omnivorous and consists of various aquatic plants, insects, small fish, and amphibians.	Suitable wetland habitat is present within the survey area; however, suitable nesting habitat is not present. This species has been documented within 1 mile of the survey area, but was not observed during field surveys. High Potential

6.4.0 Species Present within the Survey Area

Avian Species

Northern Harrier

The Northern Harrier (*Circus cyaneus*) utilizes a wide variety of open habitats with herbaceous cover, including saltwater and freshwater wetlands, grasslands, idlefields, agricultural pasturelands, deserts, and cropland. This species will forage on small rodents and birds within open fields with dense vegetation. Ideal breeding and nesting grounds include wetland or upland habitats with tall, dense grasses, forbs, or low shrubs for concealment of nests. Northern Harriers will construct nests on the ground or over water on platforms of vegetation.

The survey area has attracted nesting Northern Harriers; an active northern harrier nest was observed within the survey area with two parents tending to nestlings and delivering food. The nest is situated on the ground within dense marsh vegetation in wetlands adjacent to the northern shore of the Sacramento River. The approximate nest location is shown in Attachment E: Biological Resources Map. This species was also observed foraging within clearings surrounded by dense vegetation during the field survey.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) feeds almost exclusively on insects, the majority being grasshoppers. Young will occasionally be fed rodents, rabbits, and reptiles. Suitable habitat for this species requires riparian areas, shrub-steppe areas with scattered trees, as well as large shrubs. Swainson's hawk nests are typically located in small, shrubby trees. This species can be found throughout North America from southern Canada to northern Mexico.

This species may nest within the survey area within the limited tree nesting sites available. An individual was observed during the field survey foraging in upland grassland and cropland and CNDDDB (CDFW 2023a) documentation has been recorded near the survey area. Foraging Swainson's hawks may be present all throughout the survey area.

6.4.1 Species with a High Potential to Occur

Avian Species

Burrowing Owl

The burrowing owl (*Athene cunicularia hypugaea*) occupies wide-open, sparsely vegetated areas like prairies, deserts, grasslands, and agricultural fields. Males are generally territorial and chase or attack other individuals of the same species, except for their breeding partner. Burrowing owls often use burrows dug by other animals like ground squirrels. Although insects and small mammals are the primary source of food for this species, the burrowing owl is an opportunistic predator and eats anything it can physically handle. Unlike other owl species, the burrowing owl nests in the ground and actively hunts in the daytime.

Suitable grassland habitat for foraging is present, particularly in the survey area north of the Sacramento River. Several CNDDDB occurrences for this species have been documented within 5 miles of the survey area; however, all occurrences north of the Sacramento River were recorded during the non-breeding season (CDFW 2023). Further, anecdotal reports of overwintering

burrowing owls within the survey area have been reported along Talbert Lane (AECOM 2018a). The survey area contains marginal and limited nesting habitat for owls; suitably sized small mammal burrows were largely absent given the large-scale disking within the majority of grassland habitats. However, if agricultural lands are left fallow or unmaintained, small mammals, such as California ground squirrels, may reestablish burrow networks and provide suitable overwintering or breeding habitat for burrowing owls. This species was not observed or detected during field surveys. This species has a moderate potential to occur for nesting and high potential for foraging within grassland habitats of the survey area.

Saltmarsh Common Yellowthroat

The saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) prefers freshwater and salt marshes with nearby willow thickets. This species forages on or near the ground, looking for insects and spiders in low vegetation. Females of this species will nest in higher marsh ground to avoid flooding and conceal their young with a loose, bulky outer cup of grasses and sedges, sometimes with a roof over the nest. The saltmarsh common yellowthroat is endemic and a resident to the greater San Francisco Bay Area year-round with some individuals wintering in San Diego County.

Suitable grassland habitat for nesting and foraging is present within the survey area. This species was not observed during the field surveys but has documented CNDDB (CDFW 2023) occurrences within 1 mile of the survey area south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation and within 5 miles of suitable habitats within the portion of the survey area north of the Sacramento River. For these reasons, this species has a high potential to nest and forage within the survey area.

Suisun Song Sparrow

The Suisun song sparrow (*Melospiza melodia maxillaris*), an endemic species to Suisun Marsh, has been associated with tidal channels, particularly in marshes with dominant species of pickleweed and gumplant (*Grindelia sp.*). The diet of this species mainly consists of vegetables and some animal matter. The nests of the Suisun song sparrow can be found in an array of different substrates and dense vegetation. These include gumplant, sedges (*Scirpus sp.*), rushes (*Juncus sp.*), perennial pepperweed (*Lepidium latifolium*), pickleweed, saltgrass (*Distichlis spicata*), and arrowgrass (*Triglochin maritima*).

The portion of the survey area located on the northern shore of the Sacramento River provides suitable marsh habitat for foraging. This species has CNDDB (CDFW 2023a) occurrences in nearby marsh habitats within 0.25 mile of the survey area in the vicinity of PG&E's existing Pittsburgh Substation within 1 to 5 miles of the survey area north of the Sacramento River. Although this species was not detected during field surveys, it has a high potential to occur for both nesting and foraging.

Mammal Species

Salt Marsh Harvest Mouse

The Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*) is generally restricted to salt or brackish marshes in the general San Francisco Bay Area. This species is highly associated with

pickleweed in saline soil. This is due to the plant's ability to provide year-round cover from predators, a source of food, and refugia from flooding. Salt Marsh Harvest mice will build nests from dry grasses and sedges on the ground and within dense vegetation.

This species has a high potential to occur within survey area due to the abundance of suitable habitat within marshlands north of the Sacramento River. This species was not observed during the field survey but has recent CNDDDB occurrences near and within the survey area. Further, there have been recent confirmations of salt marsh harvest mouse presence within 1 mile of the survey area based on trapping detections from San Francisco Estuary Institute's (SFEI) salt marsh harvest mouse database.

Reptile Species

Western Pond Turtle

The western pond turtle (*Actinemys marmorata*) can be found in Puget Sound, Washington ranging down to Northwestern Baja California. They will utilize both terrestrial and aquatic habitats, including permanent and seasonal aquatic habitats like rivers, sloughs, lakes, reservoirs, ponds, and irrigation canals. This species will nest, winter, disperse, and aestivate within 100 feet of a water source onto land. Western pond turtles will consume various aquatic plants, insects, small fish, and amphibians.

Suitable wetland habitat is present within the survey area; however, conditions suitable for nesting were not observed during surveys. Although no observations were made during field surveys, multiple observations have been recorded through CNDDDB (2023a) within 1 mile of the survey area north of the Sacramento River. This species has a high potential to occur within the survey area.

6.4.2 Species with a Moderate Potential to Occur

Avian Species

California Black Rail

The California black rail (*Lateralis jamaicensis coturniculus*) inhabits saltwater and brackish marshes with Pickleweed (*Salicornia sp.*), sedges (*Carex sp.*), saltgrass (*Distichlis sp.*), and bulrush (*Scirpus sp.*). They favor high marsh habitat for breeding but are frequently faced with high and moderate tides in the San Francisco Bay Area. California black rails prefer low-growing forms of vegetation with abundant insects. Their diet consists of small invertebrates and seeds of aquatic plants.

Suitable habitat capable of supporting foraging individuals is present in the survey area north of the Sacramento River. Wetland habitats within the survey area lack large stands of pickleweed and tidal flux preferred by the species for breeding sites. This species has been recently documented within 1 mile of the survey area near PG&E's existing Pittsburgh Substation and within 5 miles of the survey area north of the Sacramento River, but was not observed during the field survey. This species has a moderate potential to occur within the survey area.

California Least Tern

The California least tern (*Strernula antillarum browni*) is typically found in colonies of 25 pairs that nest on relatively open beaches free of vegetation. Breeding season usually begins in May and nests are constructed on bare ground. Roosting individuals will forage within 2 miles of their nest location. Adults will forage for fish primarily in near shore ocean waters and in shallow estuaries and lagoons. This species has been known to move further inland to avoid humans and onto mudflats and dredge fill sites.

Suitable nesting habitat for the species does not occur within the survey area; however, suitable foraging habitat is present. CNDDDB occurrences of this species have been documented within 5 miles of the survey area (CDFW 2023a). This species was not observed during the field survey, but there is moderate potential California least tern occur within the survey area.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) will be found in colonies near a water source and natural grasslands, woodlands, or agricultural croplands. This species has historically been associated with emergent marshes, but they may be found in non-native vegetation and active agricultural areas. Breeding colonies may consist of thousands of birds and may be found in the Central Valley of California and surrounding foothills. The tricolor blackbird diet may include local, abundant food sources, ranging from invertebrates to grains. They can be seen foraging in deep dense grasses and other vegetation.

Although there is limited nesting habitat, suitable foraging habitat can be found the grasslands and croplands along the northern portions of the survey area. No occurrences have been documented near the survey area in over 30 years and tricolored blackbirds were not observed during field surveys. This species has moderate potential to occur in foraging habitat provided by croplands and grasslands.

White-Tailed Kite

The white-tailed kite (*Elanus leucurus*) feeds mostly on voles and other small, diurnal mammals. For habitat to be considered suitable to the species, it must include undisturbed open grasslands, meadows, farmlands, and emergent wetlands to find prey in and dense canopies for roosting. This species is a resident of coastal and valley lowlands.

Grassland and marsh habitat suitable for foraging is present within the survey area; however, nesting habitat is limited given the lack of suitable trees. This species has been recently documented (CNDDDB 2023a) near the survey area, but was not observed during field surveys. Therefore, there is moderate potential for this species to occur within the survey area for the purposes of foraging.

Yellow Rail

The yellow rail (*Corturnicops noveboracensis*) will eat small snails, aquatic insects, and seeds found in shallow marshes and wet meadows. Wintering habitat will include freshwater and brackish marshes with dense grass. This species breeds mostly in Canada and northern US states, often having two nests with one to incubate eggs and the other to brood young. Like other rails, this species is highly secretive.

Freshwater marshland habitat required for nesting is not present within the survey area. However, salt marsh habitat, suitable for wintering and foraging birds, is present within the survey area. This species has recent CNDDDB occurrences within 5 miles of the survey area (CDFW 2023a), but was not observed during the field survey. For these reasons, this species has a moderate potential to occur within the survey area north of the Sacramento River.

Mammal Species

Western Red Bat

The western red bat (*Lasiurus blossevillei*) prefers riparian woodlands but is found in a variety of other forest habitats. This bat forages in and around vegetation and in open areas near roosting sites on cicadas, beetles, wasps, flies, and moths. Roosting sites are primarily located in trees and rock crevices along forest edges adjacent to streams or open fields, but day roosts will sometimes be located in orchard trees and buildings. This species makes relatively short migrations within California to summer and winter ranges in the north and south of the state. As this species prefers riparian woodlands, threats include loss of riparian zones, primarily due to agricultural conversion and creation of water storage reservoirs.

Limited suitable tree roosting habitat is present within the survey area; however, suitable foraging habitat is present throughout the grassland and marsh habitats north of the Sacramento River. This species has CNDDDB occurrences within 1 to 5 miles of the survey area, but was not observed during field surveys. There is a moderate potential for this species to occur within the survey area for the purposes of foraging.

6.5 GENERAL WILDLIFE SPECIES

Thirty-five wildlife species were incidentally identified during the surveys; these included one reptile, four mammals, and 30 birds. Noted wildlife species were identified by direct observation, vocalizations, or the observance of scat and tracks. The wildlife identified are not necessarily comprehensive accounts of all species that utilize the survey area, because species that are nocturnal, secretive, or seasonally absent may not have been observed.

Although substantial portions of the survey area are dominated by non-native grassland that is frequently utilized for agriculture purposes, the portion of the survey area located on the northern shore of the Sacramento River contains tidally influenced estuarine marshes and sloughs that provide important habitat for a variety of species. Sloughs and marshes in the survey area were generally undisturbed, containing thick and continuous stands of hardstem and giant bulrush that provide ample nesting habitat for riparian birds. Several avian species were incidentally observed nesting within stands of bulrush, including marsh wren (*Cistothorus palustris*), northern harrier, and red-winged blackbird (*Agelaius phoeniceus*).

Observed occurrences of wildlife species are shown in Table 4: Wildlife Species Observed within the Survey Area.

Table 4: Wildlife Species Observed within the Survey Area

Common Name	Scientific Name
American coot	<i>Fulica americana</i>
American bittern	<i>Botaurus lentiginosus</i>
American goldfinch	<i>Spinus tristis</i>
Barn swallow	<i>Hirundo rustica</i>
Black phoebe	<i>Sayornis nigricans</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
California gull	<i>Larus californicus</i>
California scrub jay	<i>Aphelocoma californica</i>
Cliff swallow	<i>Petrochelidon pyrrhonota</i>
Cottontail	<i>Sylvilagus audubonii</i>
European starling	<i>Sturnus vulgaris</i>
Gopher snake	<i>Pituophis catenifer</i>
Great blue heron	<i>Ardea herodias</i>
Great egret	<i>Ardea alba</i>
Horned lark	<i>Eremophila alpestris</i>
House finch	<i>Haemorhous mexicanus</i>
Killdeer	<i>Charadrius vociferus</i>
Mallard	<i>Anas platyrhynchos</i>
Marsh wren	<i>Cistothorus palustris</i>
Mourning dove	<i>Zenaida macroura</i>
Mute swan	<i>Cygnus olor</i>
Northern harrier	<i>Circus hudsonius</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Ring-necked pheasant	<i>Phasianus colchicus</i>
River otter	<i>Lontra canadensis</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Snowy egret	<i>Egretta thula</i>
Song sparrow	<i>Melospiza melodia</i>

Common Name	Scientific Name
Swainson's hawk	<i>Buteo swainsoni</i>
Tule elk	<i>Cervus canadensis nannodes</i>
Turkey vulture	<i>Cathartes aura</i>
Western meadowlark	<i>Sturnella neglecta</i>

6.6 CRITICAL HABITAT

No critical habitat is found within the survey area. However, the estuarine, open water habitat within the submarine cable alignment and surrounding Sacramento River is designated as critical habitat for delta smelt (*Hypomesus transpacificus*).

6.7 NATIVE WILDLIFE CORRIDORS AND NURSERY SITES

Wildlife migration corridors are areas that connect suitable wildlife habitats in a region that would otherwise be fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g., canyon drainages, ridgelines, or areas with vegetation cover) provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high-population or high-density areas; and facilitate genetic diversity. CEQA guidelines require that project proponents disclose and mitigate for significant impacts on wildlife corridors. Impacts to wildlife corridors, such as human disturbance and development, can cause harm to migrating species, cause species to exceed population thresholds in fragmented patches, or prevent healthy gene flow between populations. The California Essential Habitat Connectivity Project (CEHC) maintains a statewide Essential Habitat Connectivity Map, which broadly depicts large, relatively natural habitat blocks that support native biodiversity (Natural Landscape Blocks) and areas essential for ecological connectivity between them (Essential Connectivity Areas) (Spencer et al., 2010). The Survey Area region lies outside of any of these Natural Landscape Blocks and Essential Connectivity Areas (CDFW, 2021d).

The Proposed Project lies within the Pacific Flyway—an important north-south migration corridor that runs along the Pacific coast of the Americas from Alaska to Patagonia, including all of North America lying west of the Rocky Mountains. The Pacific Flyway links breeding grounds to the north with wintering areas to the south and is used by many different species of birds during migration. Many birds (especially waterfowl) use locations in California's Sacramento Valley as a stopover point or wintering area. One of those major locations is Suisun Marsh, which is less than 10 miles from the Survey Area. At the Proposed Project's latitude, the Pacific Flyway extends inland from the Pacific Ocean for approximately 700 miles. As a result, the Proposed Project's aboveground components would be placed in less than 0.3 percent of the width of the Pacific Flyway. The Proposed Project site does not occur in any nursery sites.

6.8 AQUATIC RESOURCES

Insignia biologists identified one linear water feature within the survey area that is potentially under the jurisdiction of the USACE, RWQCB, and CDFW. Further, seven potentially jurisdictional wetland features were observed within the survey area. Attachment E: Biological Resources Map depicts the locations of the potentially jurisdictional water features within the survey area. Attachment I: Linear Water Feature Photographs presents upstream and downstream photographs of the mapped ephemeral linear water feature. Attachment J: Wetland Feature Photographs presents representative photographs of each wetland feature. Attachment K: Potentially Jurisdictional Water Features Table lists the unique feature identification number, feature type, length, OHWM width and depth, TOB width and depth, Cowardin classification (for wetlands), and the approximate extent of USACE, RWQCB, and CDFW jurisdictions.

Wetland features W-3, W-4, W-7, and portions of W-2 lacked standing water or observable hydrology and were identified by the presence of wetland vegetation (i.e., *Distichilis* sp., *Salicornia* sp., *Frankenia* sp., and *Juncus* sp.).

A formal wetland delineation was conducted in 2024. The findings pertaining to hydrologic features presented in this report are superseded by those documented in Attachment B: Collinsville 500/230 Kilovolt Substation Project Aquatic Resources Delineation Report.

7 – RECOMMENDATIONS

Proposed Project-specific avoidance and minimization measures will need to be developed to reduce the potential for impacts to all special-status species with moderate or high potential to occur within the project area as well as species that are present within the survey area.

Prior to initiating Project activities, the following pre-construction surveys will be required:

- Pre-construction nesting bird surveys conducted within 48 hours prior to work occurring between February 1 and September 30 each year. Surveys will be conducted within 500 feet of all Proposed Project work areas.
- Pre-construction roosting bat survey in areas within and adjacent to the Proposed Project where construction activities have the potential to directly impact active roosts or disrupt bat breeding activities.
- Pre-construction burrowing owl surveys conducted in all areas that may provide suitable nesting habitat according to the CDFW (CDFW 2012) guidelines. The take avoidance surveys, consisting of up to four visits, will be initiated within 30 days of and completed at least 14 days before construction is initiated at a given location. In areas with burrows or refuge that could potentially support burrowing owls, a clearance visit will be conducted within 24 hours of construction.
- A supplemental and floristic botanical survey conducted in 2024 during the appropriate bloom periods for special-status plants with the potential to occur within the expanded survey area north of the Sacramento River, as well as the survey area south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation. This supplemental effort will provide full survey coverage of the survey area. Floristic surveys are recommended in April and July to capture the bloom periods of all non-perennial plant species with the potential to occur. A supplemental targeted survey will be conducted within the original survey area in 2024 during the bloom period for diamond-petaled California poppy (March to April). These surveys will also serve to confirm the population boundaries of previously observed Welsh's mudwort, Mason's lilaeopsis, and Delta tule pea.⁶
- A formal wetland delineation will be required once further engineering is complete and prior to work commencing within the survey area. Once complete, a preliminary

⁶Surveys within the expanded survey area were completed in 2024 and are detailed in Attachment D: Collinsville 500/230 Kilovolt Substation Project Botanical Survey Report Addendum.

jurisdictional determination will be presented to the USACE that includes all data sheets including National Wetlands Inventory maps (as shown in Attachment L: National Wetlands Inventory Map that show all proposed facilities.⁷

Given the high potential for salt marsh harvest mouse within the survey area and corroborating observation records in CNDDDB and SFEI, surveys for this species should not be required, as presence for this species can be assumed within suitable habitats.

For all federally listed species with moderate- or high-potential to occur, if the Proposed Project has the potential to adversely affect the species or its habitat, consultation under Section 7 of the federal ESA will be necessary.

All of the state-listed species identified during the background research have low- or no potential to occur. However, if state-listed species are observed in the Proposed Project area and the Proposed Project has the potential to adversely affect the species, an incidental take permit (ITP) issued by the CDFW may be required to mitigate for potential impacts to those species.

Although the 28 bird species identified in Table 4: Wildlife Species Observed within the Survey Area do not carry listing statuses under the federal ESA or CESA, they are protected under the MBTA, California Fish and Game Code, and CCR. With the exception of the one northern harrier nest described in Section 6.4 Species Present within the Survey Area, no other nests were observed within the survey area.

Several regulatory approvals, authorizations, or permits are required for the Proposed Project, as provided in Table 5: Anticipated Biological Resource Permits and Authorizations. These approvals may include conditions that afford additional protection to species and/or their habitat. LSPGC will comply with all mitigation measures and permit conditions that result from these regulatory reviews and approvals.

As described in Section 5.2 Biological Resource Survey Method, due to access constraints imposed by the property owner, the survey area south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation was not included in biological resource surveys. While this area was included in the records search and preliminary research for this report, formal field surveys and jurisdictional waters assessments will be required to identify any existing or potentially sensitive biological resources (e.g., vegetation communities, hydrologic features, and special-status plant and animal species and their associated habitats) that may be present within or adjacent to this portion of the survey area.

⁷Formal wetland delineations of all wetland features identified in this report were conducted in 2024. The results of these delineations are detailed in Attachment B: Collinsville 500/230 Kilovolt Substation Project Aquatic Resources Delineation Report.

Table 5: Anticipated Biological Resource Permits and Authorizations

Agency	Permit/Approval/Consultation	Jurisdiction/Purpose of Permit
Federal Agencies		
USACE	CWA Section 404 Nationwide Permit	Permanent and temporary fill of waters of the U.S.
USFWS	FESA Section 7 Consultation	Construction activities such as vegetation clearing or removal that may affect federally listed species or their habitats, including salt marsh harvest mouse
State Agencies		
CDFW	California Fish and Game Code Section 1600 Streambed Alteration Agreement	Activities that will disturb the bed or bank of a jurisdictional waterbody
RWQCB	CWA Section 401 Water Quality Certification	Activities authorized by federal agencies that may affect state water quality

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**ATTACHMENT A: COLLINSVILLE TERRESTRIAL BIOLOGICAL RESOURCES TECHNICAL REPORT
ADDENDUM**

LS POWER GRID CALIFORNIA, LLC
COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT
TERRESTRIAL BIOLOGICAL RESOURCES TECHNICAL REPORT
ADDENDUM

MAY 2025

PREPARED FOR:



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1 – INTRODUCTION

LS Power Grid California, LLC (LSPGC) retained Insignia Environmental (Insignia) to conduct a pre-project survey for the Collinsville 500/230 Kilovolt (kV) Substation Project (Proposed Project). The Proposed Project would involve the construction of a new 500/230 kV substation (Collinsville Substation), the construction of two new 500 kV single-circuit transmission line segments that will loop Pacific Gas and Electric Company's (PG&E's) existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed LSPGC Collinsville Substation, and the construction of one new 230 kV double-circuit transmission line that would connect the proposed LSPGC Collinsville Substation to PG&E's existing Pittsburg Substation. The Proposed Project's general location is depicted in Figure 1: Project Overview Map, and the Proposed Project components located within the survey area associated with this Terrestrial Biological Resources Technical Report Addendum (Addendum) are depicted in Figure 2: Project Components Map. A Biological Resources Technical Report (Original Report) (Insignia 2024) was prepared for the Proposed Project in July 2024 to identify any existing or potentially sensitive biological resources (e.g., vegetation communities, hydrologic features, and special-status plant and animal species and their associated habitats) that may be present within or adjacent to the vicinity of the Proposed Project.

Since the completion of the Original Report, the project design for the Proposed Project has undergone changes, including the addition of three new transposition structures, the removal of two existing transposition lattice steel poles (LSPs), and the replacement of two existing lattice steel towers (LSTs) with two new three-pole dead-end tubular steel poles (TSPs) at four distinct locations along PG&E's existing Vaca Dixon-Tesla 500 kV Transmission Line. These four new structure sites (hereafter referred to as Tower A, Tower B, Tower C, Tower D, or "Towers" collectively) are located outside of the survey area¹ evaluated in the Original Report. To accommodate supplemental habitat assessment and preliminary waters surveys for the Towers, the Proposed Project survey area has since been expanded by approximately 526 acres. This Addendum was prepared to supplement the Original Report and details the findings of habitat assessments and preliminary waters surveys conducted within the approximately 526-acre survey area that was added (Tower survey area).

2 – PROJECT DESCRIPTION

2.0 PROJECT LOCATION

As depicted in Figure 1: Project Overview Map, the Towers would be located at four separate sites spread along approximately 33 miles of PG&E's existing Vaca Dixon-Tesla 500 kV Transmission Line. The approximately 526-acre Tower survey area is divided among the four discrete transposition structure locations. The survey areas associated with each transposition structure location are separate and do not overlap.

¹ The survey area primarily consists of all terrestrial areas of the Proposed Project area north of the Sacramento River, as well as an approximately 10-acre buffer. Terrestrial areas south of Suisun Bay, in the vicinity of PG&E's existing Pittsburgh Substation, compose a small portion of the survey area.

Tower A, the northernmost transposition structure location, is located approximately 3 miles southeast of the City of Vacaville in Solano County. The Tower survey area associated with Tower A is approximately 214 acres.

Tower B is located approximately 7 miles southeast of Tower A and approximately 3 miles southeast of the community of Denverton in Solano County. The Tower survey area associated with Tower B is approximately 91 acres.

Tower C—the site of the removal of two existing LSPs and the replacement of two existing LSTs with two three-pole dead-end TSPs—is located approximately 5 miles southeast of Tower B and approximately 2 miles east of Birds Landing in Solano County. The Tower survey area associated with Tower C is approximately 146 acres.

Tower D, the southernmost transposition structure installation, is located approximately 21 miles southeast of Tower C within the census designated place of Byron in Contra Costa County. The Tower survey area associated with Tower D is approximately 75 acres.

2.1 PROJECT COMPONENTS

With the exception of the addition of the Towers, the main components of the Proposed Project remain largely unchanged from the Original Report. The main components are depicted on Figure 2: Project Components Map and include the following:

- Constructing a new 500/230 kV substation (the proposed LSPGC Collinsville Substation).
- Constructing two new approximately 1.2-mile-long, single-circuit 500 kV transmission line segments extending to interconnect (or “loop”) PG&E’s existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed LSPGC Collinsville Substation.
- Constructing a new approximately 6-mile-long, double-circuit 230 kV transmission line to connect the proposed LSPGC Collinsville Substation to PG&E’s existing Pittsburg Substation.
- Extending and connecting PG&E’s existing 12 kV Peabody 2107 Circuit distribution line to the proposed LSPGC Collinsville Substation.
- Constructing two new telecommunications paths to the proposed LSPGC Collinsville Substation—a new microwave tower would be constructed and owned by PG&E at the substation—and a new fiber optic path consisting of two fiber optic cables for redundancy would be installed between existing fiber in the City of Pittsburg and the proposed substation.
- Construction of three new PG&E 500 kV transposition structures, the removal of two existing LSPs, and the replacement of two existing LSTs with two new three-pole dead-end TSPs along PG&E’s existing Vaca Dixon-Tesla 500 kV Transmission Line.

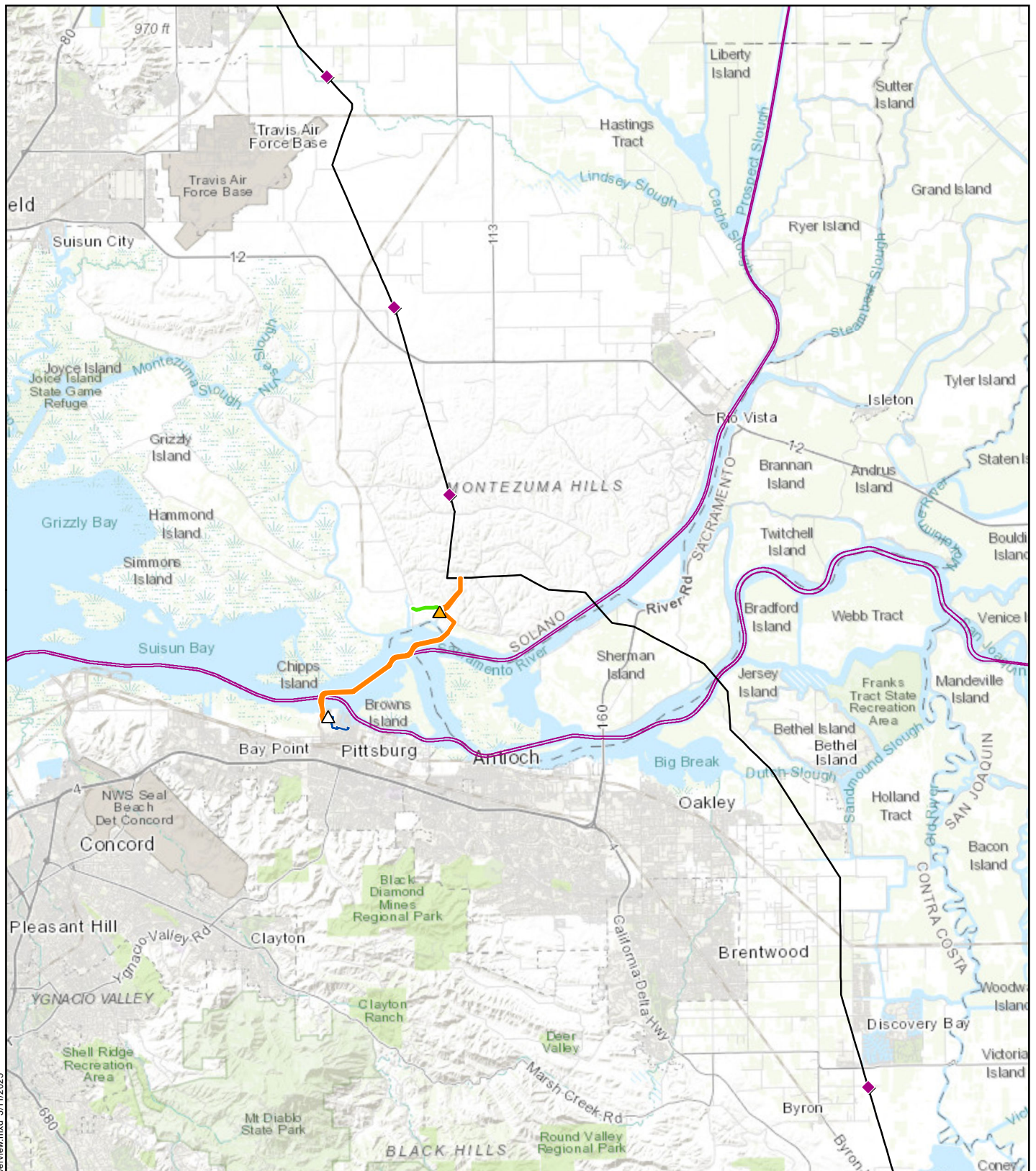
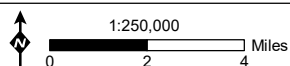


Figure 1: Project Overview Map

Collinsville 500/230 Kilovolt Substation Project

- | | |
|--|--|
| Proposed LSPGC Collinsville Substation | Proposed PG&E 12 kV Distribution Line |
| Existing PG&E Pittsburg Substation | Proposed LSPGC Telecommunications Line |
| Proposed PG&E 500 kV Transposition Structure | Existing PG&E Vaca Dixon-Tesla Transmission Line |
| Proposed Project Transmission Lines | Navigational Channel |



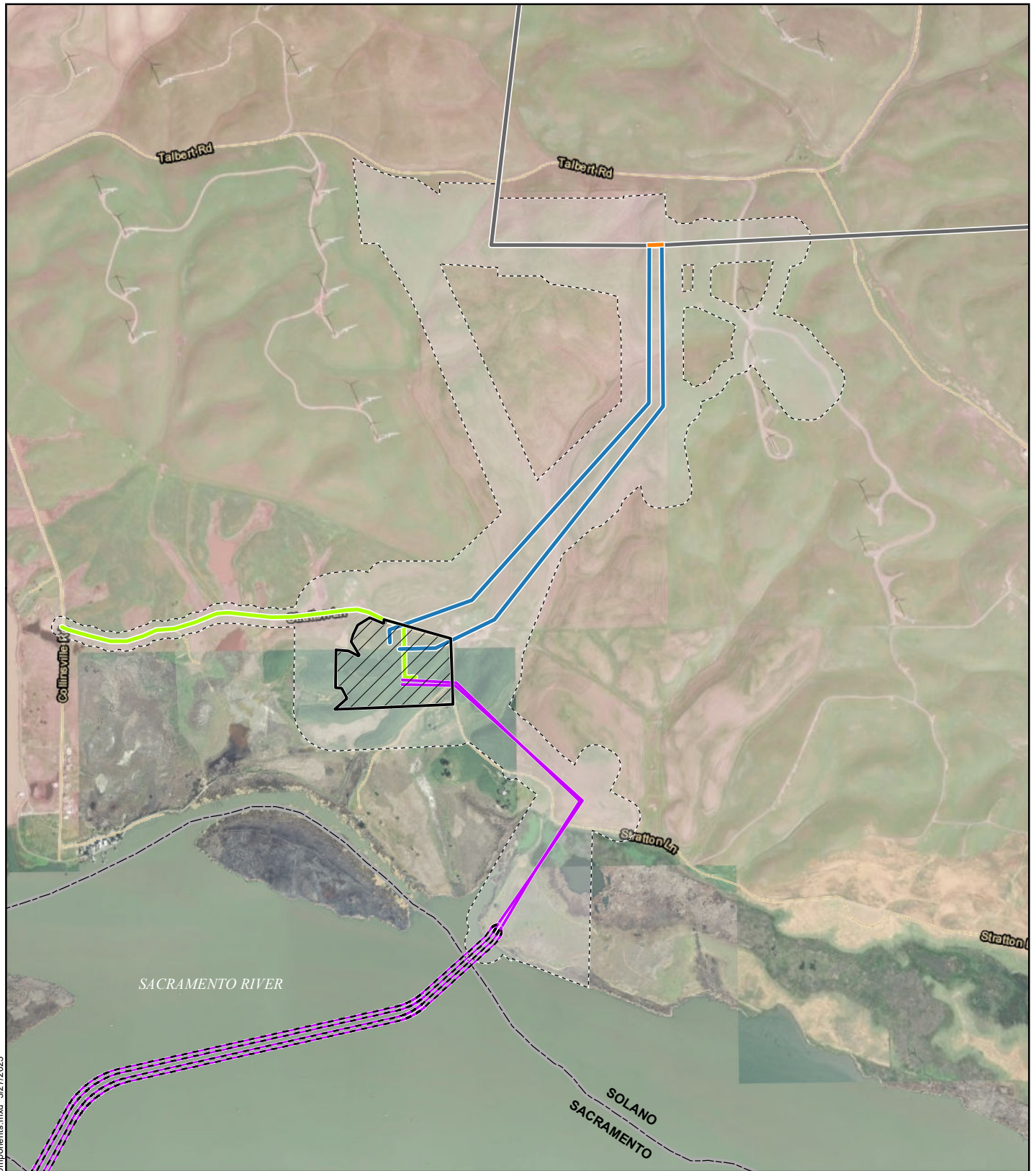


Figure 2: Project Components Map 1 of 6

Collinsville 500/230 Kilovolt Substation Project

- | | |
|---|------------------------------------|
| — Existing PG&E 500 kV Overhead Transmission Line | — County Boundary |
| — Proposed LSPGC 230 kV Overhead Segment | - - - Survey Area |
| — Proposed LSPGC 230 kV Submarine Segment | ▨ Proposed Collinsville Substation |
| — Proposed PG&E 12 kV Distribution Line | |
| — Proposed PG&E 500 kV Interconnection | |
| — Existing PG&E 500 kV Overhead Transmission Line to be Removed | |



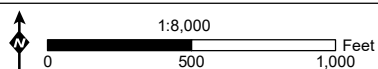
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Figure 2: Project Components Map 2 of 6

Collinsville 500/230 Kilovolt Substation Project

- Proposed LSPGC 230 kV Submarine Segment
- Proposed Riser
- Proposed LSPGC 230 kV Underground Segment
- Proposed Utility Vault
- Proposed LSPGC Telecommunications Line
- Survey Area
- Existing PG&E Pittsburg Substation



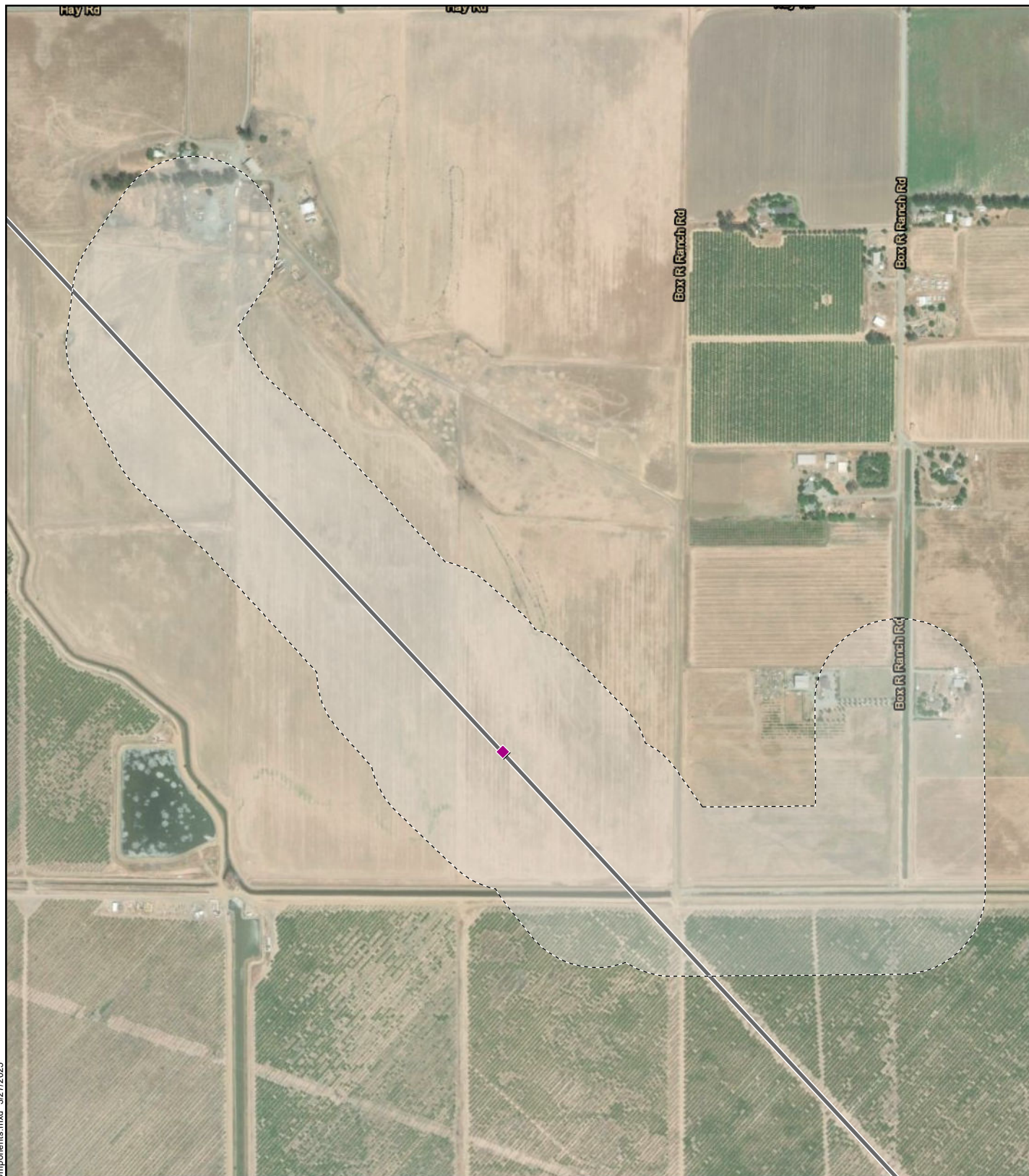
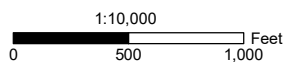


Figure 2: Project Components Map 3 of 6

Collinsville 500/230 Kilovolt Substation Project

- Proposed PG&E 500 kV Transposition Structure
- Existing PG&E 500 kV Overhead Transmission Line
- Survey Area



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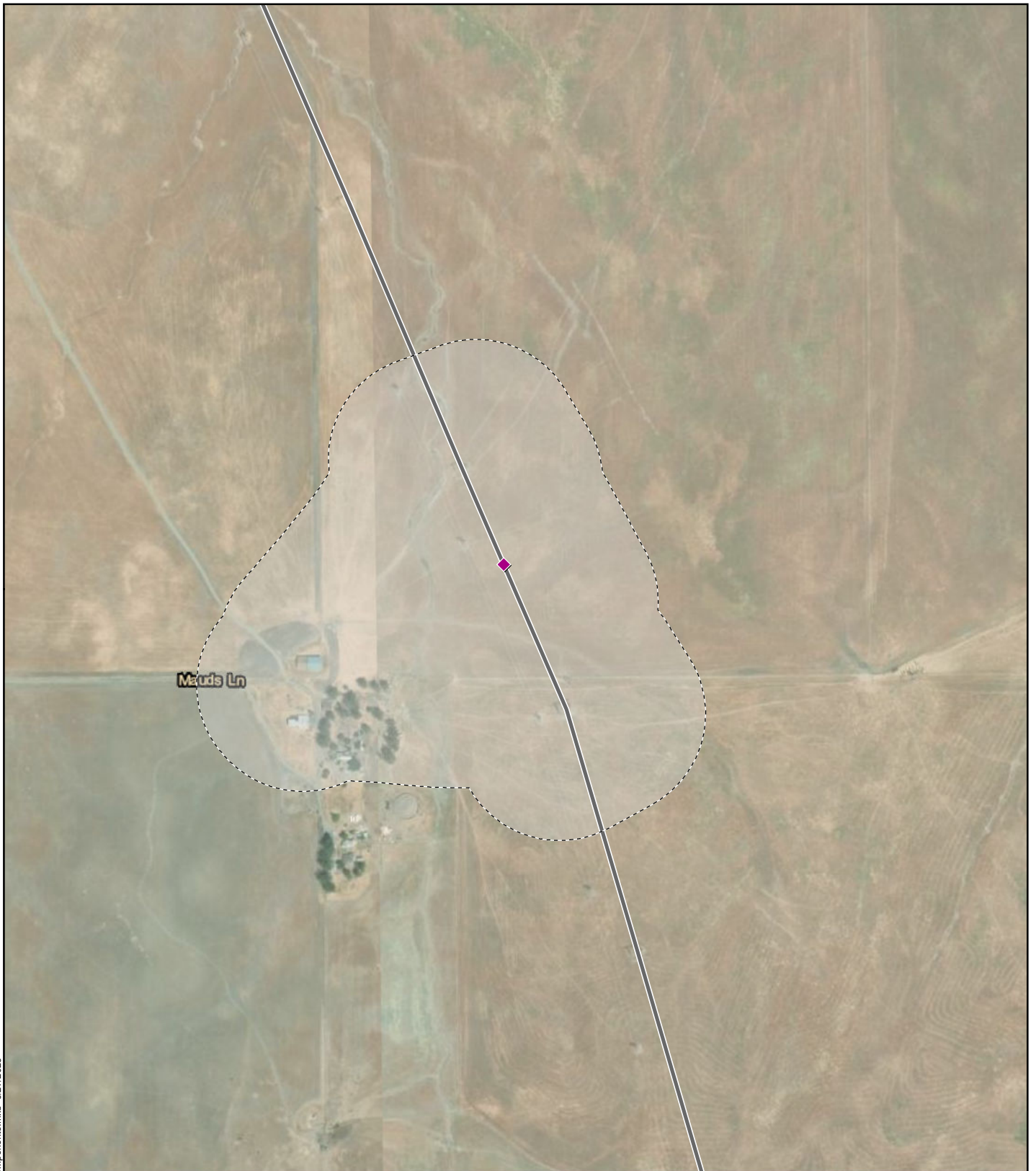
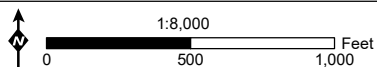


Figure 2: Project Components Map 4 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E 500 kV Transposition Structure
- Existing PG&E 500 kV Overhead Transmission Line
- - - Survey Area



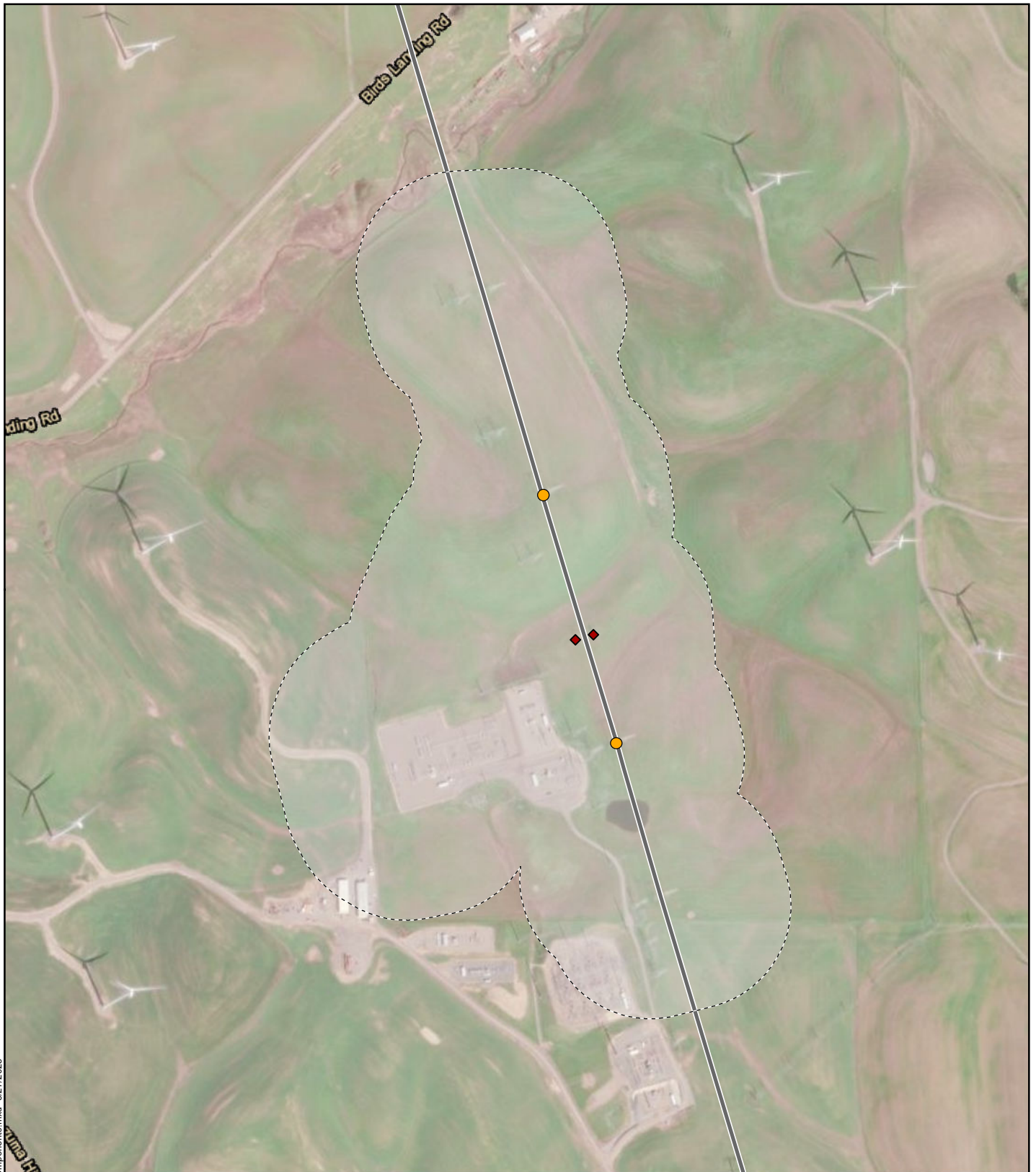


Figure 2: Project Components Map 5 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E LSP Removal
- Proposed PG&E Three-Pole Dead-End TSP
- Existing PG&E 500 kV Overhead Transmission Line
- - - Survey Area

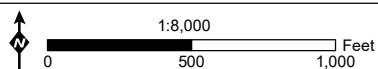
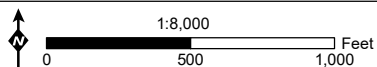




Figure 2: Project Components Map 6 of 6

Collinsville 500/230 Kilovolt Substation Project

- ◆ Proposed PG&E 500 kV Transposition Structure
- Existing PG&E 500 kV Overhead Transmission Line
- - - Survey Area



3 – REGULATORY FRAMEWORK

The regulatory framework applicable to the Tower survey area is consistent with the framework established in the Original Report. The following federal, state, and local regulations apply to the Tower survey area:

- Federal
 - Federal Endangered Species Act (FESA)
 - Migratory Bird Treaty Act (MBTA)
 - Bald and Golden Eagle Protection Act (BGEPA)
 - Clean Water Act (CWA) Sections 404, 402, and 401
 - Plant Protection Act of 2000
- California
 - California Fish and Game Code Sections 3511, 4700, 5050, and 5515
 - California Fish and Game Code Sections 3503, 3503.5, and 3513
 - Porter-Cologne Water Quality Control Act
 - Native Plant Protection Act
 - California Code of Regulations (CCR)
- Local
 - Solano County General Plan
 - Solano County Water Agency (SCWA) Solano Multispecies Habitat Conservation Plan
 - East Contra Costa Habitat and Natural Community Conservation Plan
 - PG&E Bay Area Operations and Maintenance Habitat Conservation Plan

4 – PRELIMINARY AGENCY CONSULTATION

No pre-survey contact with applicable wildlife agencies was conducted regarding this Addendum. No agency approvals were required for biologists conducting surveys. Agency protocols and best practices applied to the survey effort are detailed in Section 5.2 Biological Resource Survey Method of the Original Report.

5 – METHODS

Consistent with the methods and definitions outlined in the Original Report, Insignia performed a records search, a habitat assessment, and a preliminary jurisdictional delineation within the Tower survey area.

Surveys within the Tower survey area were conducted on February 20 and 21, 2025. Insignia biologists searched for areas of potential habitat by walking meandering transects that covered 100 percent of the Tower survey area that was accessible. Approximately 82 acres that were inaccessible due to lack of landowner permission were surveyed through binoculars to the

greatest extent feasible from accessible rights-of-way. The Tower survey area and areas where surveyor access was limited are shown in Attachment A: Biological Resources Map.

Surveys were conducted during daylight hours with clear to partly cloudy skies and did not occur in inclement weather conditions or fog cover. Temperatures ranged from 45 to 70 degrees Fahrenheit with wind speeds between 5 and 20 miles per hour.

5.0 MODIFICATIONS FROM ORIGINAL REPORT

A fully floristic special-status plant survey was conducted in the survey area for the Original Report; however, this survey was not conducted within the Tower survey area for this Addendum. Therefore, the criteria for a special-status species' potential to occur in this Addendum differ from the Original Report and are as follows:

- **Present:** The species was incidentally observed during the habitat assessment surveys.
- **High Potential:** Suitable habitat for the species is present within the Tower survey area, and recent (i.e., within 30 years) occurrences have been reported within 1 mile of the Tower survey area; or marginal habitat is present, and recent occurrences have been recorded within 0.25 mile of the Tower survey area.
- **Moderate Potential:** Suitable habitat for the species is present, and the Tower survey area is located within the species' known range, but no recent (i.e., within 30 years) occurrences have been recorded between 1 and 5 miles from the Tower survey area; or marginal habitat is present, the Tower survey area is located within the species' known range, and multiple recent occurrences have been recorded between 1 and 5 miles from the Tower survey area.
- **Low Potential:** Poor or marginal habitat for the species exists, and no more than one recent occurrence has been recorded between 1 and 5 miles from the Tower survey area; barriers to migration/dispersal may be present; or suitable habitat for the species is present within the Tower survey area, but either no recent occurrences have been recorded between 1 and 5 miles from the Tower survey area or the Tower survey area is located outside of the species' known range.
- **No Potential:** No habitat exists for the species; no occurrences have been recorded between 1 and 5 miles from the Tower survey area, or the Tower survey area is outside of the species' known geographic or elevation range; and/or the species has been confirmed to be extirpated from the area.

6 – RESULTS

6.0 GEOGRAPHY, CLIMATE, AND HYDROLOGY

Precipitation, average air temperatures, and elevation data at each transposition tower location within the Tower survey area are detailed in Table 1: Geography, Climate, and Hydrology within the Tower Survey Area.

Table 1: Geography, Climate, and Hydrology within the Tower Survey Area

Metric	Tower			
	A*	B*	C*	D**
Average Rainfall (inches)	24.0	24.0	24.0	13.7
Period of Highest Rainfall	Dec-Mar	Dec-Mar	Dec-Mar	Dec-Feb
Average Annual Temperature Range (degrees Fahrenheit)	26-108	26-108	26-108	26-106
Elevation Range (feet)***	42-79	72-140	170-281	5-14

(*National Oceanic and Atmospheric Administration [NOAA] 2025a)

(**NOAA 2025b)

(***)Google Earth Pro 2025)

6.1 RECORDS SEARCH

Results of the initial desktop analysis indicated that the areas surrounding the Tower survey area are primarily grassland habitat and agricultural areas, followed by some developed areas for farming or residential purposes. Grassland habitats, in general, may provide suitable habitat for special-status plants.

From this records search, Insignia compiled a list of 44 special-status plant species and 46 special-status wildlife species that have the potential to occur within the Tower survey area associated with each of the Towers, as well as 18 potential jurisdictional water features from a United States (U.S.) Geological Survey (USGS) National Wetlands Inventory (NWI) database review. Special-status species and water features found during the records search are broken down by transposition towers and are detailed in Table 2: Special-Status Plant and Wildlife Species Identified During Records Search and Table 3: Aquatic Resources Identified During Records Search of Water Features .

Table 2: Special-Status Plant and Wildlife Species Identified During Records Search within 5 Miles of the Tower Survey Area

Tower	Special-Status Occurrences	
	Plants	Wildlife
A	33	20
B	36	28
C	33	31
D	28	30
All Towers*	44	46

Note: The totals represent the cumulative special-status species count for the Towers. The total will not sum as the transposition tower records search either overlapped and captured the same occurrence data or independently recorded the same species within their respective search areas.

Table 3: Aquatic Resources Identified During Records Search of Water Features within the Tower Survey Area

Tower	Water Features
A	8
B	2
C	2
D	6
Total	18

6.2 VEGETATION COMMUNITIES

Ten vegetation community alliances and land cover types were identified in the Tower survey area, as presented in Table 4: Vegetation Community Alliances and Land Cover Types and depicted in Attachment A: Biological Resources Map. The vegetation community and land cover locations are also documented in Attachment A: Biological Resources Map, and photographs are provided in Attachment B: Habitat Assessment Photographs. The natural communities observed in the Tower survey area are ranked S3, S4, and semi-natural alliance (SNA) (semi-natural stands dominated by non-native species). Two of the 10 natural communities observed are considered sensitive. The following subsections describe each vegetation community identified within the survey area.

Approximately 162 acres of the Tower survey area were not accessible to the field survey team on foot. However, these areas were assessed for habitat from adjacent accessible areas through a combination of binocular-assisted evaluation and desktop analysis. Although vegetation communities and land cover types were identified for portions of the inaccessible terrain, a preliminary jurisdictional delineation for waters was not feasible in areas with limited foot access.

6.2.0 *Allenrolfea occidentalis* Shrubland Alliance (S3)

This community is associated with dry lakebed margins, hummocks, playas perched above current drainages, and seeps. Iodine bush (*Allenrolfea occidentalis*) typically has a greater than 2-percent absolute cover in the shrub canopy and is dominant or co-dominant in the shrub and herbaceous layers with fourwing saltbush (*Atriplex canescens*), saltgrass (*Distichlis spicata*), and alkali heath (*Frankenia salina*). This community was observed within the Tower survey area associated with Tower D, along either side of Kellog Creek Road adjacent to roadside drainages.

6.2.1 *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance

This community is found in foothills, waste places, rangelands, and opening in woodlands. The dominant species include oats (*Avena* spp.) and bromes (*Bromus* spp.) in the herbaceous layer with at least 50-percent relative cover. Co-dominant species in the herbaceous layer may include Australian saltbush (*Atriplex semibaccata*) and barley (*Hordeum* spp.). This alliance is widespread across the Tower survey area associated with Tower B, Tower C, and Tower D. Areas where this community occurs are being used for active cattle grazing or agriculture.

Table 4: Vegetation Community Alliances and Land Cover Types

Vegetation Community or Land Cover Type	Area Identified (acres)			
	A	B	C	D
Agriculture	22.4	--*	--	31.4
<i>Allenrolfea occidentalis</i> Shrubland Alliance**	--	--	--	0.6
<i>Avena</i> spp. – <i>Bromus</i> spp. Herbaceous SNA	--	84.6	132.5	34.0
<i>Brassica nigra</i> – <i>Centaurea (solstitialis, melitensis)</i> Herbaceous SNA	3.3	--	--	1.6
Developed	2.0	1.1	12.2	1.0
Disturbed	15.3	0.9	1.6	1.4
<i>Lolium perenne</i> Herbaceous SNA	165.9	--	--	--
Open water	1.1	--	--	--
Ornamental Vegetation	4.2	3.9	--	2.7
<i>Schoenoplectus (acutus, californicus)</i> Herbaceous Alliance**	--	--	--	2.0
Total***	214.3	90.5	146.2	74.7

*This vegetation community or land cover type was not observed within the Tower survey area.

** This is a California Department of Fish and Wildlife- (CDFW-) designated sensitive natural community (State Rarity Rank S1-S3).

*** Due to rounding, the total may not sum.

6.2.2 *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

This community is typically associated with disturbed areas where black mustard (*Brassica nigra*) and short-pod mustard (*Hirshfeldia incana*) achieve 80-percent relative cover in the herbaceous layer. Similar ruderal forbs, including tocolote (*Centaurea melitensis*) and yellow star thistle (*Centaurea solstitialis*), may achieve dominance or co-dominance. This community was observed within the Tower survey area associated with Tower A where active cattle grazing occurs and at Tower D along either side of agricultural canals.

6.2.3 *Lolium perenne* Herbaceous Semi-Natural Alliance

This community contains Italian rye grass (*Festuca perennis*) that is dominant or co-dominant with other non-natives in the herbaceous layer, including rip-gut brome (*Bromus diandrus*), sea barley (*Hordeum marinum*), and wild oat (*Avena fatua*). Typically, the herbaceous layer is continuous and often forms monocultures, which contributes to a poorly developed shrub layer. This alliance is widespread across the Tower survey area associated with Tower A, where the land is used for active cattle grazing and agriculture.

6.2.4 *Schoenoplectus (acutus, californicus)* Herbaceous Alliance (S3S4)

This community is found in a variety of wetland habitats, including brackish marshes, freshwater ponds, sloughs, swamps, and roadside ditches. The herbaceous layer is intermittent to continuous, forming thick stands that often result in a poorly developed shrub layer. Hardstem

bulrush (*Schoenoplectus acutus*) or giant bulrush (*Schoenoplectus californicus*) typically contain greater than 50-percent relative cover in the herbaceous layer. This community was observed within the Tower survey area associated with Tower D, in the middle of several agricultural canals that run between fallow and active agriculture fields.

6.3 SPECIAL-STATUS PLANT SPECIES

Background research conducted for the Tower survey area generated a list of 41 special-status plant species that have the potential to occur in the Tower survey area. This list was generated by comparing the species' ranges and habitat requirements with the location of the Tower survey area and habitat types within it. These species are presented in Table 5: Special-Status Plant Species with the Potential to Occur, which provides the listing status, life history, and bloom period for each species. California Natural Diversity Database (CNDDDB) occurrences of special-status plants are presented in Attachment C: CNDDDB Occurrences of Special-Status Plant Species.

As documented in Table 5: Special-Status Plant Species with the Potential to Occur, seven species have a high potential to occur and 28 species have a moderate potential to occur.

6.4 SPECIAL-STATUS WILDLIFE SPECIES

Based on the literature and database review, 46 special-status wildlife species were identified that have the potential to occur within the Tower survey area. The species name, listing status, life history, known locations, and a brief assessment of the potential to occur within the Tower survey area are provided for each species in Table 6: Special-Status Wildlife Species with the Potential to Occur. CNDDDB occurrences of special-status wildlife are presented in Attachment D: CNDDDB Occurrences of Special-Status Wildlife Species.

As documented in Table 6: Special-Status Wildlife Species with the Potential to Occur, two species (golden eagle [*Aquila chrysaetos*] and northern harrier [*Circus cyaneus*]) were incidentally observed during the habitat assessment surveys, eight species have a high potential to occur, and 19 species have a moderate potential to occur.

6.5 GENERAL WILDLIFE SPECIES

Nineteen wildlife species were incidentally identified during the surveys, which includes two mammals and 17 birds. Noted wildlife species were identified by direct observation, vocalizations, or the observance of scat and tracks. The wildlife identified are not necessarily comprehensive accounts of all species that utilize the Tower survey area, because species that are nocturnal, secretive, or seasonally absent may not have been observed. Observed occurrences of wildlife species are shown in Table 7: Wildlife Species Observed within the Tower Survey Area.

Table 5: Special-Status Plant Species with the Potential to Occur

Common Name (<i>Scientific Name</i>)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
alkali-sink goldfields (<i>Lasthenia chrysantha</i>)	1B.2	This species occurs in vernal pools at elevations between 0 and 656 feet. (CNPS 2025b)	Feb-Apr	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
alkali milk-vetch (<i>Astragalus tener var. tener</i>)	1B.2	This species occurs in alkali playas, valley and foothill grasslands, and vernal pools at elevations between 5 and 195 feet. (CNPS 2025b)	Mar-Jun	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented within 0.25 mile of the survey area. High Potential
Antioch Dunes evening-primrose (<i>Oenothera deltooides</i> ssp. <i>howellii</i>)	FE; SE; 1B.1	This species occurs in inland dunes at elevations between 0 to 100 feet. (CNPS 2025b)	Mar-Sep	perennial herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential
Baker's navarretia (<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>)	1B.1	This species occurs in a variety of habitats including cismontane woodland, lower montane coniferous forest, meadows and seeps. It may also be seen in valley or foothill grasslands and vernal pools at elevations between 16 and 5,709 feet. (CNPS 2025b)	Apr-Jul	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 0.25 and 1 mile of the survey area. High Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 0.25 and 1 mile of the survey area. High Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential

² Explanation of federal and state listing codes:

Federal listing code: -FE: Federally listed as endangered	State listing code: -SE: State-listed as endangered	California Native Plant Society (CNPS) California Rare Plant Ranks (CRPRs): -1A: Presumed extinct in California and rare/extinct elsewhere -1B: Rare or endangered in California and elsewhere -2B: Rare, threatened, or endangered in California, but more common elsewhere	CRPR Threat Codes: -0.1: Seriously threatened in California (over 80 percent of occurrences threatened, high degree and immediacy of threat) -0.2: Moderate Potentially threatened in California (20 to 80 percent of occurrences threatened, Moderate Potential degree and immediacy of threat)
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Common Name (<i>Scientific Name</i>)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
bearded popcornflower (<i>Plagiobothrys hystriculus</i>)	1B.2	This species occurs in valley & foothill grassland and vernal pool at elevations between 0 to 900 feet. (CNPS 2025b)	Apr-May	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented within 0.25 mile of the survey area. High Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented within 0.25 mile of the survey area. High Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Big tarplant (<i>Blepharizonia plumosa</i>)	1B.1	This species occurs within valley and foothill grasslands at elevations between 98 and 1,657 feet. (CNPS 2025b)	Jul-Oct	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential
Boggs Lake hedge-hyssop (<i>Gratiola heterosepala</i>)	2B.2	This species occurs within marshes, swamps, and vernal pools at elevations between 33 and 7,792 feet. (CNPS 2025b)	Apr-Aug	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within the 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Bolander's water-hemlock (<i>Cicuta maculata</i> var. <i>bolanderi</i>)	2B.2	This species occurs in marsh & swamp and salt marsh at elevations between 0 to 655 feet. (CNPS 2025b)	Jul-Sep	perennial herb	Suitable marsh habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable marsh habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. N Potential	Suitable marsh habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable marsh habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential
Brittlescale (<i>Atriplex depressa</i>)	2B.2	This species occurs in a variety of habitats including alkali playa, chenopod scrub, meadows and seep. It may also be observed in valley or foothill grasslands and vernal pools at elevations between 5 to 1,050 feet. (CNPS 2025b)	Apr-Oct	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential

Common Name (Scientific Name)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
California alkali grass (<i>Puccinellia simplex</i>)	2B.2	This species occurs in a variety of habitats including chenopod scrub, meadows and seeps. It may also be observed in valley or foothill grasslands and vernal pools at elevations between 7 and 3,051 feet. (CNPS 2025b)	Mar-May	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential
Caper-fruited trepidocarpum (<i>Trepidocarpum capparideum</i>)	1B.1	This species occurs in valley and foothill grasslands at elevations between 3 and 1,493 feet. (CNPS 2025b)	Mar-Apr	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 0.25 and 1 mile of the survey area. High Potential
Carquinez goldenbush (<i>Isocoma arguta</i>)	1B.2	This species occurs in valley & foothill grassland at elevations between 5 to 65 feet. (CNPS 2025b)	Aug-Dec	perennial shrub	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential
chapparal ragwort (<i>Senecio aphanactis</i>)	2B.2	This species occurs in chaparral, cismontane woodland, and coastal scrub at elevations between 50 to 2,625 feet. (CNPS 2025b)	January to April	annual herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles from the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles from the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles from the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential
Colusa grass (<i>Neostapfia colusana</i>)	SE; 1B.2	This species occurs in vernal pools at elevations between 15 and 655 feet. (CNPS 2025b)	May-Aug	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented 5 miles of the survey area. No Potential

Common Name (<i>Scientific Name</i>)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
Contra Costa goldfields (<i>Lasthenia conjugens</i>)	FE; 1B.2	This species occurs in a variety of habitats such as alkali playa, cismontane woodland, and valley or foothill grasslands. It may also be found in vernal pools at elevations between 0 to 1,540 feet. (CNPS 2025b)	Mar-Jun	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential
Contra Costa wallflower (<i>Erysimum capitatum</i> var. <i>angustatum</i>)	FE; SE; 1B.1	This species occurs in inland dunes at elevations between 10 and 65 feet. (CNPS 2025b)	Mar-Jul	perennial herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey. No Potential
Coulter's goldfields (<i>Lasthenia glabrata ssp. coulteri</i>)	1B.1	This species occurs within marshes and seeps, playas, and vernal pools at elevations between 5 and 4,005 feet. (CNPS 2025b)	Feb-Jun	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Crampton's tuctoria or Solano grass (<i>Tuctoria mucronata</i>)	1B.1	This species occurs in valley or foothill grasslands and vernal pools at elevations between 15 and 35 feet. (CNPS 2025b)	Apr-Aug	annual herb	Suitable grasslands are present within the survey area; however, the survey area is not within the known elevation range for this species. Therefore, marginally suitable habitat is present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Low Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Not Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential
Delta button-celery (<i>Eryngium racemosum</i>)	SE; 1B.1	This species occurs in riparian scrub at elevations between 10 and 100 feet. (CNPS 2025b)	Jun-Oct	annual/ perennial herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area; however, this species' known range does not overlap with the survey area. No Potential

Common Name (<i>Scientific Name</i>)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
Delta mudwort (<i>Limosella australis</i>)	2B.1	This species occurs in a variety of habitats such as brackish marsh, freshwater marsh, marsh or swamp. It may also be observed within riparian scrub at elevations between 0 to 10 feet. (CNPS 2025b)	May to August	perennial stoloniferous herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential
Delta tule pea (<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>)	1B.2	This species occurs in marshes or swamps at elevations between 0 to 15 feet. (CNPS 2025b)	May to July	perennial herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential
diamond-petaled California poppy (<i>Eschscholzia rhombipetala</i>)	1B.1	This species occurs in valley or foothill grassland at elevations between 0 to 3,200 feet. (CNPS 2025b)	March to April	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential
dwarf downingia (<i>Downingia pusilla</i>)	FE; 1B.1	This species occurs in valley or foothill grassland and vernal pool at elevations between 5 to 1,460 feet. (CNPS 2025b)	Mar-May	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
fragrant fritillary (<i>Fritillaria liliacea</i>)	1B.1	This species occurs in a variety of habitats, such as cismontane woodland and coastal prairie or scrub. It may also be observed in valley & foothill grassland at elevations between 10 to 1,345 feet often found in ultramafic soils. (CNPS 2025b)	Feb-Apr	perennial bulbiferous herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential

Common Name (<i>Scientific Name</i>)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
heartscale (<i>Atriplex cordulata</i> <i>var. cordulata</i>)	1B.1	This species occurs in chenopod scrub, meadow or seep, and valley or foothill grassland at elevations between 0 to 1,835 feet. (CNPS 2025b)	Apr-Oct	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 0.25 and 1 mile of the survey area. High Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Heckard's pepper-grass (<i>Lepidium latipes</i> <i>var. heckardii</i>)	FT; SE; 1B.1	This species occurs in valley and foothill grasslands at elevations between 5 and 655 feet. (CNPS 2025b)	Mar-May	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
hispid salty bird's-beak (<i>Chloropyron molle</i> <i>ssp. hispidum</i>)	FT; SE; 1B.1	This species occurs in meadows and seeps, playas, and valley or foothill grasslands at elevations between 5 and 510 feet. (CNPS 2025b)	Jun-Sep	annual herb (hemiparasitic)	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Keck's checkerbloom (<i>Sidalcea keckii</i>)	FE, 1B.1	This species occurs in cismontane woodlands and valley or foothill grasslands at elevations between 245 to 2,135 feet, often found in ultramafic soils. (CNPS 2025b)	Apr-Jun	annual herb	Suitable grasslands for this species are present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable grasslands for this species are present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has been documented within 0.25 mile of the survey area. High Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 0.25 and 1 mile of the survey area. High Potential	Suitable grasslands for this species are present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
large flowered fiddleneck (<i>Amsinkia grandiflora</i>)	FE;1B.1	This species occurs in foothill woodlands and valley grasslands at elevations between 0 and 1,000 feet. (CNPS 2025b)	Apr-May	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential

Common Name (Scientific Name)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
Legenere (<i>Legenere limosa</i>)	1B.1	This species occurs in vernal pools at elevations between 5 and 2,885 feet. (CNPS 2025b)	Apr-Jun	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Long-styled sand-spurrey (<i>Spergularia macrotheca</i> var. <i>longistyla</i>)	1B.2	This species occurs in marshes, swamps, meadows, and seeps at elevations between 0 and 835 feet. (CNPS 2025b)	Feb-May	perennial herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential
Mason's lilaeopsis (<i>Lilaeopsis masonii</i>)	1B.1	This species occurs in freshwater marsh, marsh or swamp, and riparian scrub at elevations between 0 to 35 feet. (CNPS 2025b)	Apr-Nov	perennial rhizomatous herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential
pappose tarplant (<i>Centromadia parryi</i> ssp. <i>parryi</i>)	1B.1	This species occurs in a variety of habitats such as chaparral, coastal prairie, meadow and seep. It may also be observed within marsh, swamp, and valley or foothill grasslands at elevations between 0 to 1,380 feet. (CNPS 2025b)	May-Nov	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential
Recurved larkspur (<i>Delphinium recurvatum</i>)	1B.2	This species occurs in chenopod scrub, cismontane woodland, and valley or foothill grasslands at elevations between 10 and 2,590 feet. (CNPS 2025b)	Mar-Jun	perennial herb	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential

Common Name (Scientific Name)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
saline clover (<i>Trifolium hydrophilum</i>)	1B.1	This species occurs in marshes and swamps, valley or foothill grasslands, and vernal pools at elevations between 0 and 985 feet. (CNPS 2025b)	Apr-Jun	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential
San Joaquin spearscale (<i>Extriplex joaquinana</i>)	1B.2	This species occurs in alkali playa, chenopod scrub, meadows and seeps. It may also be observed in valley or foothill grasslands at elevations between 5 to 2,740 feet. (CNPS 2025b)	Apr-Oct	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented within 0.25 mile of the survey area. High Potential
San Joaquin Valley Orcutt grass (<i>Orcuttia inaequalis</i>)	FE; 1B.1	This species occurs in vernal pools at elevations between 35 and 2475 feet. (CNPS 2025b)	Apr-Sep	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
soft salty bird's-beak (<i>Chloropyron molle</i> ssp. <i>molle</i>)	FE; 1B.2	This species occurs in marshes and swamps at elevations between 0 and 10 feet. (CNPS 2025b)	Jun-Nov	annual herb (hemiparasitic)	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area and this species' known range does not overlap with the survey area No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species known range does not overlap with the survey area. No Potential
spiny-sepaed button-celery (<i>Eryngium spinosepalum</i>)	1B.2	This species occurs in valley or foothill grasslands and vernal pools at elevations between 260 and 3,200 feet. (CNPS 2025b)	Apr-Jun	annual/ perennial herb	Suitable grasslands for this species are present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grasslands for this species are present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Low Potential

Common Name (<i>Scientific Name</i>)	Listing Status ²	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area			
					Tower A	Tower B	Tower C	Tower D
Suisun Marsh aster (<i>Symphyotrichum lentum</i>)	FE; 1B.1	This species occurs in marshes and swamps at elevations between 0 to 10 feet. (CNPS 2025b)	(Apr)May- Nov	perennial rhizomatous herb	Suitable grasslands for this species is present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Low Potential	Suitable grasslands for this species is present within the survey area; however, the survey area is outside the species' known elevation range. Therefore, marginally suitable habitat is present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Low Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential
Suisun thistle (<i>Circium hydrophilum</i> var. <i>hydrophilum</i>)	1B.1; FE	This species occurs in marshes and swamps at elevations between 0 to 5 feet. (CNPS 2025b)	Jun-Sept	perennial herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and the species' known range does not overlap with the survey area. No Potential
two-fork clover (<i>Trifolium amoenum</i>)	1B.2; FE	This species occurs in coastal bluff scrub and valley or foothill grasslands at elevations between 15 and 1360 feet. (CNPS 2025b)	Apr-Jun	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
vernal pool smallscale (<i>Atriplex persistens</i>)	FE; SE; 1B.1	This species occurs in vernal pools at elevations between 35 and 275 feet. (CNPS 2025b)	Jun-Oct	annual herb	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are present within the survey area. This species has been documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Wooly rose-mallow (<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>)	1B.2	This species occurs in marshes and swamps at elevations between 0 and 395 feet. (CNPS 2025b)	Jun-Sep	perennial/ rhizomatous herb	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has not been documented within 5 miles of the survey area. No Potential	Suitable habitat and conditions for this species are not present within the survey area. This species has been documented between 1 and 5 miles of the survey area. No Potential

Table 6: Special-Status Wildlife Species with the Potential to Occur

Common Name (<i>Scientific Name</i>)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
Amphibians						
California red-legged frog (<i>Rana draytonii</i>)	FT; SSC	This highly aquatic species typically inhabits quiet pools of streams, marshes and ponds, preferring habitat with extensive shoreline vegetation. Its diet is highly variable and may include various invertebrates, amphibians, and small mammals. In Northern California, breeding usually takes place between March and July. (USFWS 2025)	Marginal stream habitat that lacks the preferred shoreline vegetation for the species is present within the survey area. This species has not been recently (within 30 years) documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential	Although the species' known range overlaps with the survey area, suitable stream habitat is not present within the survey area. Additionally, this species has not been recently documented within 5 miles of the survey area. No Potential	Suitable stream habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. No Potential	Suitable stream habitat is present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential
California tiger salamander - central California DPS (<i>Ambystoma californiense</i> pop. 1)	FT; ST; WL	This species occupies grassland, savanna, or open woodland habitats and spends much of the year in underground refuges, especially ground squirrel (<i>Ammospermophilis beechyi</i>) burrows. Vernal pools or other seasonal water sources are required for breeding and egg laying. Adults may travel hundreds of meters across upland habitat to reach breeding ponds following seasonal rains during November to February. Its diet is highly variable and may include invertebrates, amphibians, or small mammals. (USFWS 2025)	Suitable grassland with ground squirrel burrows and seasonally ponded wetland habitat are present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential	Suitable grassland and seasonally ponded wetland habitat are present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable grasslands are present within the survey area; however, small mammal burrows suitable for occupancy and seasonal wetlands were not observed. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential
western spadefoot (<i>Spea hammondi</i>)	SSC; FPT	This species occurs predominantly in grasslands, but may also occur in valley-foothill hardwood woodlands. The western spadefoot consumes worms, insects, and other invertebrates and requires shallow, temporary pools of water from heavy winter rains for reproduction. (USFWS 2025)	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Moderate Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area Moderate Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Moderate Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Moderate Potential

³ Explanation of federal and state listing codes:

Federal listing codes:

- FE: Federally listed as endangered
- FT: Federally listed as threatened
- FPT: Proposed to be federally listed as threatened
- BCC: United States (U.S.) Fish and Wildlife Service (USFWS) Bird of Conservation Concern
- BGEPA: Bald and Golden Eagle Protection Act

State listing codes:

- SE: State-listed as endangered
- ST: State-listed as threatened
- SCE: State candidate for listing as endangered
- SSC: Species of Special Concern

- FP: Fully protected species
- WL: Watch List species
- WBWG-H: Western Bat Working Group high designation

⁴ Unless otherwise specified, all documented occurrences of special-status species were observed in the last 30 years

Common Name (<i>Scientific Name</i>)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
Birds						
burrowing owl (<i>Athene cunicularia</i> ssp. <i>hypugaea</i>)	SCE; SSC	This species can be found in a variety of open habitat types, including grassland, savanna, desert scrub, agricultural, and urban areas. Breeding occurs from March through October, and nesting takes place within abandoned burrows dug by burrowing mammals. This species preys on large insects and small mammals. (USFWS 2025)	Suitable grassland and agricultural habitat is present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential (Nesting) High Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. Moderate Potential (Nesting) High Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) High Potential (Foraging)	Suitable grassland and agricultural habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) High Potential (Foraging)
California black rail (<i>Laterallus jamaicensis</i> <i>coturniculus</i>)	ST; FP	This species is found in tidal emergent wetlands dominated by pickleweed (<i>Salicornia</i> spp.) or in brackish marshes supporting bulrushes in association with pickleweed. Breeding occurs from March to June, and nests are concealed in dense vegetation (often pickleweed) near the upper limits of tidal flooding. (CDFW 2025a)	Suitable tidal marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Although this species has been recently documented between 1 and 5 miles of the survey area, suitable tidal marsh habitat is not present within the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable tidal marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable tidal marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)
California condor (<i>Gymnogyps californianus</i>)	FE; SE; FP	This species uses extensive territories in open grasslands, oak savannah foothills, and beaches adjacent to coastal mountains for foraging, roosting, and nesting. Nests are built in caves and ledges in steep, rocky terrain. This species may also use cavities and broken tops of conifers for nesting locations. Juveniles remain dependent on their parents for 1 to 2 years while they learn to forage on their own. The species will consume carrion and carcasses. (USFWS 2025)	Suitable open grassland habitat is present within the survey area; however, steep, rocky terrain is not. This species has not been recently documented within 5 miles of the survey area, and this species’ known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable open grassland habitat is present within the survey area; however, steep, rocky terrain is not. This species has not been recently documented within 5 miles of the survey area, and this species’ known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable open grassland habitat is present within the survey area; however, steep, rocky terrain is not. This species has not been recently documented within 5 miles of the survey area, and this species’ known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable open grassland habitat is present within the survey area; however, steep, rocky terrain is not. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) Moderate Potential (Foraging)
California least tern (<i>Sternula antillarum browni</i>)	FE; SE; FP	This species is found throughout California and requires undisturbed stretches of beach and coastline. Adults forage in bays and estuaries for a variety of fish species. The California least tern nests in colonies on relatively open beaches where vegetation is limited by natural scouring from tidal action. However, to avoid humans, tern colonies have been known to move to inland mud flats and dredge fill sites. The breeding season typically begins in early to mid-May, and nests are constructed directly on the ground. (USFWS 2025)	Suitable mudflat, beach, or coastline is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable mudflat, beach, or coastline is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ range overlaps with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable mudflat, beach, or coastline is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable mudflat, beach, or coastline is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)
California Ridgeway’s rail (<i>Rallus obsoletus</i>)	FE; SE; FP	This species occurs almost exclusively in tidal and brackish marshes with unrestricted daily tidal flow, adequate invertebrate prey food supply, well-developed tidal channel networks, and suitable nesting and escape cover to provide habitat during extreme high tides. (CDFW 2025a)	Suitable tidal marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable tidal marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable tidal marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable tidal marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)

Common Name (Scientific Name)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
golden eagle (<i>Aquila chrysaetos</i>)	FP; WL; BGEPA	This species is an uncommon resident and migrant in California, favoring rolling foothills, mountains, and open terrains for hunting lagomorphs and rodents. It nests on cliffs and large trees, requiring rugged habitats with cover. This bird exhibits year-round diurnal activity and may migrate seasonally. (CDFW 2025a)	Suitable open terrain habitat for hunting is present within the survey area; however, marginal nesting habitat within trees are present. This species has not been recently documented within 5 miles of the survey area; however, this species' range does overlap with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable open terrain habitat for hunting is present within the survey area; however, marginal nesting habitat within trees are present. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable open terrain habitat for hunting is present within the survey area; however, marginal nesting habitat within trees are present. This species has been recently documented between 0.25 and 1 mile of the survey area. Low Potential (Nesting) High Potential (Foraging)	A pair of golden eagles was observed on during field surveys within the Tower survey area associated with Tower D. The pair was seen perching in a PG&E transmission tower, adjacent to a small stick nest whose approximate location is shown in Attachment A: Biological Resources Map. No nest building, or incubation was observed during the survey. During a subsequent site visit by PG&E staff on February 27, 2025, the pair of eagles was not observed at this location and no evidence of nest-tending by any species was observed. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Present (Foraging)
grasshopper sparrow (<i>Ammodramus savannarum</i>)	SSC	This species is a summer resident in California's dry, dense grasslands, particularly in foothills and lowlands. It requires thick cover of grasses and forbs for nesting and foraging. This secretive species primarily feeds on insects and may breed up to 1,500 meters elevation. (CDFW 2025a)	Marginally suitable dense grassland habitat is present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Marginally suitable dense grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Marginally suitable dense grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Marginally suitable dense grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)
mountain plover (<i>Charadrius montanus</i>)	SSC	This species prefers open grasslands and plowed fields with low vegetation for feeding and roosting. It is a winter resident in California's Central Valley and foothill valleys, relying on short grasslands. The species is declining, with specific habitat needs for foraging and nesting. (USFWS 2025)	Suitable grassland and plowed fields are present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland and plowed field habitat are present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. No Potential (Nesting) High Potential (Foraging)	Suitable grassland and plowed fields are present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable grassland and plowed fields are present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)

Common Name (<i>Scientific Name</i>)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
northern harrier (<i>Circus hudsonius</i>)	SSC; BCC	This species is found in a variety of open grassland, wetland, and agricultural habitats. Open wetland habitats used for breeding include marshy meadows, wet and lightly grazed pastures, freshwater and brackish marshes. Breeding habitat also includes dry upland habitats, such as grassland, cropland, drained marshland, and shrub-steppe in cold deserts. Wintering habitat includes open areas dominated by herbaceous vegetation, such as grassland, pastures, cropland, coastal sand dunes, brackish and freshwater marshes, and estuaries. (CDFW 2025a)	Suitable open grassland and agricultural habitat is present within the survey area. This species was observed during field surveys and has been recently documented between 1 and 5 miles of the survey area Moderate Potential (Nesting) Present (Foraging)	Suitable open grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area Moderate Potential (Nesting) Moderate Potential (Foraging)	Suitable open grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) Moderate Potential (Foraging)	Suitable open grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Low Potential (Foraging)
prairie falcon (<i>Falco mexicanus</i>)	WL	This species is an uncommon permanent resident found in California's grasslands, savannahs, rangelands, and desert scrub. It requires open areas for foraging and sheltered cliff ledges for nesting. This species primarily feeds on small mammals and exhibits diurnal activity patterns. (USFWS 2025)	Suitable grassland habitat is present within the survey area; however, no suitable nesting habitat is present. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area; however, no suitable nesting habitat is present. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area; however, no suitable nesting habitat is present. This species has not been recently documented within 5 miles of the survey area. No Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area; however, no suitable nesting habitat is present. This species has been recently documented between 0.25 and 1 mile of the survey area. No Potential (Nesting) High Potential (Foraging)
saltmarsh common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	SSC; BCC	This species occurs in freshwater and saltwater marshes. It requires thick, continuous cover down to the water surface for foraging, and tall grasses, tule patches, and willows for nesting. (CDFW 2025a)	Suitable marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area No Potential (Nesting) No Potential (Foraging)	Suitable marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Marginal tule habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)
short-eared owl (<i>Asio flammeus</i>)	SSC; BCC	This species occurs in agricultural fields, grazed and ungrazed grasslands, and freshwater and saltwater marshes. This species requires open country that supports concentrations of microtine rodents and herbaceous cover sufficient to conceal its nest from predators. Its nests are built on the ground. This species' diet consists of small mammals and is particularly affected by the 3- to 4-year cycle of the California vole (<i>Microtus californicus</i>). Its breeding season occurs from April through July. (USFWS 2025)	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential (Nesting) Low Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)

Common Name (<i>Scientific Name</i>)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
song sparrow ("Modesto" population) (<i>Melospiza melodia</i> pop. 1)	SSC	This species inhabits freshwater marshes, riparian thickets, sparsely vegetated irrigation canals, and valley oak restoration sites. It seeks cover and nests in willow and nettle thickets, growths of tules and cattails, and riparian oak forests with a sufficient understory of blackberry. (CDFW 2025a)	Suitable riparian and irrigation canal habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable riparian and irrigation canal habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable riparian and irrigation canal habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)
Suisun song sparrow (<i>Melospiza melodia maxillaris</i>)	SSC	This species occurs throughout California, primarily in saltwater and brackish marshes. The species requires dense vegetation as protection from predators and high tide, for perching, and for nesting habitat. Breeding season is from early March through July. (CDFW 2025a)	Suitable marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area Low Potential (Nesting) Low Potential (Foraging)	Suitable marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area Low Potential (Nesting) Low Potential (Foraging)	Suitable marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)
Swainson's hawk (<i>Buteo swainsoni</i>)	ST	This species occurs in open grasslands, prairies, and farmlands that have nearby trees for nesting. It nests in bushes and in several tree species, including oaks (<i>Quercus</i> spp.), willow, and eucalyptus, and usually nests in trees in riparian areas near open fields. This species primarily hunts small rodents, rabbits, birds, and reptiles during the breeding season. It largely lives off insects, such as grasshoppers and beetles, during the non-breeding season. It reproduces from March through April, incubates for 34 to 35 days, and fledges 6 weeks later. (CDFW 2025a)	Suitable grassland and farmland habitat are present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential (Nesting) High Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential (Nesting) Moderate Potential (Foraging)	Suitable grassland habitat is present within the survey area; however, there is marginally suitable tree habitat. This species has been recently documented between 0.25 and 1 mile of the survey area. Low Potential (Nesting) High Potential (Foraging)
tricolored blackbird (<i>Agelaius tricolor</i>)	ST; SSC; BCC	This highly colonial species requires open water, protected nesting substrate, and foraging areas adjacent to the colony with insect prey. Breeding occurs near fresh water, often in emergent wetlands with tall, dense cattails or tules, but also in thickets of willow; blackberry; wild rose; or tall, dense forbs. Seeds and cultivated grains, such as rice and oats, compose most of its fall and winter diet. Tricolored blackbird forages on the ground in croplands, grassy fields, flooded land, and along edges of ponds. The breeding season usually occurs from mid-April to late July. (USFWS 2025)	Suitable wetland habitat is not present within the survey area; however, grassy fields are. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable wetland habitat is not present within the survey area; however, grassy fields are. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable wetland habitat is not present within the survey area; however, grassy fields are. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)	Suitable wetland habitat and grassy fields are present within the survey area, This species has been recently documented between 1 and 5 miles of the survey area. Low Potential (Nesting) Moderate Potential (Foraging)

Common Name (Scientific Name)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
western snowy plover (<i>Charadrius nivosus nivosus</i>)	FT; SSC	This species thrives on sandy marine and estuarine shores, nesting from April to August in shallow depressions on sandy or gravelly substrates. Key habitats include coastal beaches, salt ponds, and alkali lakes, where it feeds on insects and relies on camouflage for cover. (USFWS 2025)	Suitable shore and sandy habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable shore and sandy habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable shore and sandy habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable shore and sandy habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)
white-tailed kite (<i>Elanus leucurus</i>)	FP	This species nests in riparian or oak woodland adjacent to undisturbed, open fields and grasslands, meadows, farmlands, and emergent wetlands, where it hunts rodents. Breeding generally occurs from February through October. White-tailed kite lays three to five eggs, which it incubates for 30 to 32 days, after which fledging occurs at 5 to 6 weeks of age. (CDFW 2025a)	Suitable riparian or oak woodland habitat adjacent to open fields and grasslands is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable riparian or oak woodland habitat adjacent to open fields are not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area No Potential (Nesting) No Potential (Foraging)	Suitable riparian or oak woodland habitat adjacent to open fields are not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area No Potential (Nesting) No Potential (Foraging)	Suitable riparian or oak woodland habitat adjacent to open fields and grasslands is not present within the survey area. This species has not been recently documented within 5 miles of the survey area; however, this species' known range overlaps with the survey area. No Potential (Nesting) No Potential (Foraging)
yellow rail (<i>Coturnicops noveboracensis</i>)	SSC	This species breeds in densely vegetated, shallow freshwater marshes and wet meadows. Breeding occurs from May through September. Wintering birds frequent mature salt marshes well above the water line. (Green 1992)	Suitable marsh and wet meadow habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable marsh and wet meadow habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)	Suitable marsh and wet meadow habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area No Potential (Nesting) No Potential (Foraging)	Suitable marsh and wet meadow habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential (Nesting) No Potential (Foraging)
Fish						
Delta smelt (<i>Hypomesus transpacificus</i>)	FT; SE	Delta smelt are an euryhaline species (i.e., a species adapted to living in fresh and brackish water) that occupies estuarine areas with salinities below 2 parts per thousand. This species is found only from the San Pablo Bay upstream through the Sacramento-San Joaquin River Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. Delta smelt spawn in shallow, fresh, or slightly brackish water upstream from the brackish water habitat associated with the mixing zone. (USFWS 2025)	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Marginal aquatic habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential

Common Name (Scientific Name)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
eulachon (<i>Thaleichthys pacificus</i>)	FT; SSC	Eulachon require clean, cold freshwater rivers for spawning and coastal marine environments for growth; they migrate upstream to spawn in late winter to early spring, exhibiting a semelparous life cycle. (McCaughran and Heggenes 2010)	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential
green sturgeon - southern DPS (<i>Acipenser medirostris</i> pop. 1)	FT; SSC	This species is found in a variety of estuarine and freshwater habitats within the San Francisco Bay, San Pablo Bay, and Sacramento-San Joaquin River Delta. Spawning occurs in the Sacramento, Feather, and Yuba rivers in cool (11 to 15 degrees Celsius) sections of mainstem rivers in deep pools (i.e., 8 to 9 meters) with substrate containing small- to medium-sized sand, gravel, cobble, or boulders. (USFWS 2025)	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Although this species has been recently documented between 1 and 5 miles of the survey area, suitable aquatic habitat is not present within the survey area. No Potential	Although this species has been recently documented between 1 and 5 miles of the survey area, suitable aquatic habitat is not present within the survey area. No Potential	Although this species has been recently documented between 1 and 5 miles of the survey area, suitable aquatic habitat is not present within the survey area. No Potential
longfin smelt – San Francisco Bay-Delta DPS (<i>Spirinchus thaleichthys</i> pop. 2)	FE; ST	The known range of this species extends from the San Francisco Bay Estuary and Sacramento-San Joaquin Delta (Bay-Delta) in California northward to the Cook Inlet in Alaska. In the Bay-Delta, longfin smelt spawn primarily in freshwater in the lower reaches of the Sacramento and San Joaquin rivers. Juvenile and adult longfin smelt have been found throughout the year in salinities ranging from pure freshwater to pure seawater. Once past the juvenile stage, they are typically collected in waters with salinities ranging from 14 to 28 parts per thousand. The life cycle of most longfin smelt generally requires estuarine conditions. Longfin smelt occur in the Bay-Delta typically from January to April. (Moyle and Baltz 1985)	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Marginal aquatic habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential
Sacramento splittail (<i>Pogonichthys macrolepidotus</i>)	SSC	The Sacramento splittail requires shallow, slow-moving waters with abundant vegetation for spawning and rearing, primarily inhabiting the Sacramento-San Joaquin Delta. They migrate for spawning in floodplain habitats. (USFWS 2025)	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Marginal aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential

Common Name (<i>Scientific Name</i>)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
steelhead - Central Valley DPS (<i>Oncorhynchus mykiss irideus</i> pop. 11)	FT; SSC	This DPS of steelhead represents a population that spawns in freshwater habitats located in California’s Central Valley. This species is anadromous, meaning they are born in freshwater, migrate to the ocean to grow and mature, and return to their natal streams to spawn. Suitable freshwater breeding habitats include rivers, streams, and tributaries with clean, cold water and gravel substrate. After hatching, the young steelhead spend several years in fresh water before migrating to the ocean, where they feed on a variety of prey, including small fish, invertebrates, and plankton. (CDFW 2025a)	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential
Invertebrates						
Conservancy fairy shrimp (<i>Branchinecta conservatio</i>)	FE	This species occurs within vernal pool habitats in California’s Central Valley. It mostly lives in relatively large, turbid freshwater vernal pools called playa pools. This species can be found at elevations ranging from 16 to 5,577 feet in grassland, rural, and wetland habitats. This species opportunistically filter-feeds on various planktonic food sources including algae and protozoa. (USFWS 2025)	Suitable seasonally ponded wetland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable seasonally ponded wetland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable seasonally ponded wetland habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable seasonally ponded wetland habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential
Delta green ground beetle (<i>Elaphrus viridis</i>)	FT	This species is currently only known to live in the Jepson Prairie region of Solano County. The Delta green ground beetle requires moist, grassy habitats near wetlands, with a life history involving predation on other insects and a lifecycle that includes egg, larval, pupal, and adult stages. (USFWS 2025)	Suitable prairie habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable prairie habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable prairie habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential	Suitable prairie habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential
Lange's metalmark butterfly (<i>Apodemia mormo langei</i>)	FE	This species is associated with the Antioch Dunes, a riverbank dune system along the San Joaquin River. Currently, this species can only be found in the Antioch Dunes National Wildlife Refuge, the last remnants of the Antioch Dunes. All life stages are closely associated with naked-stemmed buckwheat (<i>Eriogonum nudum</i> var. <i>psychicola</i>), which is the primary nectar source for adults, is used to lay eggs, and is a larval food plant. The leaves of the larval host plant provide both food and shelter throughout the larval instar phases. (Nature Serve)	Suitable riverbank dune habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential	Suitable riverbank dune habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential	Suitable riverbank dune habitat is not present within the survey area. This species has been recently documented within 0.25 mile of the survey area. No Potential	Suitable riverbank dune habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species’ known range does not overlap with the survey area. No Potential

Common Name (Scientific Name)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
longhorn fairy shrimp (<i>Branchinecta longiantenna</i>)	FE	Longhorn fairy shrimp require temporary freshwater pools for breeding, with a life cycle that includes a dormant egg stage, hatching in response to seasonal rainfall. They thrive in vernal pools. (USFWS 2025)	Suitable seasonally ponded wetland habitat is present within the survey area; however, this species' known range does not overlap with the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable seasonally ponded wetland habitat is present within the survey area; however, this species' known range does not overlap with the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable seasonally ponded wetland habitat is not present within the survey area; however, this species' known range does not overlap with the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable seasonally ponded wetland habitat is not present within the survey area; however, this species' known range overlaps with the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. No Potential
monarch butterfly (<i>Danaus plexippus</i>)	FPT	This species requires milkweed and flowering plants for suitable habitat. Although adults only need to feed on nectar from flowers, milkweed is the only place where they can lay eggs. Most individuals of this species live 2 to 5 weeks, but overwintering individuals may live 6 to 9 months. (USFWS 2025)	Suitable habitat with milkweed is not present within the survey area; however, other species flowering plants are present. Therefore, marginally suitable habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential	Suitable habitat with milkweed is not present within the survey area; however, other species flowering plants are present. Therefore, marginally suitable habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential	Suitable habitat with milkweed is not present within the survey area; however, other species flowering plants are present. Therefore, marginally suitable habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential	Suitable habitat with milkweed is not present within the survey area; however, other species flowering plants are present. Therefore, marginally suitable habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	This species is extremely dependent on the elderberry (<i>Sambucus nigra</i> ssp. <i>canadensis</i>), which is a shrub found in riparian areas and foothill oak woodlands. Adults and juveniles exclusively eat the stems, leaves, and flowers of the elderberry. Individuals are only found on the valley floor and low foothills. The typical lifespan of this species is 1 to 2 years. (USFWS 2025)	Suitable riparian habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable riparian habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable riparian habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Marginally suitable riparian habitat is present within the survey area; however, no elderberry shrubs are present within these habitats. This species has not been recently documented within 5 miles of the survey area. No Potential
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	This species occurs within vernal pool habitats throughout California. Female vernal pool fairy shrimp carry fertilized eggs in a sac on the underside of their body. The eggs are either dropped to the pool bottom or remain in the brood sac until the mother dies and sinks to the bottom of the pool. This species opportunistically filter-feeds on various planktonic food sources, including algae and protozoa. (USFWS 2025)	Suitable seasonally ponded wetland habitat is present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential	Suitable seasonally ponded wetland habitat is present within the survey area. This species has been recently documented between 0.25 and 1 mile of the survey area. High Potential	Suitable seasonally ponded wetland habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable seasonally ponded wetland habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential
vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE	This species occurs within vernal pool habitats with a patchy distribution within California's Central Valley. Female vernal pool tadpole shrimp produce up to six clutches of eggs containing 32 to 61 eggs per clutch during each wet season. They carry fertilized eggs in a sac on the underside of their body. The eggs are either dropped to the pool bottom or remain in the brood sac until the mother dies and sinks to the bottom of the pool. This species opportunistically filter-feeds on other fairy shrimp (<i>Branchinecta</i> spp.), invertebrates, and waste from other vernal pool species. (USFWS 2025)	Suitable seasonally ponded wetland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable seasonally ponded wetland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area Moderate Potential	Suitable seasonally ponded wetland habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable seasonally ponded wetland habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential

Common Name (Scientific Name)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
western bumble bee (<i>Bombus occidentalis</i>)	SCE	This species can be found throughout the western United States and Canada and are not limited to any particular host plant. (Xerces Society)	Suitable habitat is present within the survey area. This species has been documented between 1 and 5 miles of the survey area; however, this occurrence is over 30 years old. Moderate Potential	Suitable habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential	Suitable habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential	Suitable habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential
Mammals						
American badger (<i>Taxidea taxus</i>)	SSC	This species is an uncommon, permanent resident in California, thriving in drier, open habitats with friable soils. It primarily feeds on fossorial rodents and digs burrows for cover and reproduction. This species plays a crucial role in controlling small mammal populations. (WDFW)	Suitable dry, open habitat with fossorial rodent burrows is present within the survey area; however, these burrows are not suitably large enough for this species. This species has not been recently documented within 5 miles of the survey area. Low Potential	Marginal grassland habitats lacking suitably sized rodent burrows are present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential	Marginal grassland habitats lacking suitably sized rodent burrows are present within the survey area. This species has not been recently documented within 5 miles of the survey area. Low Potential	Marginal grassland habitats lacking suitably sized rodent burrows are present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Low Potential
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE; ST	This species inhabits a variety of open habitats, including grasslands, chenopod scrublands, and semi-arid regions. Breeding occurs from January to March, with a gestation period of 49 to 55 days. The female constructs a den in the ground, often utilizing existing burrows dug by other animals. Its diet primarily consists of small mammals, such as rodents, rabbits, and ground squirrels. (USFWSUSFWS 2025)	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential
salt-marsh harvest mouse (<i>Reithrodontomys raviventris</i>)	FE; SE; FP	This species inhabits salt marshes in California and is adapted to live in marsh vegetation, including pickleweed and cordgrass, which provide cover, food sources, and breeding habitats. Breeding typically occurs between March and October. Its diet consists of marsh vegetation, including seeds, stems, and leaves. (USFWS 2025)	Suitable marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area No Potential	Suitable marsh habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area No Potential	Suitable marsh habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential
Western red bat (<i>Lasirurs blossevillii</i>)	SSC, WBWG-H	This species occurs in a variety of habits, including forests, woodlands, and riparian areas. It roosts and forages among trees and vegetation and exhibits a preference for mixed coniferous and deciduous forests. Breeding occurs in the spring and early summer. This species typically seeks out tree foliage, such as leaves or branches, to create roosting sites. The diet consists mainly of insects, such as moths, beetles, and flies. (CDFW 2025a)	Marginally suitable roosting habitat is present within the survey area within the limited stands of trees, and suitable foraging habitat is present. This species has not been recently documented between 1 and 5 miles from the survey area. Low Potential (Roosting) Low Potential (Foraging)	Marginally suitable roosting habitat is present within the survey area within the limited stands of trees, and suitable foraging habitat is present. This species has not been recently documented between 1 and 5 miles from the survey area. Low Potential (Roosting) Low Potential (Foraging)	Marginally suitable roosting habitat is present within the survey area within the limited stands of trees, and suitable foraging habitat is present. This species has not been recently documented between 1 and 5 miles from the survey area. Low Potential (Roosting) Low Potential (Foraging)	Marginally suitable roosting habitat is present within the survey area within the limited stands of trees, and suitable foraging habitat is present. This species has not been recently documented between 1 and 5 miles from the survey area. Low Potential (Roosting) Low Potential (Foraging)

Common Name (<i>Scientific Name</i>)	Listing Status ³	Habitat and Life History	Potential to Occur within the Survey Area ⁴			
			Tower A	Tower B	Tower C	Tower D
Reptiles						
Alameda whipsnake (<i>Masticophis lateralis euryxanthus</i>)	FT; ST	This species inhabits grasslands, chaparral, and oak woodlands within Alameda and Contra Costa counties. It is primarily diurnal, being active during the day and seeking shelter in vegetation or underground burrows at night. Breeding typically occurs in the spring and summer months. The diet consists of small vertebrates, including lizards, rodents, and birds. (USFWS 2025)	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' known range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential
coast horned lizard (<i>Phrynosoma blainvillii</i>)	SSC	Blainville's horned lizard (<i>Phrynosoma blainvillii</i>) thrives in open, sandy habitats with scattered shrubs, including valley-foothill hardwood, conifer, and grasslands across California. It forages primarily on the ground, consumes ants, and relies on camouflage for protection. This species is diurnal and hibernates in loose soil during winter. (Nature Serve)	Suitable sandy habitats with scattered shrubs are not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable sandy habitats with scattered shrubs are not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Suitable sandy habitats with scattered shrubs are not present within the survey area. This species has not been recently documented within 5 miles of the survey area. No Potential	Marginally suitable sandy habitats with scattered shrubs are present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential
giant gartersnake (<i>Thamnophis gigas</i>)	FT; ST	This semi-aquatic species inhabits marshes, wetlands, and slow-moving bodies of water. It is often closely associated with water sources, which serve as its hunting grounds. Breeding typically occurs in the spring and early summer. After mating, females give birth to live young. The diet primarily consists of small fish, amphibians, and aquatic invertebrates. (USFWS 2025)	Suitable marsh and wetland habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' range does not overlap with the survey area. No Potential	Suitable marsh and wetland habitat is not present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' range does not overlap with the survey area. No Potential	Suitable marsh and wetland habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Marginal slow moving linear drainage habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' range does not overlap with the survey area. No Potential
Northern California legless lizard (<i>Anniella pulchra</i>)	SSC	This species is found in grasslands, chaparral, and open woodlands and requires loose, friable soils for burrowing. Breeding typically occurs in the spring or early summer. Females lay small clutches of eggs in underground burrows or hidden areas. The diet primarily consists of small invertebrates, such as insects, spiders, and other arthropods. (CDFW 2025a)	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has not been recently documented within 5 miles of the survey area and this species' range does not overlap with the survey area. No Potential	Suitable grassland habitat is present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. Moderate Potential
northwestern pond turtle (<i>Actinemys marmorata</i>)	FPT; SSC	This freshwater turtle species primarily inhabits ponds, lakes, and slow-moving streams with suitable basking sites. It spends a significant amount of time basking on logs or rocks. Breeding typically occurs in the spring and early summer. Females dig nests in sandy or gravelly areas near water, where they lay their eggs. The hatchlings emerge several months later and make their way to the water. The diet is omnivorous and consists of various aquatic plants, insects, small fish, and amphibians. (USFWS 2025)	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Suitable aquatic habitat is not present within the survey area. This species has been recently documented between 1 and 5 miles of the survey area. No Potential	Marginal slow-moving aquatic habitat is present within the survey area; however, these areas lack suitable basking sites. This species has been recently documented between 1 and 5 miles of the survey area. No Potential

Table 7: Wildlife Species Observed within the Tower Survey Area

Common Name	Scientific Name
American crow	<i>Corvus brachyrhynchos</i>
Black phoebe	<i>Sayornis nigricans</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
European starling	<i>Sturnus vulgaris</i>
Golden eagle	<i>Aquila chrysaetos</i>
Horned lark	<i>Eremophila alpestris</i>
House finch	<i>Haemorhous mexicanus</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Mourning dove	<i>Zenaida macroura</i>
Northern harrier	<i>Circus hudsonius</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Raccoon	<i>Procyon lotor</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Ring-necked pheasant	<i>Phasianus colchicus</i>
Song sparrow	<i>Melospiza melodia</i>
Tree swallow	<i>Tachycineta bicolor</i>
Western meadowlark	<i>Sturnella neglecta</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>

6.6 CRITICAL HABITAT

Critical habitat for delta smelt (*Hypomesus transpacificus*) is present at the Tower survey area associated with Tower D. However, this area lacks several of the primary constituent elements (PCEs) for delta smelt, including physical habitat and river flow. Physical habitat requires proper substrate with water depth variation and channel morphology for spawning adults and potential foraging habitat for rearing juveniles along marsh edges. The agricultural canals within the Tower survey area associated with Tower D have been extensively manipulated and lack the variation in depth and morphology required by the species. Further, the canals within the Tower survey area associated with Tower D lack large-scale riverine flows that provide open water habitats preferred by the species.

However, the canals within the Tower survey area associated with Tower D may contain the requisite salinity necessary to satisfy the PCEs for critical habitat for this species, and the emergent vegetation along the shorelines of the canals may provide some physical habitat. However, the marginal suitability of the habitat within the Tower survey area associated with Tower D makes it unlikely that Delta smelt are present within these canals.

6.7 NATIVE WILDLIFE CORRIDORS AND NURSERY SITES

Wildlife migration corridors are areas that connect suitable wildlife habitats in a region that would otherwise be fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g., canyon drainages, ridgelines, or areas with vegetation cover) provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high-population or high-density areas; and facilitate genetic diversity. California Environmental Quality Act Guidelines require that project proponents disclose and mitigate for significant impacts on wildlife corridors. Impacts to wildlife corridors, such as human disturbance and development, can cause harm to migrating species, cause species to exceed population thresholds in fragmented patches, or prevent healthy gene flow between populations. The California Essential Habitat Connectivity Project (CEHC) maintains a statewide Essential Habitat Connectivity Map, which broadly depicts large, relatively natural habitat blocks that support native biodiversity (Natural Landscape Blocks) and areas essential for ecological connectivity between them (Essential Connectivity Areas) (Spencer et al. 2010). One Essential Connectivity Area lies within the Tower survey area associated with Tower C, as depicted in Attachment E: Essential Connectivity Areas (CDFW 2025c), and no Natural Landscape Blocks overlap with the Tower survey area (CDFW 2025d).

The Proposed Project lies within the Pacific Flyway, which is an important north-south migration corridor that runs along the Pacific coast of the Americas from Alaska to Patagonia, including all of North America west of the Rocky Mountains. The Pacific Flyway links breeding grounds to the north with wintering areas to the south and is used by many different species of birds during migration. Many birds (especially waterfowl) use locations in California's Sacramento Valley as a stopover point or wintering area. One of those major locations is Suisun Marsh, which is less than 10 miles from the Tower survey area. At the Tower survey area's latitude, the Pacific Flyway extends inland from the Pacific Ocean for approximately 700 miles. As a result, the

Tower survey area's components would be placed in less than 0.3 percent of the width of the Pacific Flyway. The Tower survey area does not occur in any nursery sites.

6.8 AQUATIC RESOURCES

Insignia biologists identified 13 linear drainages within the Tower survey area that are potentially under the jurisdiction of the Regional Water Quality Control Board (RWQCB) and CDFW. Three of these drainages may be potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Further, 19 potentially jurisdictional wetland features were observed within the Tower survey area. Attachment A: Biological Resources Map depicts the locations of the potentially jurisdictional water features within the Tower survey area.

Attachment F: Linear Water Feature Photographs presents upstream and downstream photographs of the mapped ephemeral linear water feature. Attachment G: Wetland Feature Photographs presents representative photographs of each wetland feature. Attachment H: Potentially Jurisdictional Water Features Table lists the unique feature identification number, feature type, length, ordinary high water mark width and depth, top-of-bank width and depth, Cowardin classification (for wetlands), and the approximate extent of potential USACE, RWQCB, and/or CDFW jurisdictions.

7 – RECOMMENDATIONS

Proposed Project-specific avoidance and minimization measures would need to be developed to reduce the potential for impacts to all special-status species with moderate or high potential to occur within the Proposed Project area, as well as species that are present within the Tower survey area.

Prior to initiating Proposed Project activities, the following pre-construction surveys would be required as follows:

- Pre-construction nesting bird and raptor surveys would be conducted within 48 hours prior to work occurring between February 1 and September 30 each year. Surveys would be conducted within 500 feet of all Proposed Project work areas.
- A pre-construction California red-legged frog survey would be conducted between January 1 and February 28 within the Tower survey area associated with Tower D in accordance with the U.S. Fish and Wildlife Service's (USFWS's) Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog guidelines (USFWS 2005).
- A pre-construction California tiger salamander survey would occur at all Towers within the Tower survey area in accordance with the USFWS's Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding on the California Tiger Salamander guidelines (USFWS 2003).
- A pre-construction golden eagle survey would occur within the Tower survey area associated with Tower D in accordance with the MBTA's Interim Golden Eagle Breeding

Survey Recommendations in Nevada: FWS R8 Migratory Birds June 13, 2023 guidelines (MBTA 2023).

- A pre-construction Swainson's hawk survey would occur at all Towers within the Tower survey area in accordance with the Swainson's Hawk Technical Advisory Committee's (SHTAC's) Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley guidelines (SHTAC 2000).
- A pre-construction survey for San Joaquin kit fox would occur in the Tower survey area associated with Tower D in accordance with the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011).
- Pre-construction burrowing owl surveys would be conducted in all Towers within the Tower survey area that may provide suitable nesting habitat in accordance with the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012). The take avoidance surveys, consisting of up to four visits, would be initiated within 30 days of and completed at least 14 days before construction is initiated at a given location. In areas with burrows or refuge that could potentially support burrowing owls, a clearance visit would be conducted within 24 hours of construction.
- A formal wetland delineation would be required once further engineering is complete and prior to work commencing within the Tower survey area. Once complete, a preliminary jurisdictional determination would be presented to the USACE that includes all data sheets, including NWI maps that show all proposed facilities (as shown in Attachment I: National Wetlands Inventory Map).

For all federally listed species with a moderate or high potential to occur, if the Proposed Project has the potential to adversely affect the species or its habitat, consultation under Section 7 of the FESA would be necessary.

If any state-listed species are observed in the Tower survey area and the Proposed Project has the potential to adversely affect them, an incidental take permit (ITP) issued by the CDFW may be required to mitigate for potential take of those species.

Although the 16 of the 17 bird species identified in Table 7: Wildlife Species Observed within the Tower Survey Area do not carry listing statuses under the FESA or California Endangered Species Act, they are protected under the MBTA, California Fish and Game Code, and CCR. One wildlife species observed, the golden eagle, is protected under the BGEPA.

Several regulatory approvals, authorizations, or permits are required for the Proposed Project, as provided in Table 8: Anticipated Biological Resource Permits and Authorizations. These approvals may include conditions that afford additional protection to species and/or their habitat.

Table 8: Anticipated Biological Resource Permits and Authorizations

Agency	Permit/Approval/Consultation	Jurisdiction/Purpose of Permit
Federal Agencies		
USACE	CWA Section 404 Nationwide Permit	Permanent and temporary fill of waters of the U.S.
USFWS	FESA Section 7 Consultation	Construction activities such as vegetation clearing or removal that may affect federally listed species or their habitats
State Agencies		
CDFW	California Fish and Game Code Section 1600 Streambed Alteration Agreement	Activities that will substantially disturb the bed or bank of a jurisdictional waterbody
RWQCB	CWA Section 401 Water Quality Certification	Activities authorized by federal agencies that may affect state water quality

8 – REFERENCES

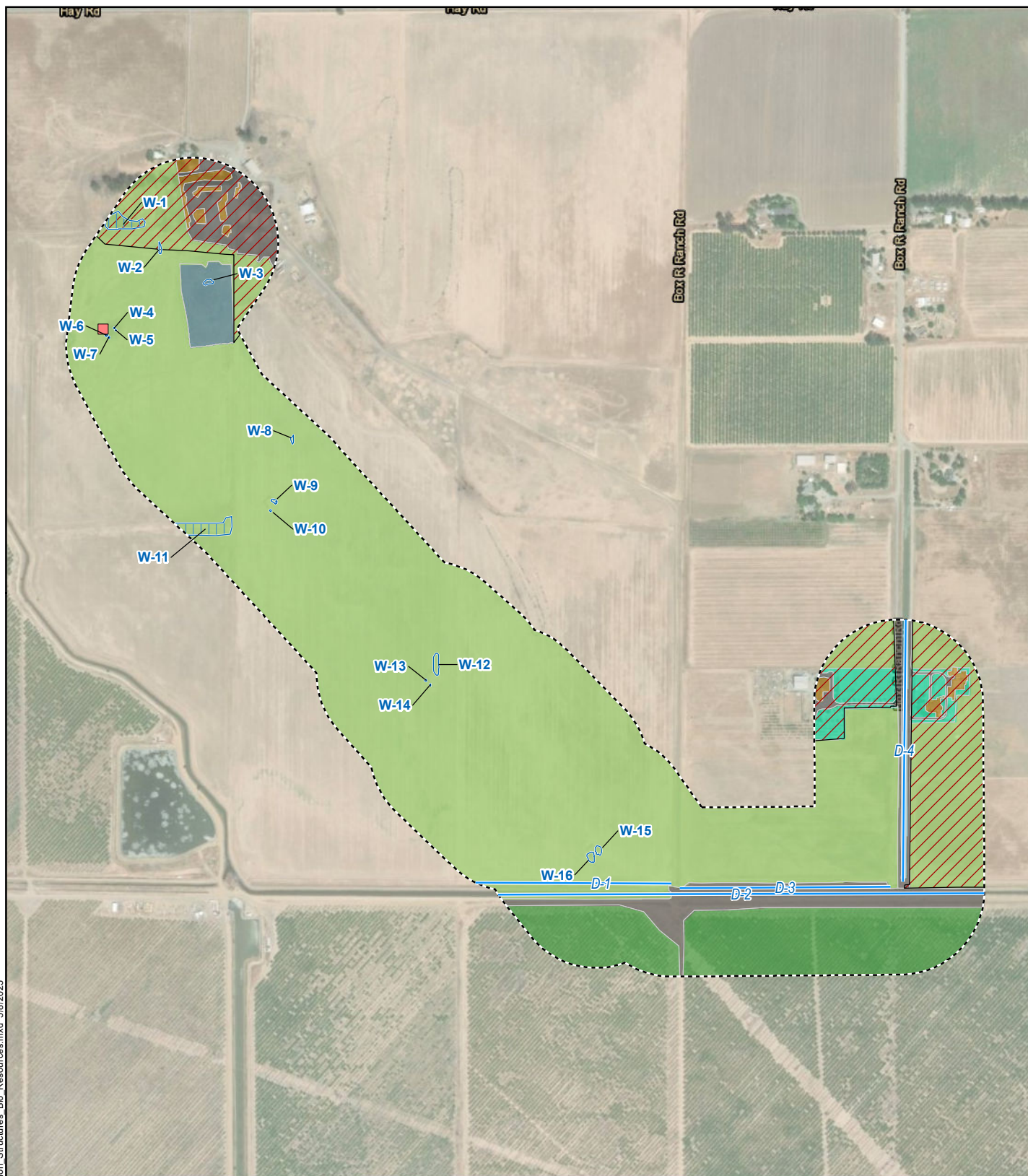
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ATTACHMENT A: BIOLOGICAL RESOURCES MAP

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Attachment A: Bio Resources Map Tower A

Collinsville 500/230 Kilovolt Substation Project

Vegetation Community

- Agriculture
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Developed

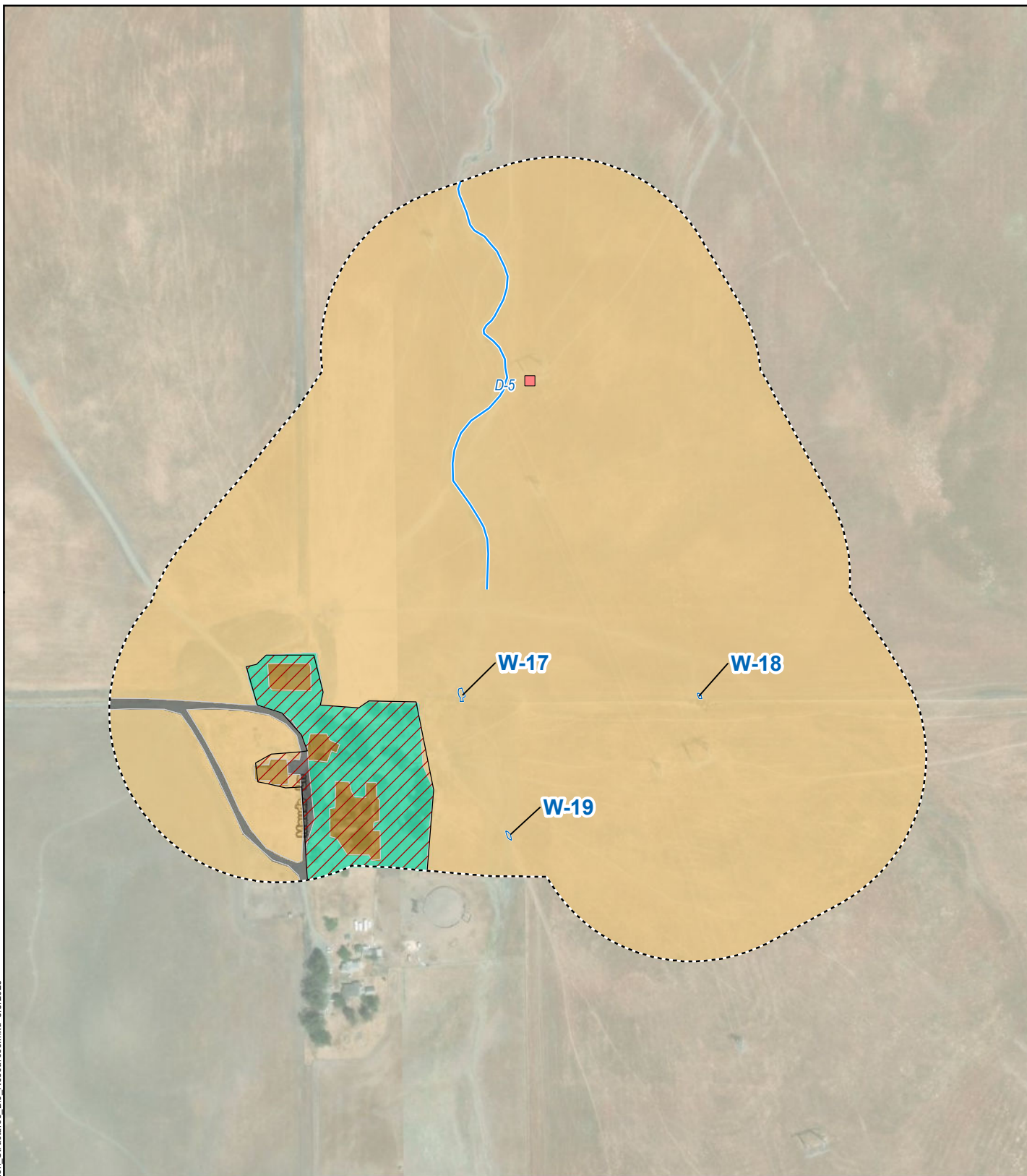
- Disturbed
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Open Water
- Ornamental Vegetation

- Stick Nest
- Drainage
- Wetland
- Limited Access Area
- Survey

Note: Vegetation within Limited Access Areas were mapped using aerial imagery and visual observation



1:10,000
0 400 800 Feet



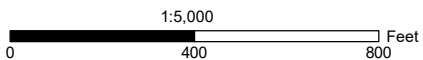
Attachment A: Bio Resources Map Tower B

Collinsville 500/230 Kilovolt Substation Project

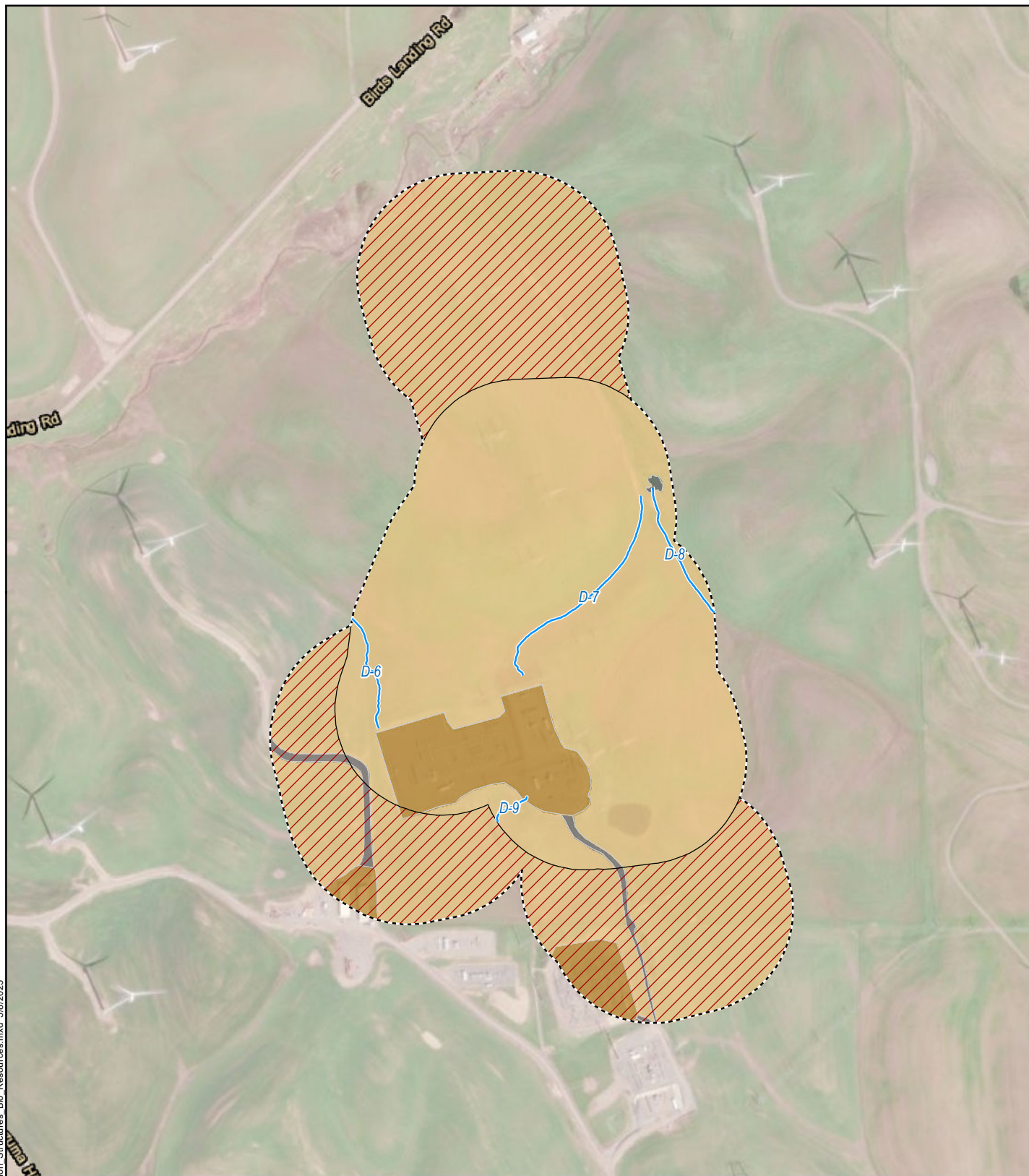
Vegetation Community

-  *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance
-  Developed
-  Disturbed
-  Ornamental Vegetation

-  Stick Nest
-  Drainage
-  Wetland
-  Limited Access Area
-  Survey Area



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Attachment A: Bio Resources Map Tower C

Collinsville 500/230 Kilovolt Substation Project

Vegetation Community

-  *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance
-  Developed
-  Disturbed

 Drainage

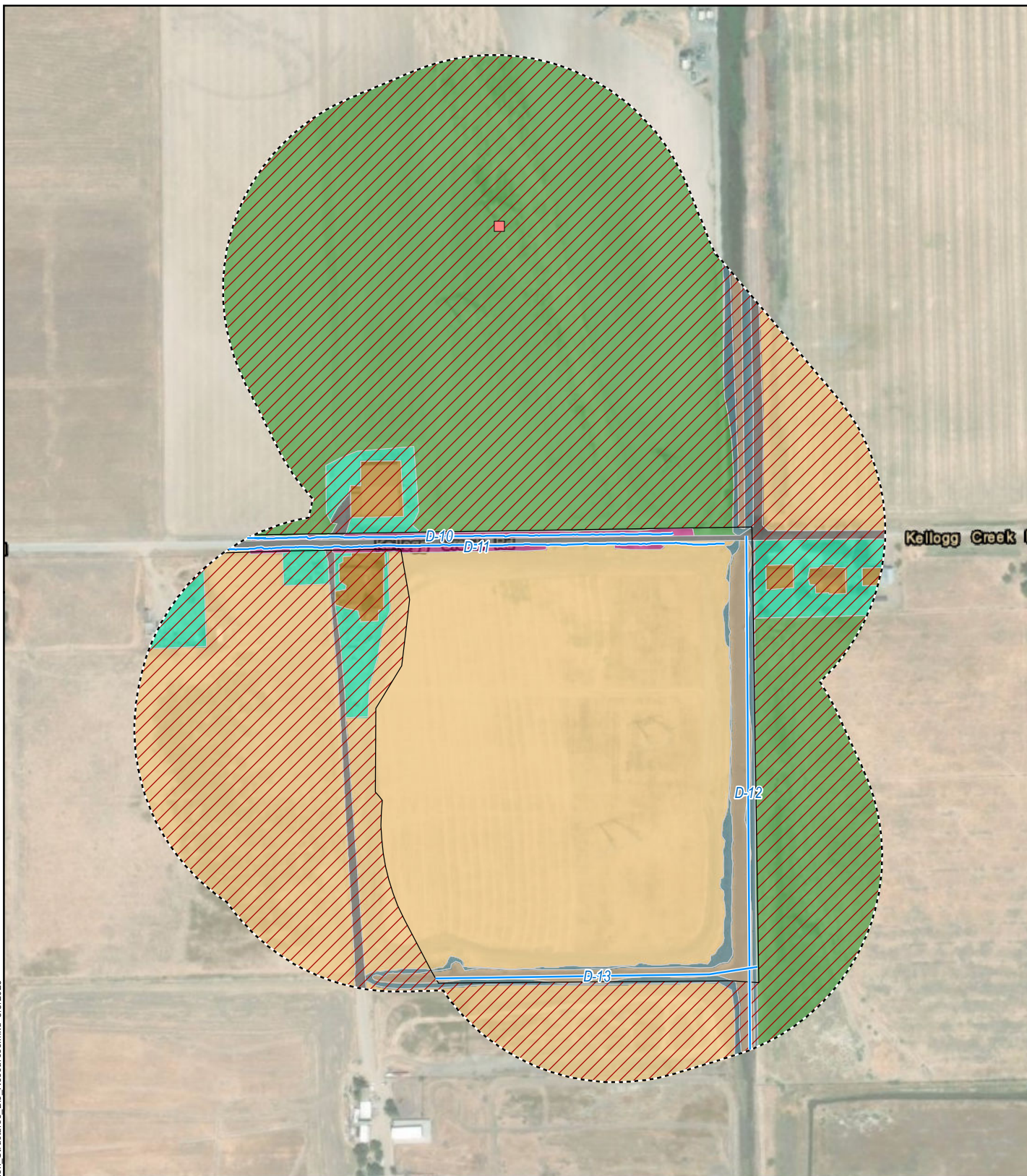
 Limited Access Area

 Survey Area



1:8,000
0 400 800 Feet

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Attachment A: Bio Resources Map Tower D

Collinsville 500/230 Kilovolt Substation Project

Vegetation Community

- Agriculture
- Allenrolfea occidentalis* Shrubland Alliance
- Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

- Developed
- Disturbed
- Ornamental Vegetation
- Schoenoplectus (acutus, californicus)* Herbaceous Alliance

- Stick Nest
- Drainage
- Limited Access Area
- Survey Area



1:4,000
0 400 800 Feet

ATTACHMENT B: HABITAT ASSESSMENT PHOTOGRAPHS

ATTACHMENT B: HABITAT ASSESSMENT PHOTOGRAPHS



Photograph 1:
Agriculture land
cover type,
facing southwest.



Photograph 2:
*Allenrolfea
occidentalis*
Shrubland
Alliance, facing
south.



Photograph 3:
Avena spp. -
Bromus spp.
Herbaceous
Semi-Natural
Alliance (SNA),
facing south.



Photograph 4:
Brassica nigra -
Centaurea
(*solstitialis*,
melitensis)
Herbaceous
SNA, facing
east.



Photograph 5:
Disturbed land
cover type,
facing north

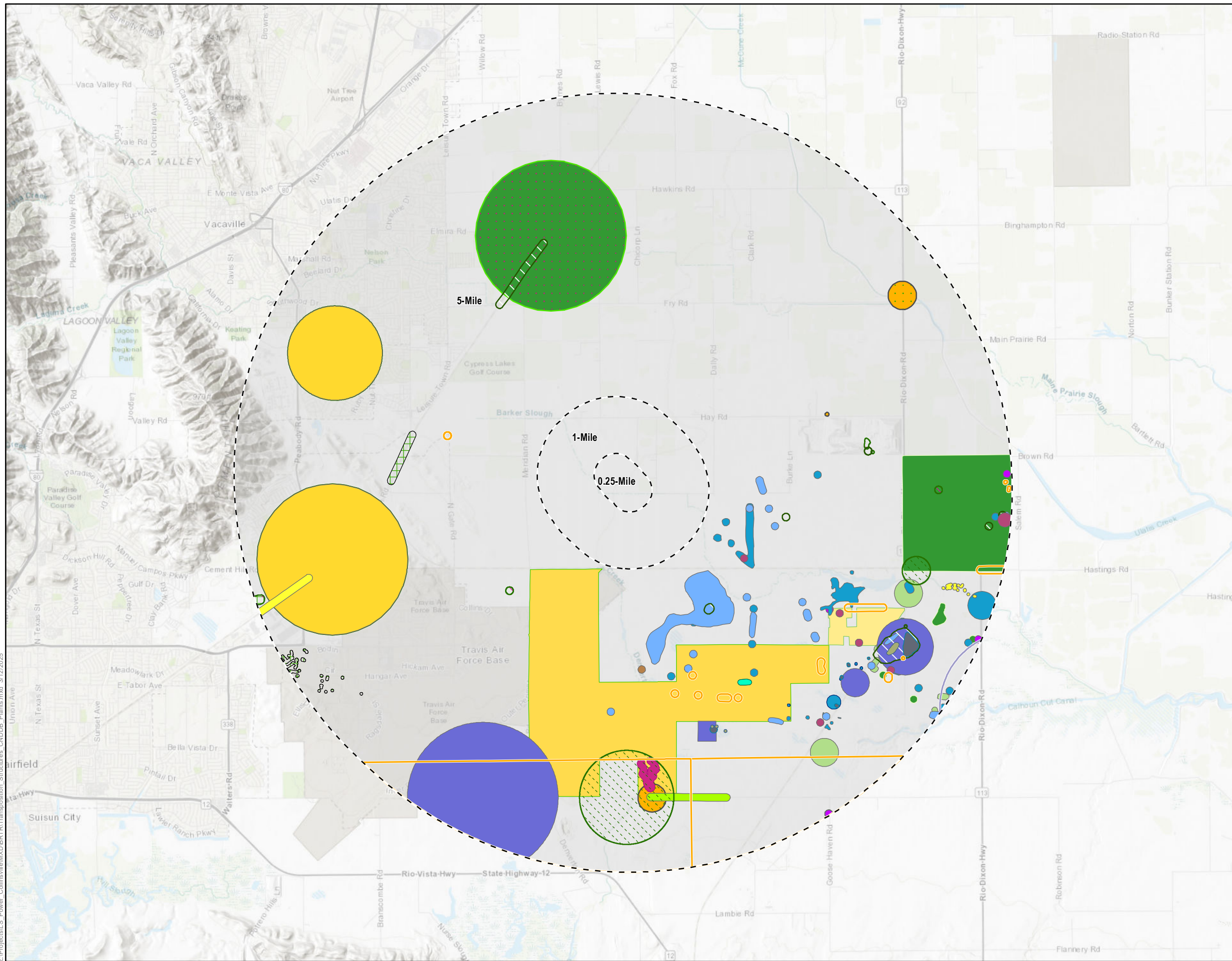


Photograph 6:
Lolium perenne
Herbaceous
SNA, facing
southwest.



Photograph 7:
Schoenoplectus
(*acutus*,
californicus)
Herbaceous
Alliance, facing
north.

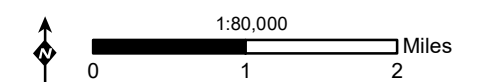
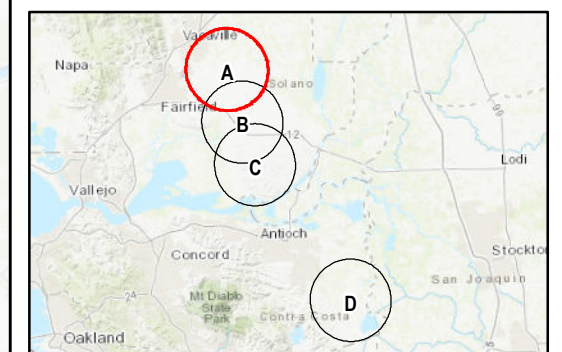
ATTACHMENT C: CNDDB OCCURRENCES OF SPECIAL-STATUS PLANT SPECIES

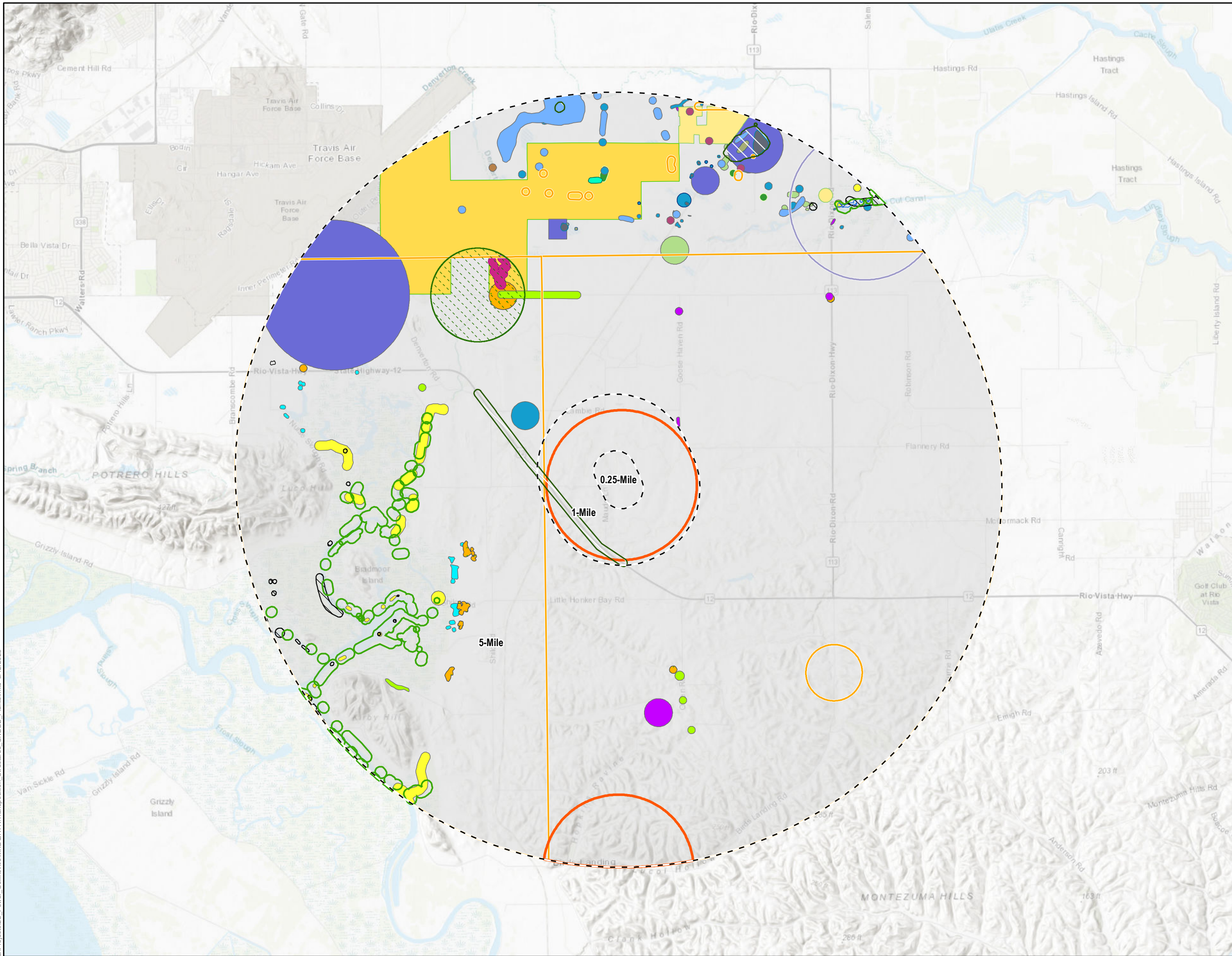


**Attachment C:
CNDDb Occurrences of
Special-Status Plant Species
Transposition Tower A**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Alkali Milk-Vetch
- Alkali-Sink Goldfields
- Baker's Navarretia
- Bearded Popcornflower
- Boggs Lake Hedge-Hyssop
- Bolander's Water-Hemlock
- Brittlescale
- California Alkali Grass
- Carquinez Goldenbush
- Colusa Grass
- Contra Costa Goldfields
- Coulter's Goldfields
- Crampton's Tuctoria (Solano Grass)
- Dwarf Downingia
- Fragrant Fritillary
- Heartscale
- Heckard's Pepper-Grass
- Hispid Salty Bird's-Beak
- Legenere
- Pappose Tarplant
- Saline Clover
- San Joaquin Spearscale
- San Joaquin Valley Orcutt Grass
- Suisun Marsh Aster
- Two-Fork Clover
- Vernal Pool Smallscale

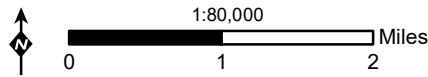
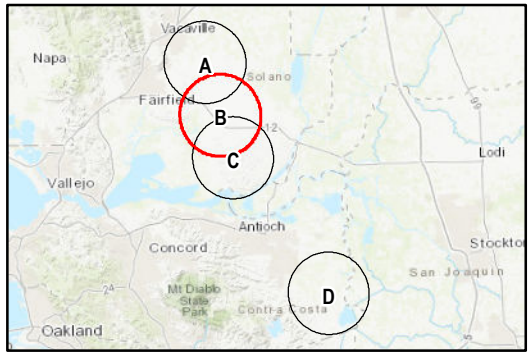




**Attachment C:
CNDDb Occurrences of
Special-Status Plant Species
Transposition Tower B**

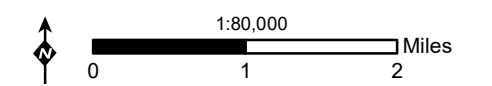
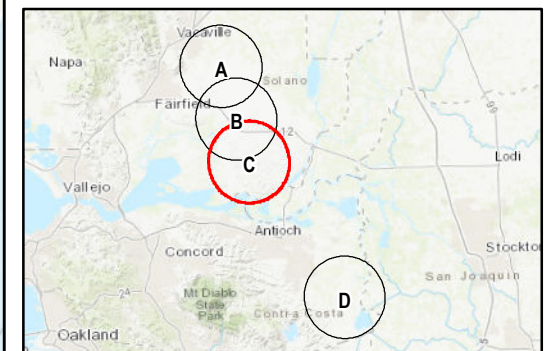
**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Alkali Milk-Vetch
- Alkali-Sink Goldfields
- Baker's Navarretia
- Boggs Lake Hedge-Hyssop
- Bearded Popcornflower
- Bolander's Water-Hemlock
- Brittlescale
- California Alkali Grass
- Carquinez Goldenbush
- Colusa Grass
- Contra Costa Goldfields
- Coulter's Goldfields
- Crampton's Tuctoria (Solano Grass)
- Delta Mudwort
- Delta Tule Pea
- Dwarf Downingia
- Fragrant Fritillary
- Heartscale
- Heckard's Pepper-Grass
- Hispid Salty Bird's-Beak
- Keck's Checkerbloom
- Legenere
- Mason's Lilaeopsis
- Pappose Tarplant
- San Joaquin Valley Orcutt grass
- Soft Salty Bird's-Beak
- Suisun Marsh Aster
- Vernal Pool Smallscale



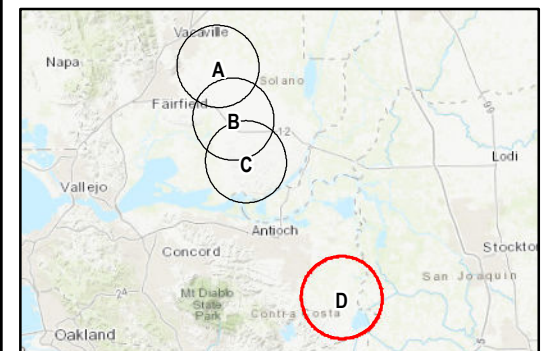
Collinsville 500/230 Kilovolt Substation Project

- | | |
|---|--------------------------|
|  | Proposed Project Buffer |
|  | Alkali Milk-Vetch |
|  | Baker's Navarretia |
|  | Bearded Popcornflower |
|  | Bolander's Water-Hemlock |
|  | Carquinez Goldenbush |
|  | Brittscale |
|  | Delta Mudwort |
|  | Delta Tule Pea |
|  | Dwarf Downingia |
|  | Fragrant Fritillary |
|  | Heartscale |
|  | Keck's Checkerbloom |
|  | Mason's Lilaeopsis |
|  | Pappose Tarplant |
|  | San Joaquin Spearscale |
|  | Soft Salty Bird's-Beak |
|  | Suisun Marsh Aster |



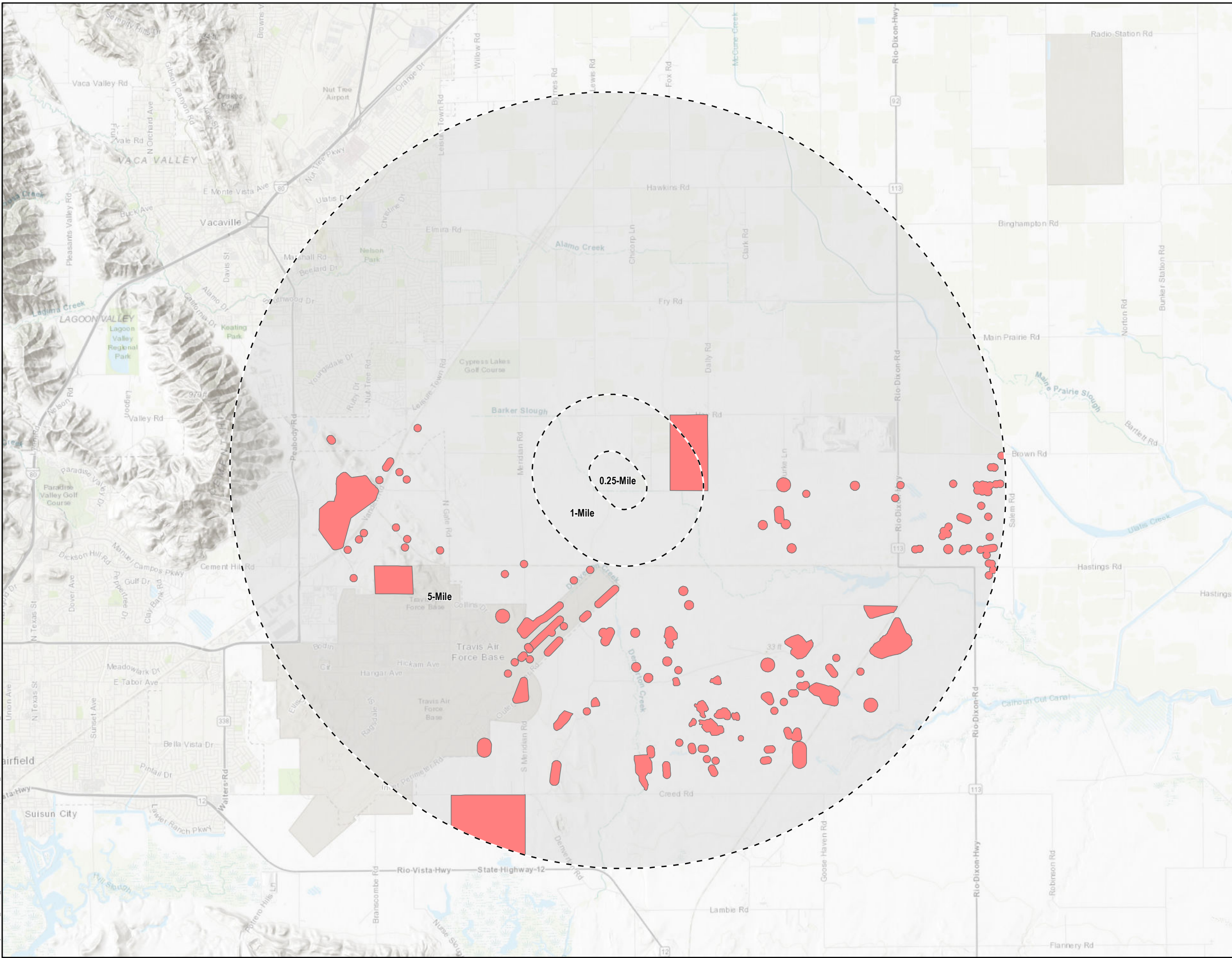
Collinsville 500/230 Kilovolt Substation Project

- | | Proposed Project Buffer |
|---|----------------------------------|
|  | Alkali Milk-Vetch |
|  | Big Tarplant |
|  | Brittlescale |
|  | California Alkali Grass |
|  | Caper-Fruited Tropidocarpum |
|  | Chaparral Ragwort |
|  | Delta Button-Celery |
|  | Delta Mudwort |
|  | Diamond-Petaled California Poppy |
|  | Long-Styled Sand-Spurrey |
|  | Mason's Lilaeopsis |
|  | Recurved Larkspur |
|  | San Joaquin Spearscale |
|  | Spiny-Sepaled Button-Celery |
|  | Woolly Rose-Mallow |



ATTACHMENT D: CNDDB OCCURRENCES OF SPECIAL-STATUS WILDLIFE SPECIES

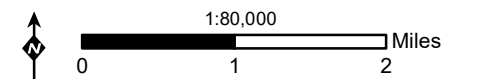
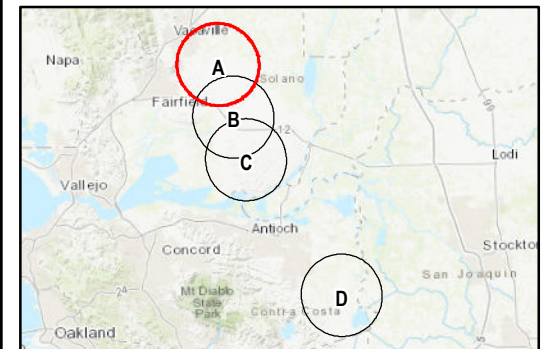
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**Attachment D:
CNDD Occurrences of
Special-Status Wildlife Species
Amphibians - Transposition Tower A**

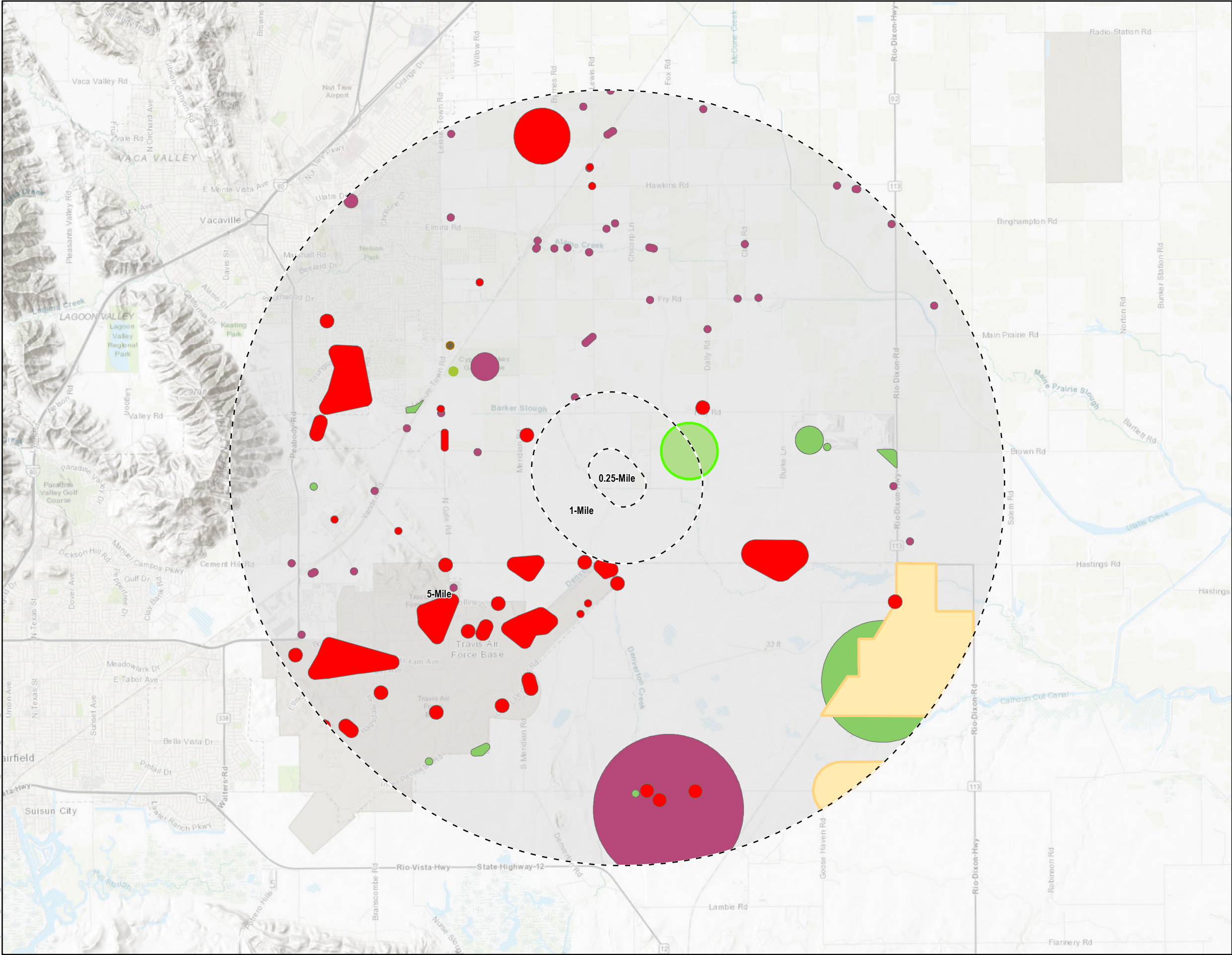
**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- California Tiger Salamander - Central California DPS



LSPower GRID **INSIGNIA**
CALIFORNIA ENVIRONMENTAL

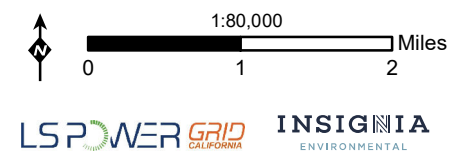
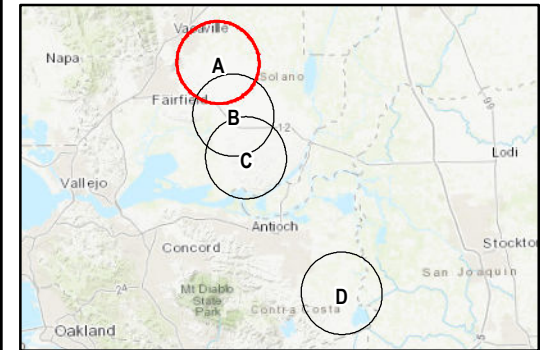
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**Attachment D:
CNDD Occurrences of
Special-Status Wildlife Species
Birds - Transposition Tower A**

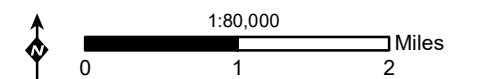
**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Burrowing Owl
- Grasshopper Sparrow
- Mountain Plover
- Northern Harrier
- Swainson's Hawk
- Tricolored Blackbird
- White-Tailed Kite



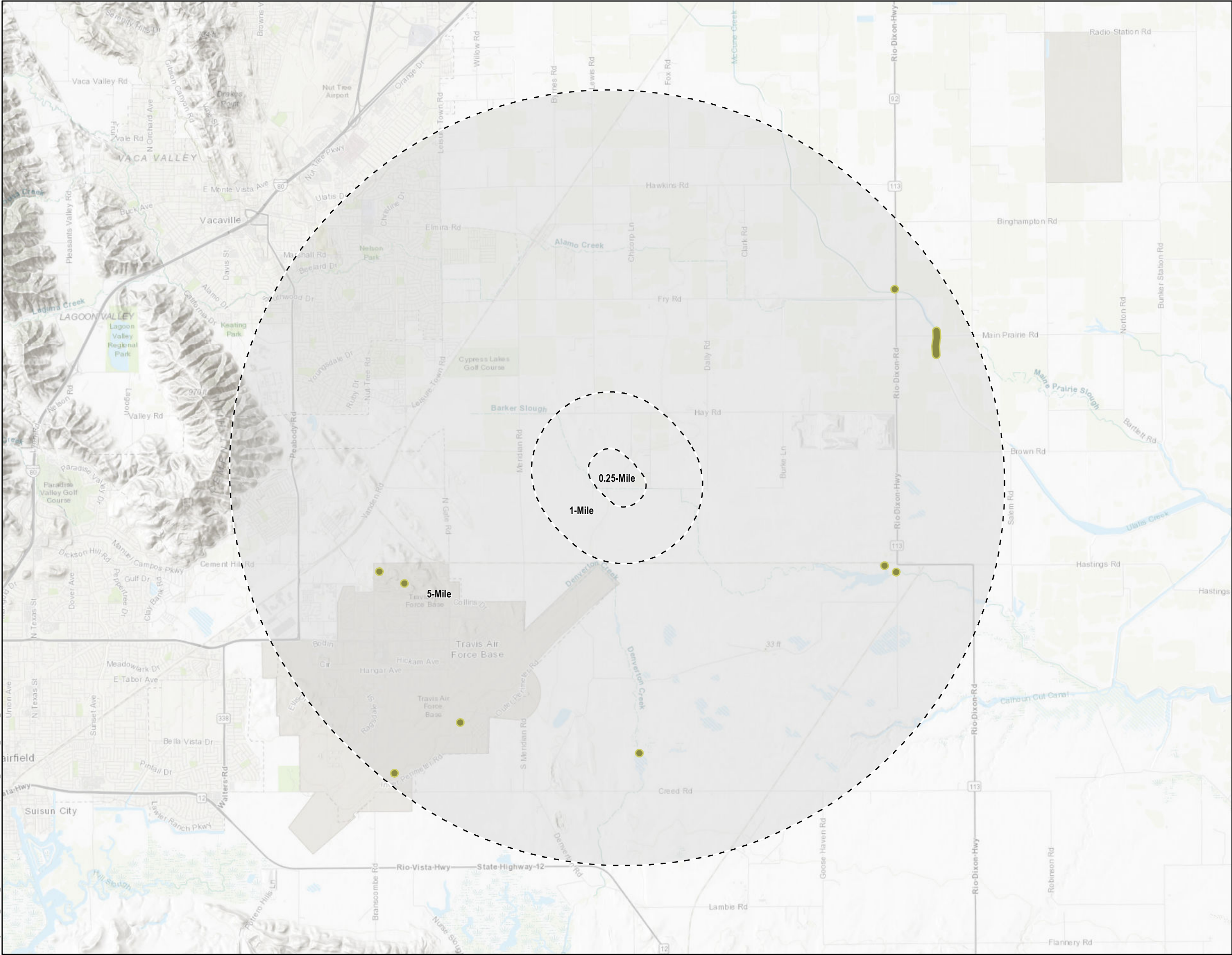
**Collinsville 500/230 Kilovolt
Substation Project**

-
- A map of the San Francisco Bay Area showing four sampling locations. Location A is marked with a red circle near Vallejo. Locations B and C are marked with black circles near Fairfield and Suisun, respectively. Location D is marked with a black circle near Contra Costa. Other labeled locations include Napa, Solano, Lodi, Vallejo, Antioch, Concord, Stockton, San Joaquin, Oakland, and Mt. Diablo State Park. Major highways 99, 12, and 24 are also indicated.



LSPOWER GRID CALIFORNIA

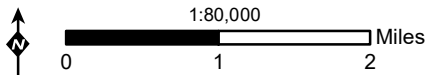
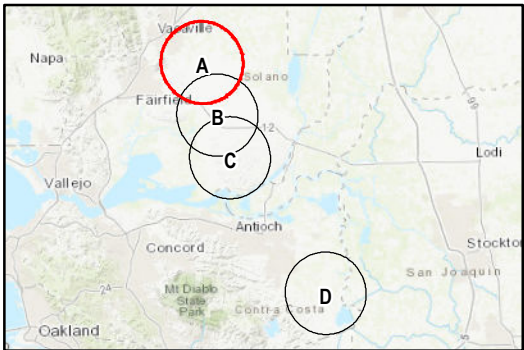
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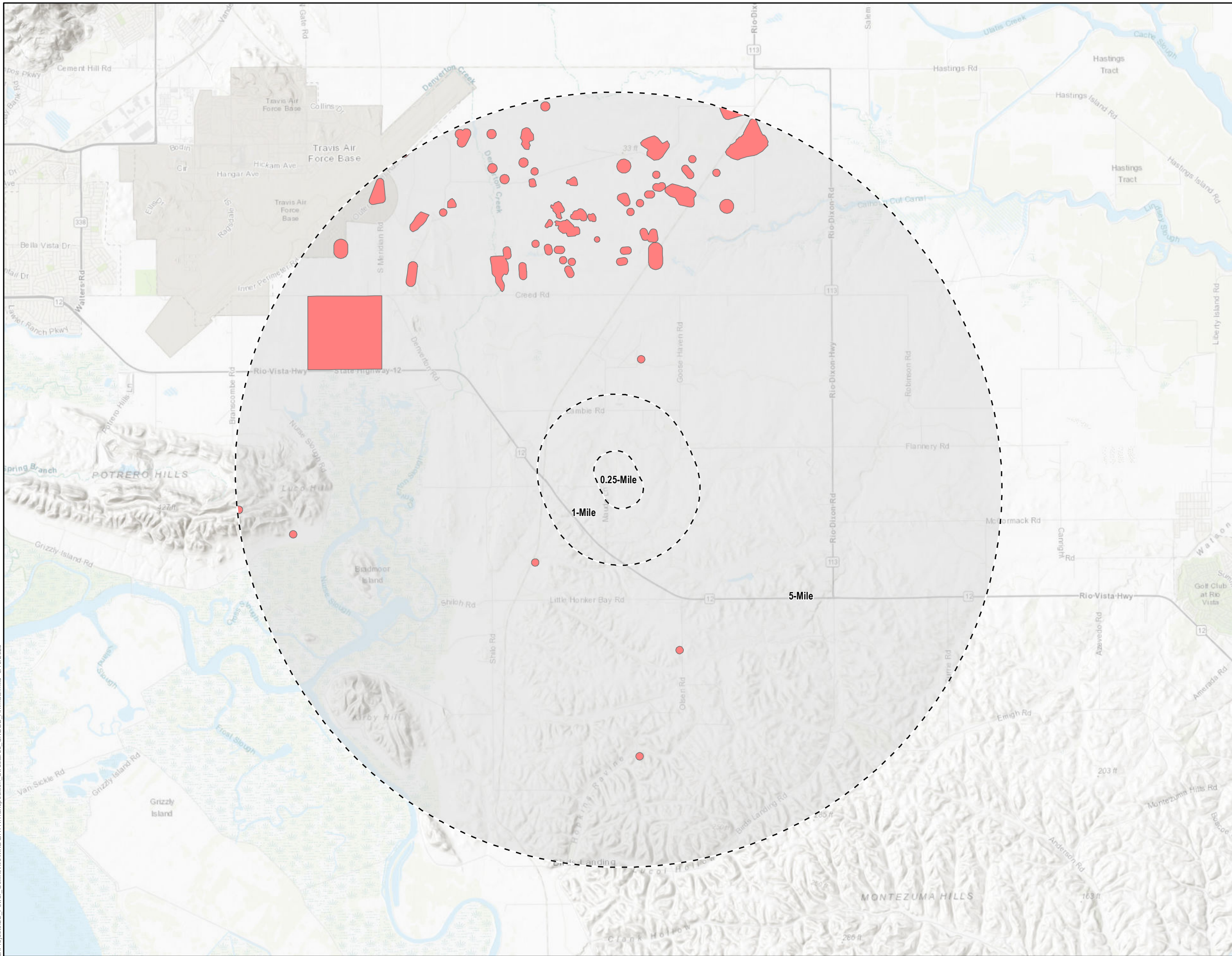
**Attachment D:
CNDD Occurrences of
Special-Status Wildlife Species
Reptiles - Transposition Tower A**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Northwestern Pond Turtle



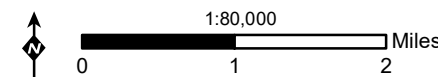
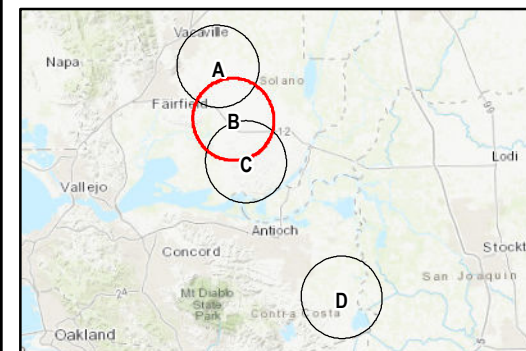
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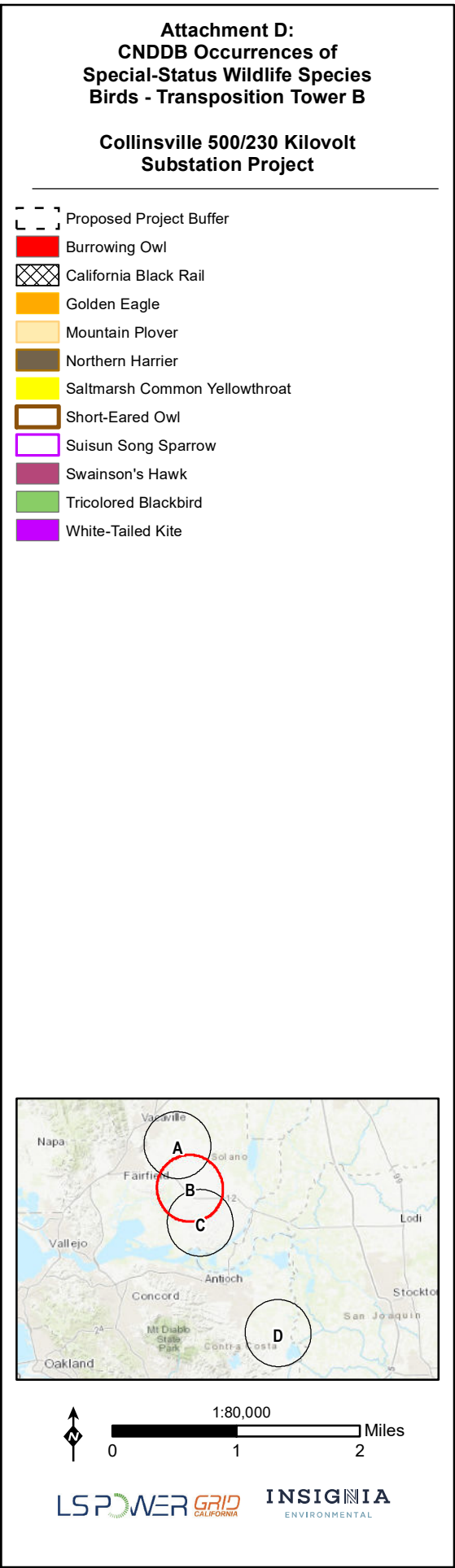
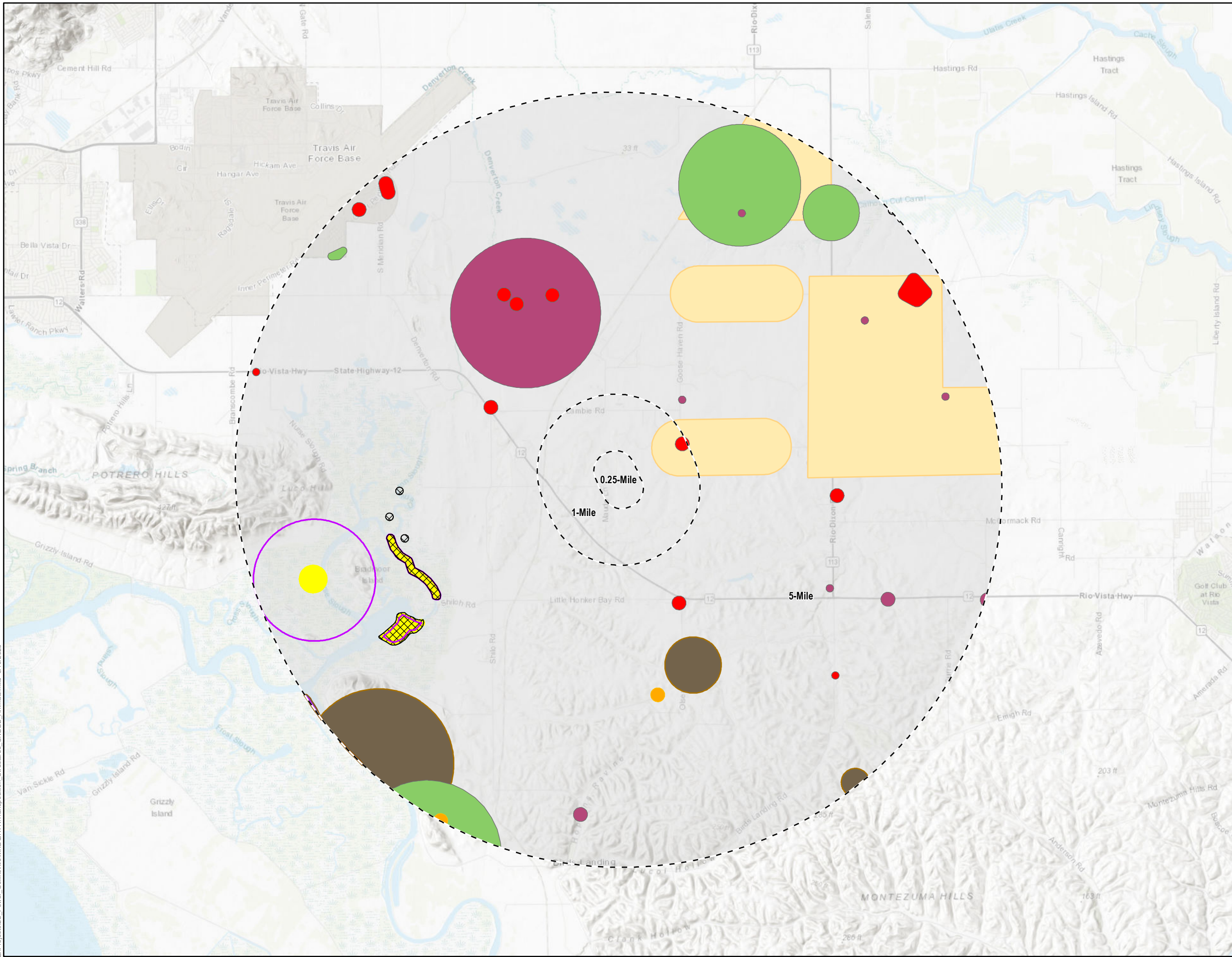
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Amphibians - Transposition Tower B**

**Collinsville 500/230 Kilovolt
Substation Project**

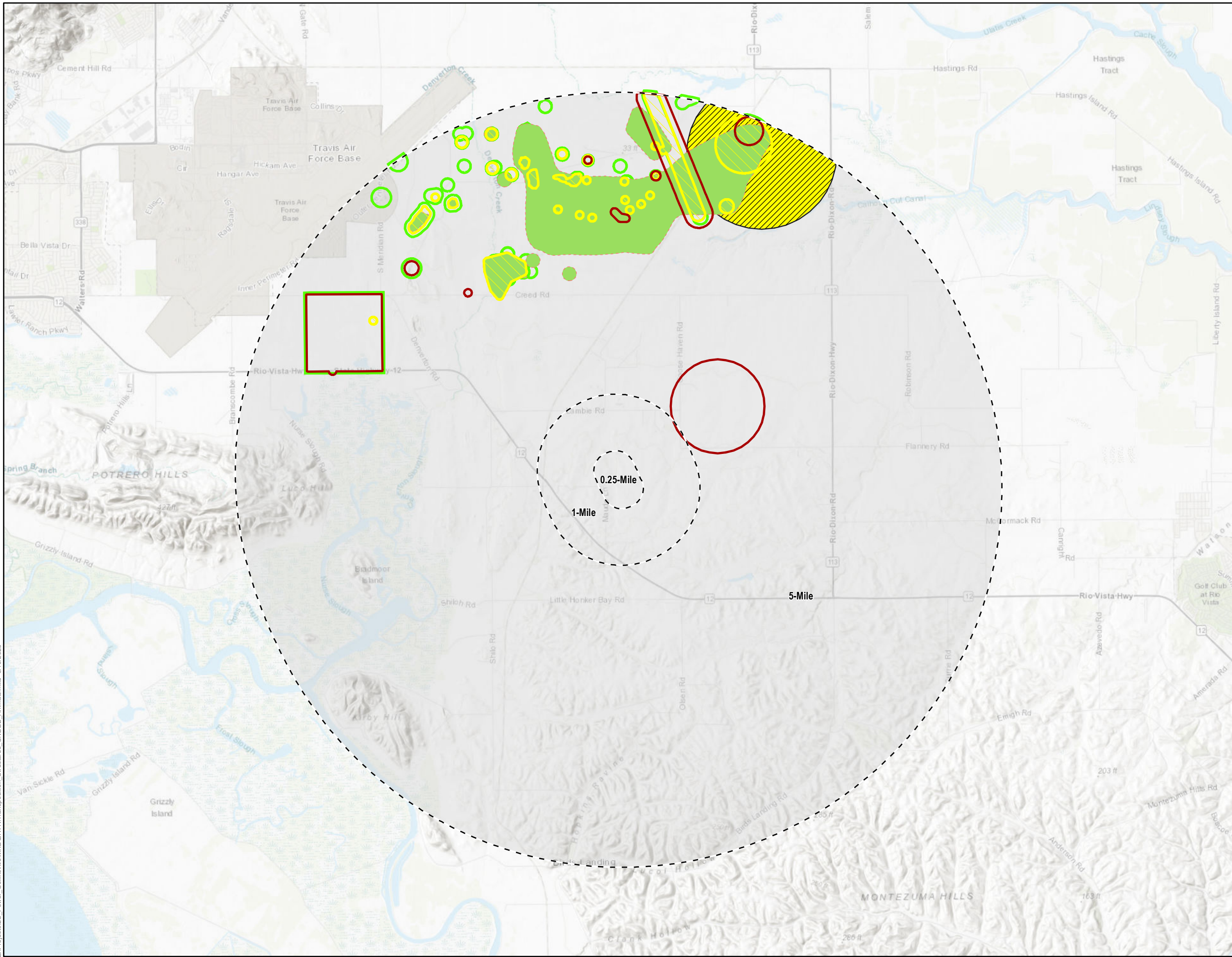
-  Proposed Project Buffer
-  California Tiger Salamander - Central California DPS



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**Attachment D:
CNDDb Occurrences of
Special-Status Wildlife Species
Crustaceans/Insects - Transposition Tower B**

**Collinsville 500/230 Kilovolt
Substation Project**

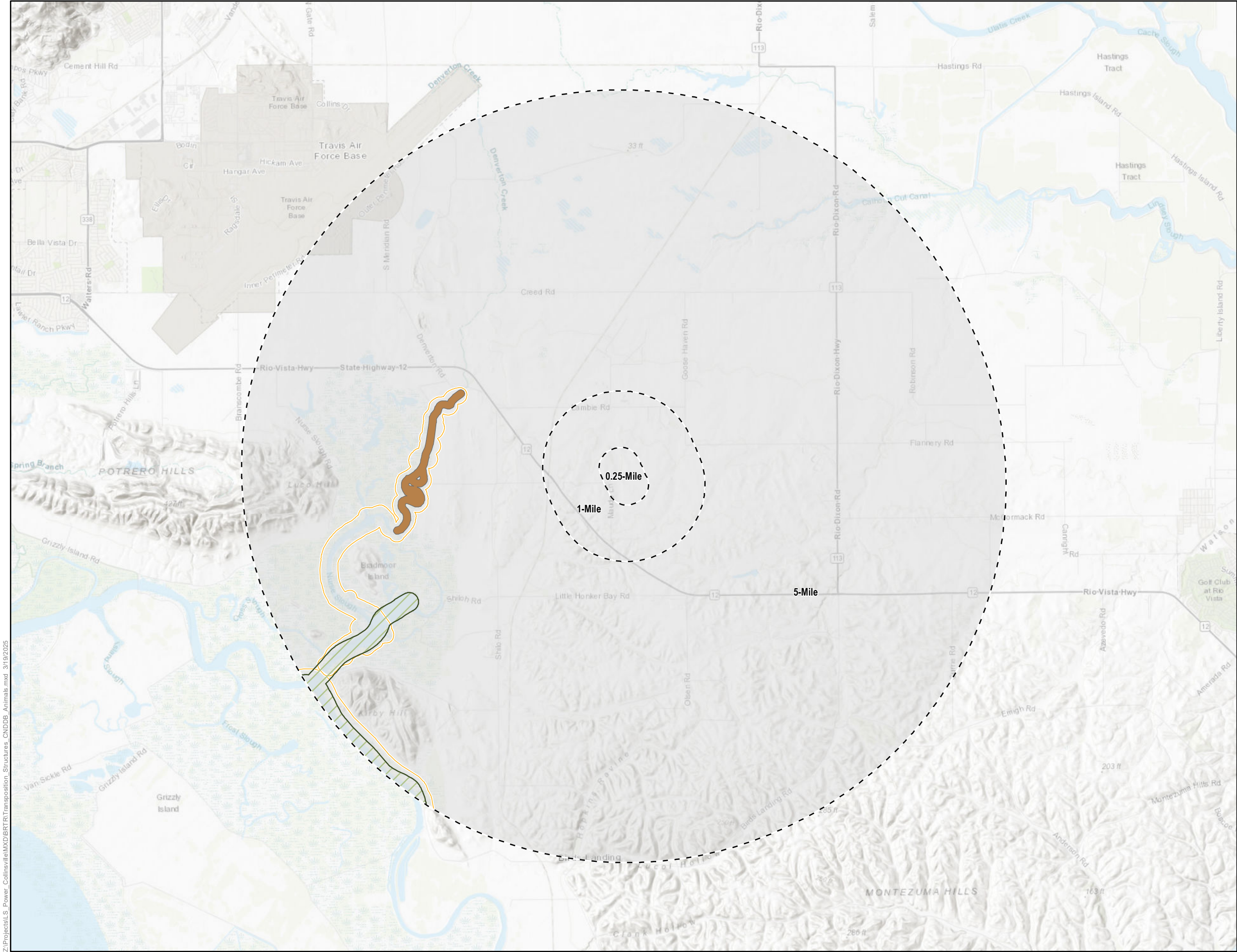
- Proposed Project Buffer
- Conservancy Fairy Shrimp
- Delta Green Ground Beetle
- Vernal Pool Fairy Shrimp
- Vernal Pool Tadpole Shrimp
- Western Bumble Bee

0 1 2 Miles

1:80,000

LSPower GRID **INSIGNIA**
CALIFORNIA ENVIRONMENTAL

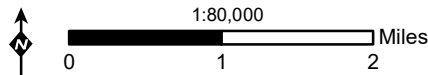
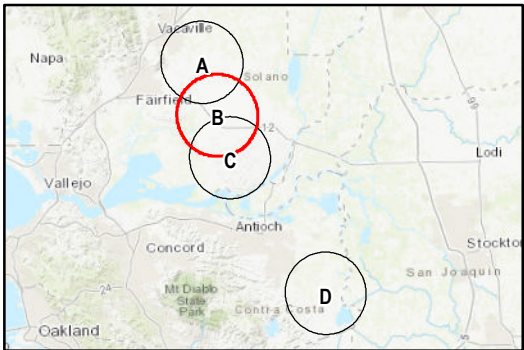
3/19/2025



**Attachment D:
CNDDDB Occurrences of
Special-Status Wildlife Species
Fish - Transposition Tower B**

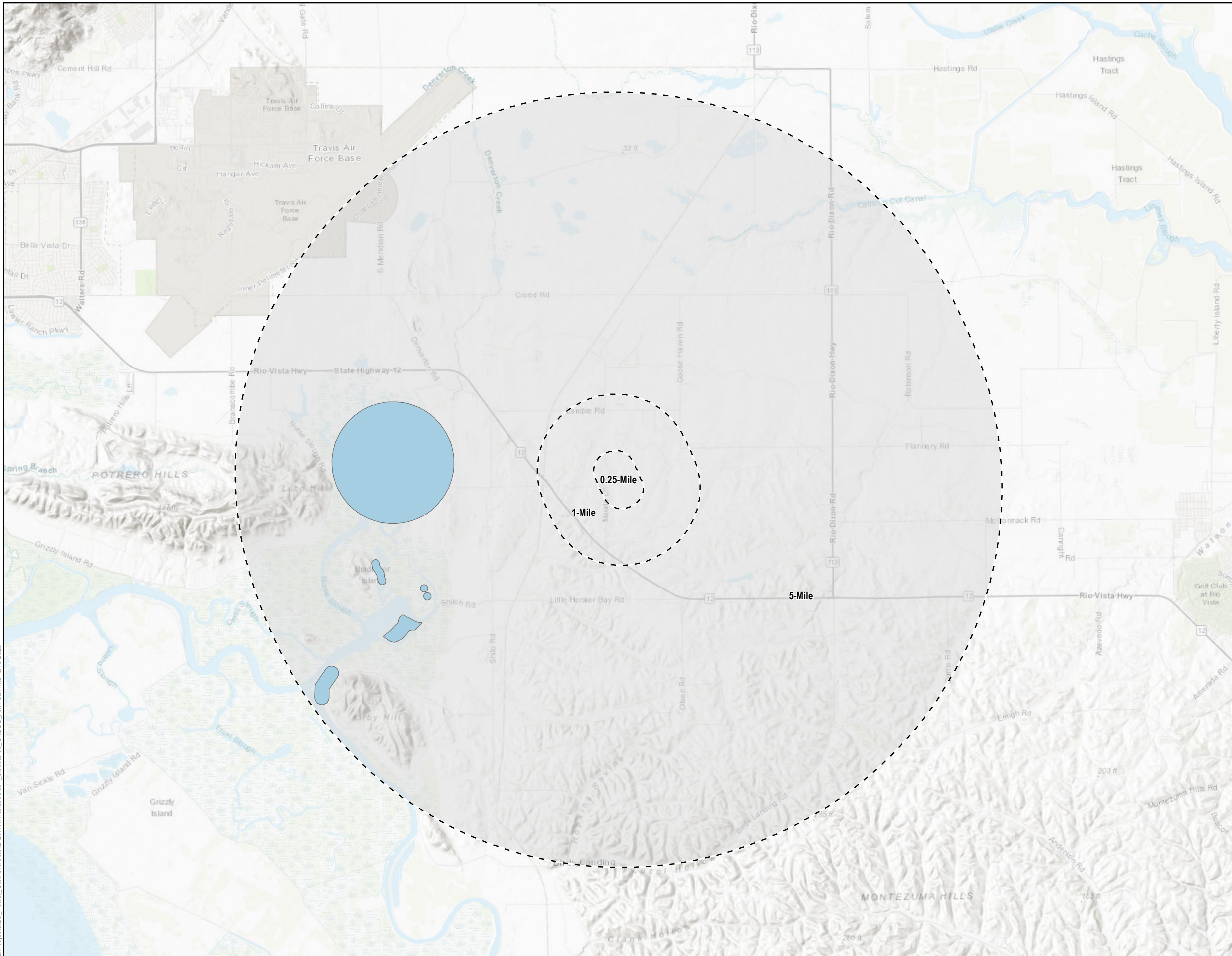
**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Green Sturgeon - Southern DPS
- Longfin Smelt
- Sacramento Splittail



LSPower GRID **INSIGNIA**
CALIFORNIA ENVIRONMENTAL

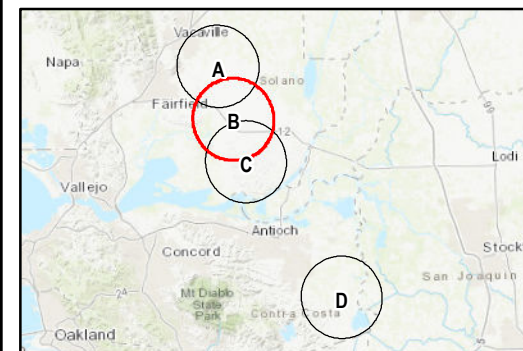
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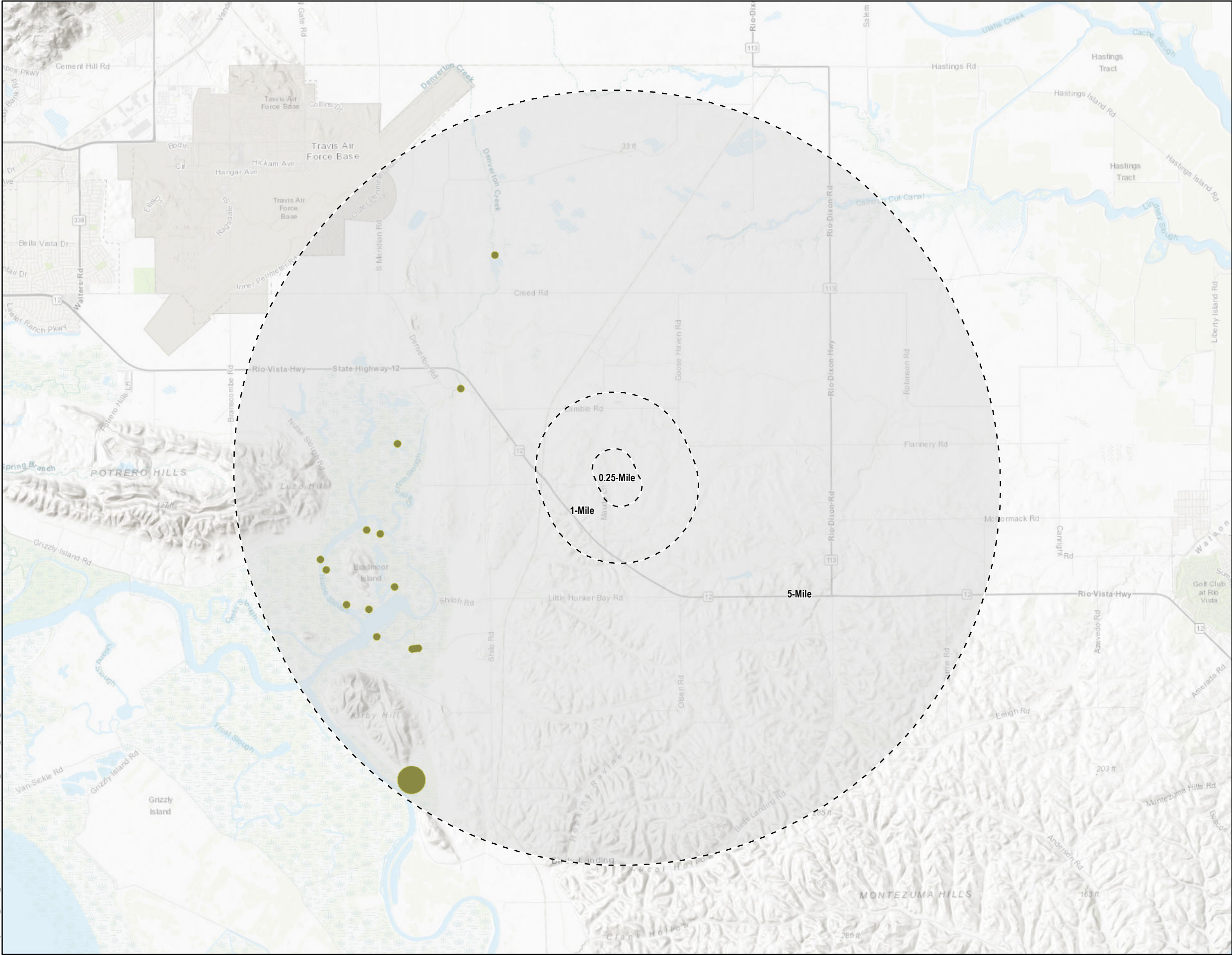
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Mammals - Transposition Tower B**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Salt-Marsh Harvest Mouse



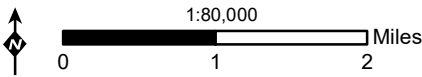
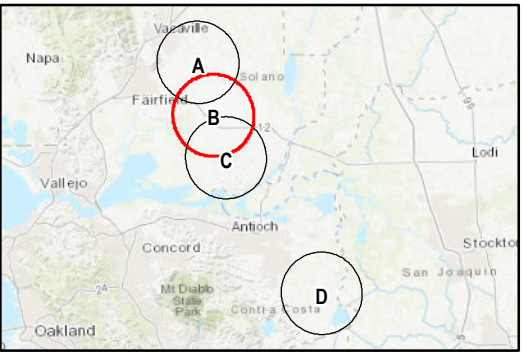
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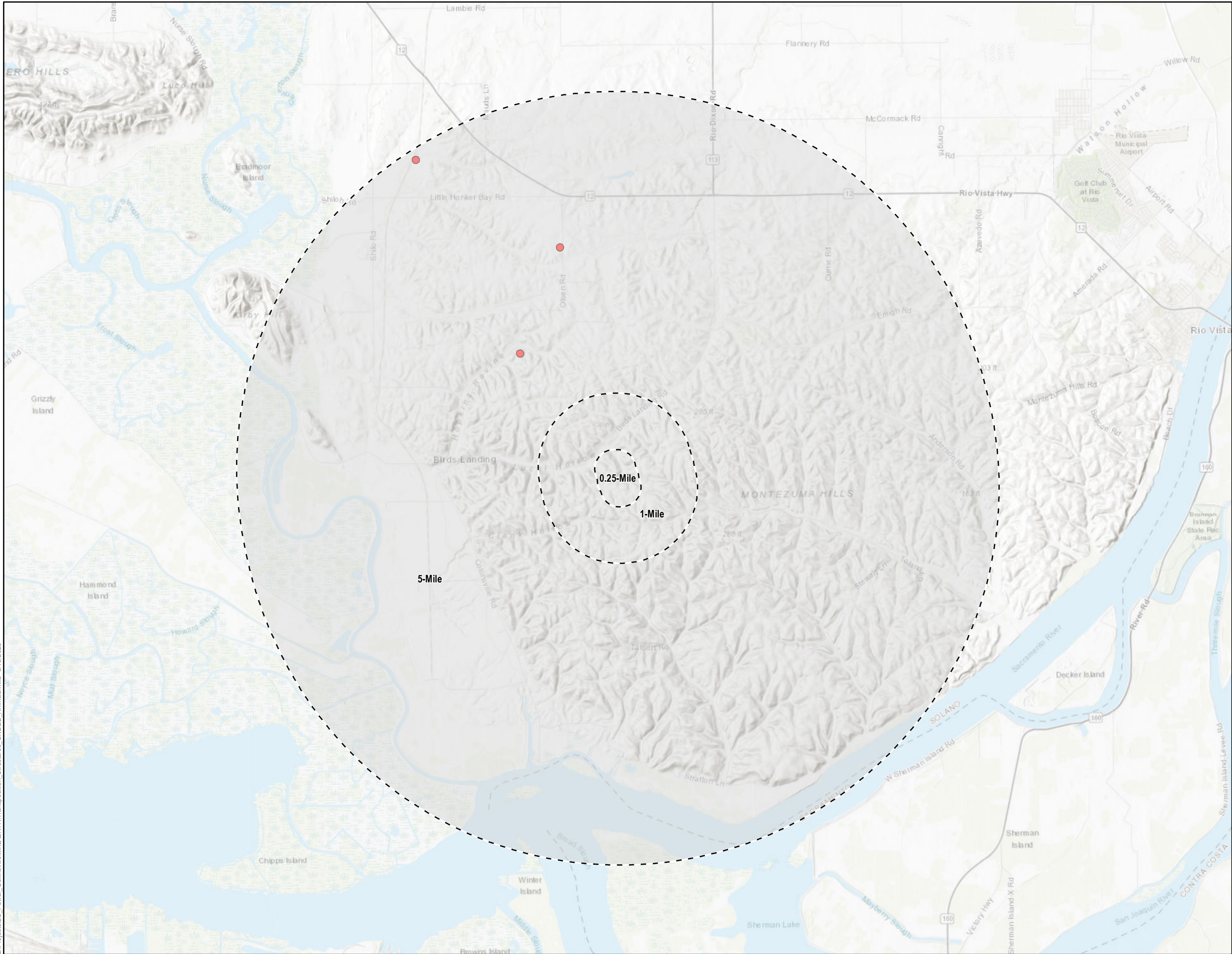
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Reptiles - Transposition Tower B**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Northwestern Pond Turtle



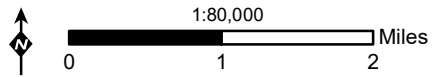
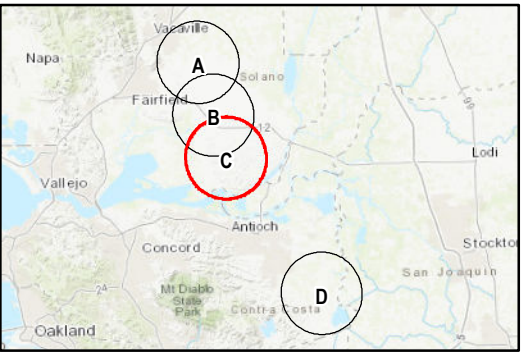
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**Attachment D:
CNDDDB Occurrences of
Special-Status Wildlife Species
Amphibians - Transposition Tower C**

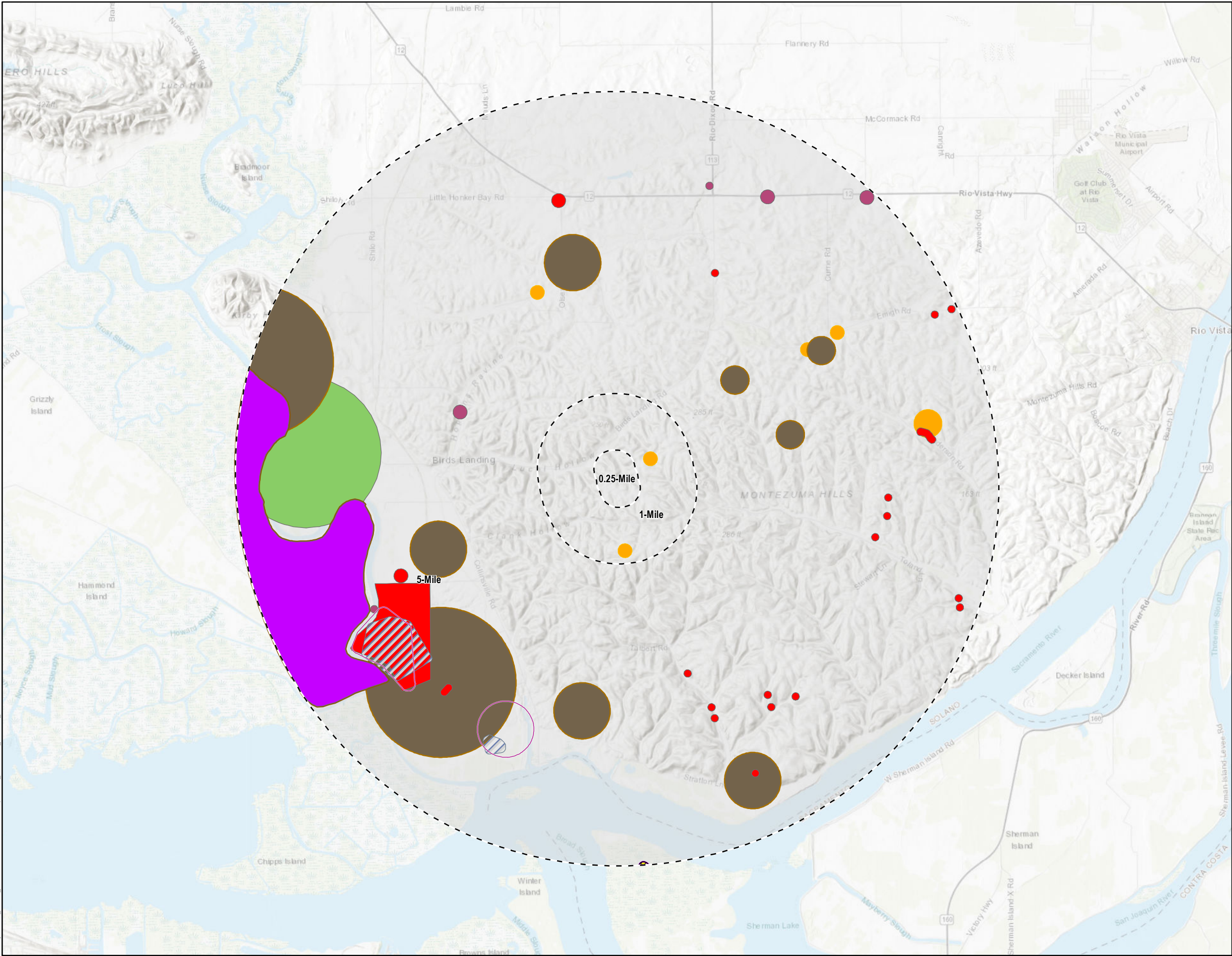
**Collinsville 500/230 Kilovolt
Substation Project**

-  Proposed Project Buffer
-  California Tiger Salamander - Central California DPS



LSPower **GRID** **INSIGNIA**
CALIFORNIA ENVIRONMENTAL

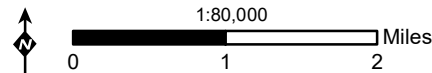
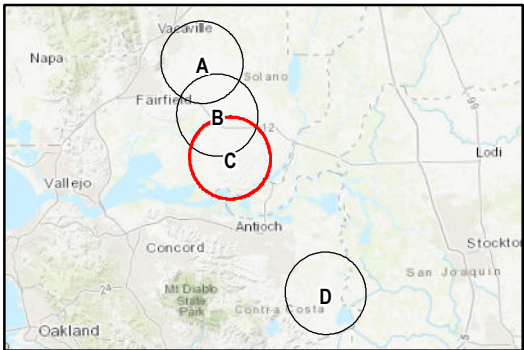
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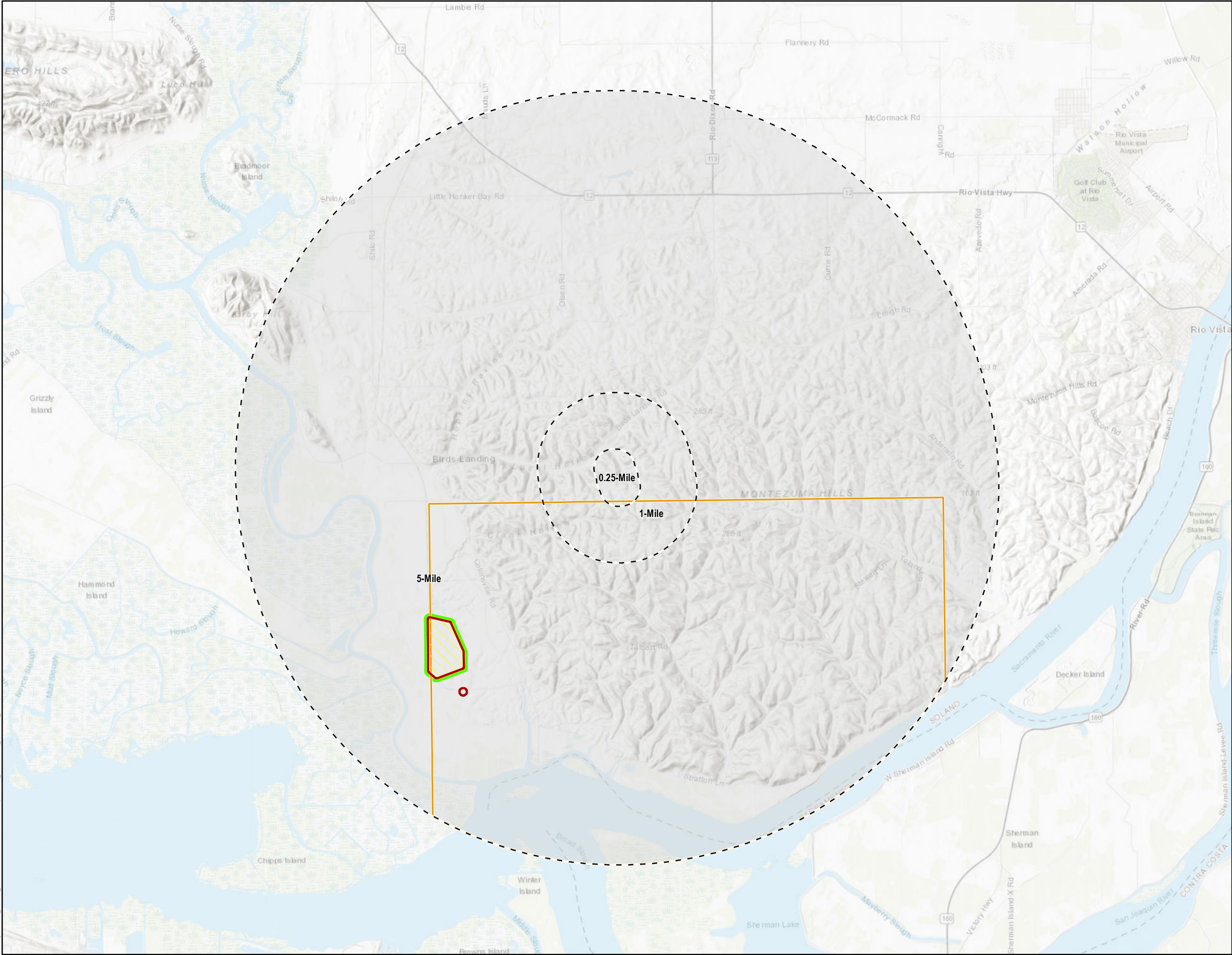
**Attachment D:
CNDDDB Occurrences of
Special-Status Wildlife Species
Birds - Transposition Tower C**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Burrowing Owl
- California Black Rail
- California Least Tern
- Golden Eagle
- Northern Harrier
- Saltmarsh Common Yellowthroat
- Short-Eared Owl
- Swainson's Hawk
- Suisun Song Sparrow
- Tricolored Blackbird
- Western Snowy Plover
- White-Tailed Kite
- Yellow Rail



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**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Crustaceans/Insects - Transposition Tower C**

**Collinsville 500/230 Kilovolt
Substation Project**

Proposed Project Buffer

Conservancy Fairy Shrimp

Lange's Metalmark Butterfly

Vernal Pool Fairy Shrimp

Vernal Pool Tadpole Shrimp

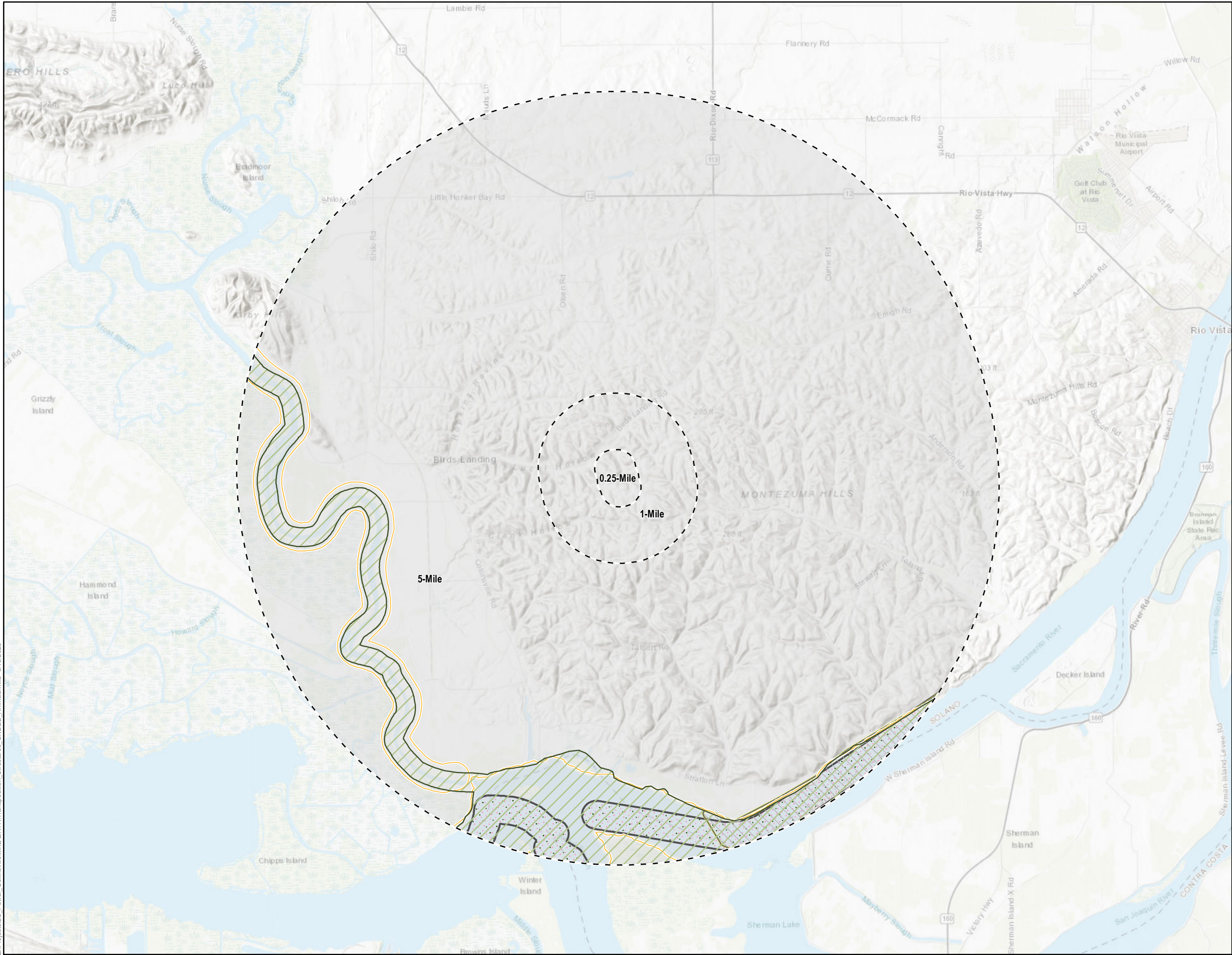
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0 1 2 Miles

LSPower GRID CALIFORNIA

INSIGNIA ENVIRONMENTAL

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**Attachment D:
CNDD Occurrences of
Special-Status Wildlife Species
Fish - Transposition Tower C**

**Collinsville 500/230 Kilovolt
Substation Project**

Proposed Project Buffer

Delta Smelt

Green Sturgeon - Southern DPS

Longfin Smelt

Steelhead - Central Valley DPS

0

1

2

Miles

LSPower

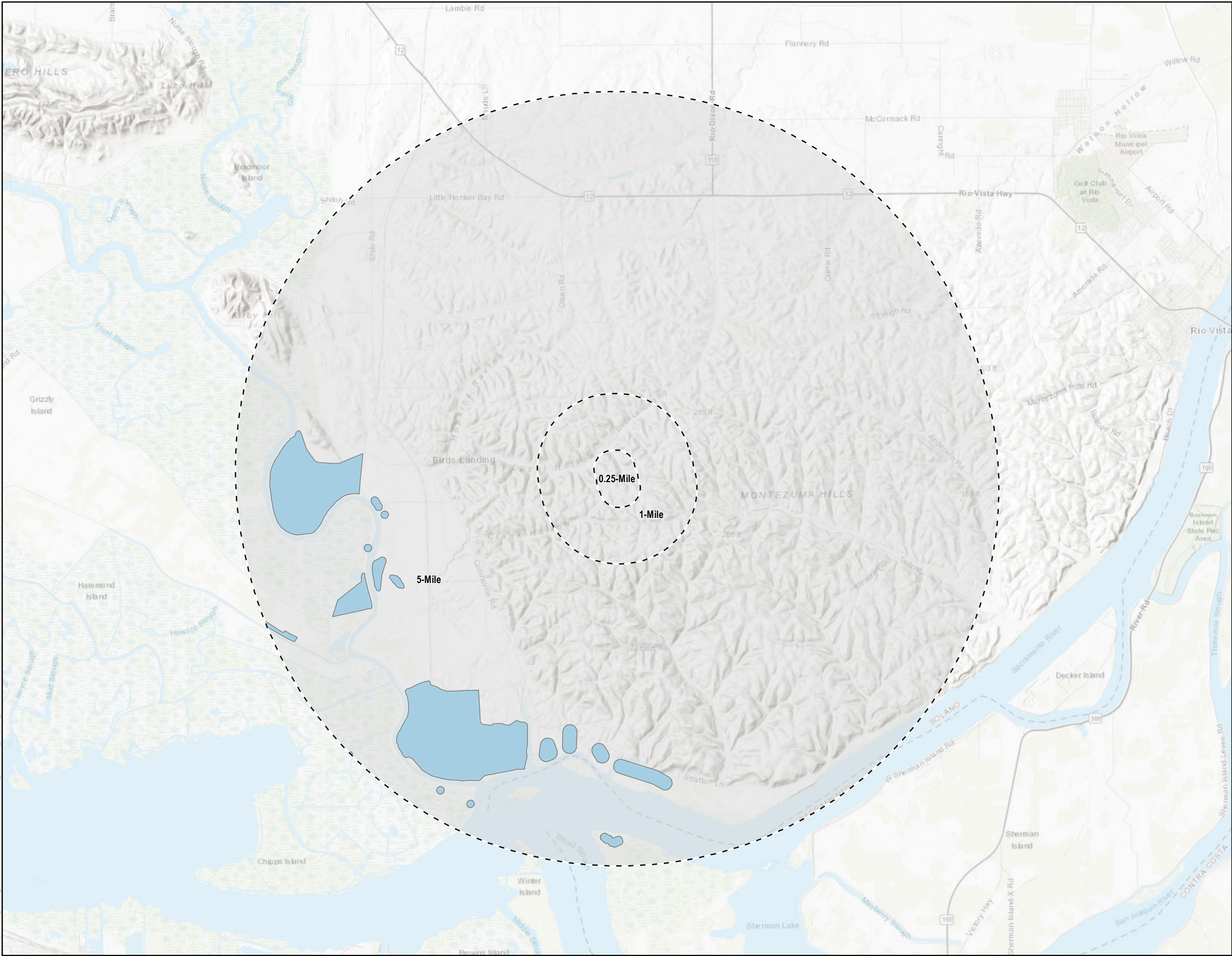
GRID

CALIFORNIA

INSIGNIA

ENVIRONMENTAL

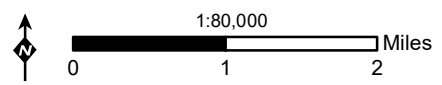
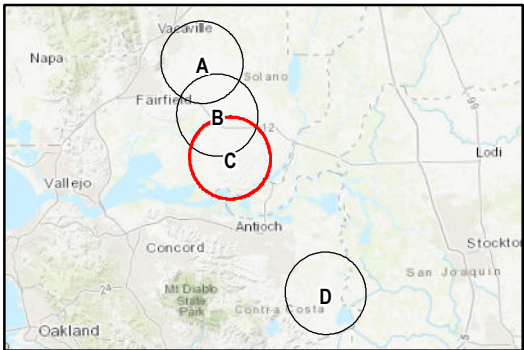
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**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Mammals - Transposition Tower C**

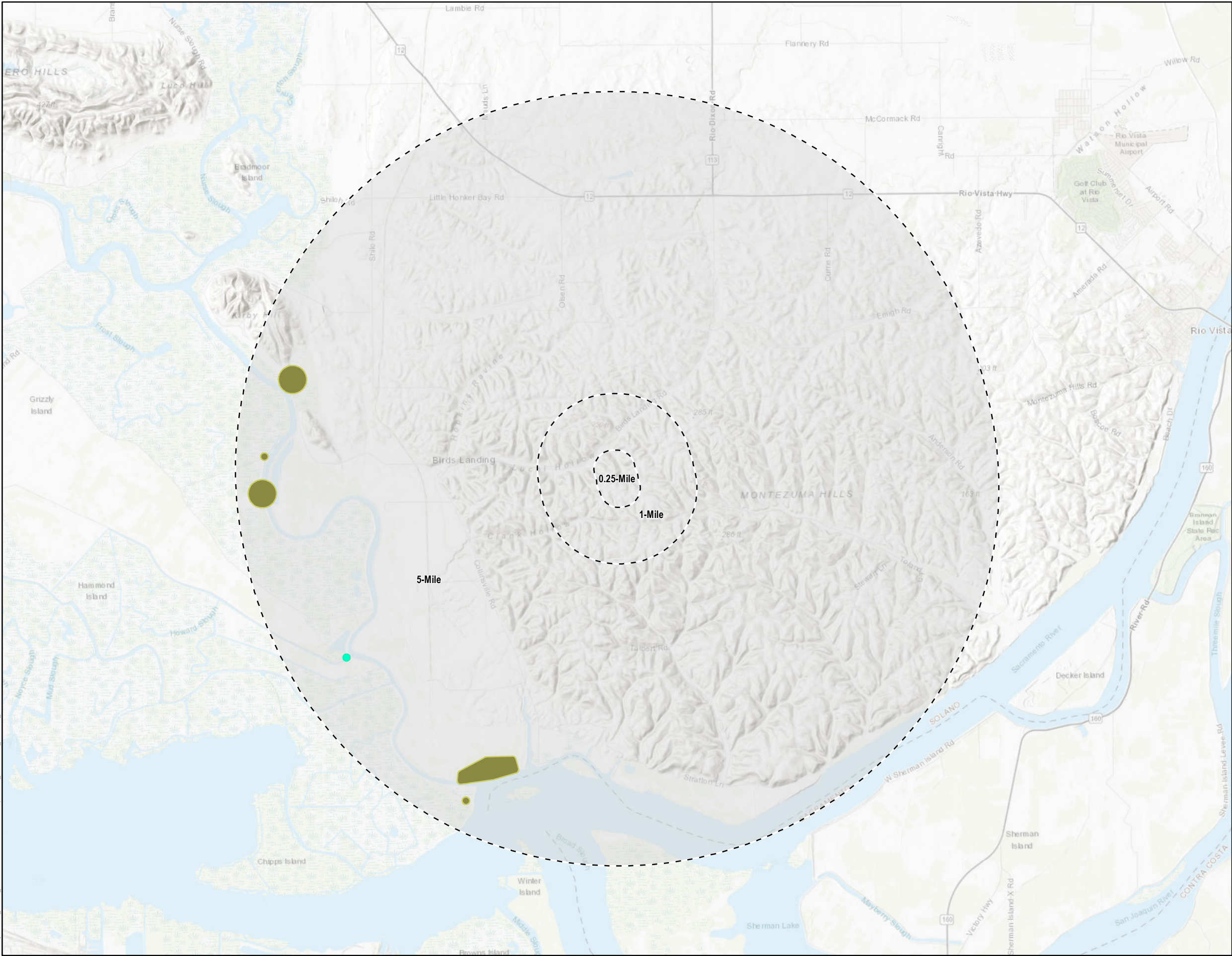
**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Salt-Marsh Harvest Mouse



LSPower GRID **INSIGNIA**
CALIFORNIA ENVIRONMENTAL

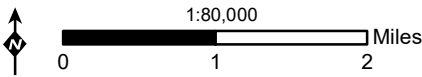
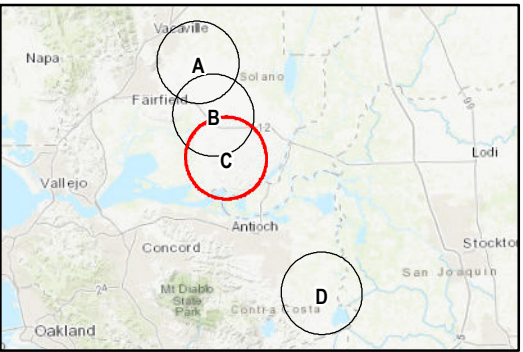
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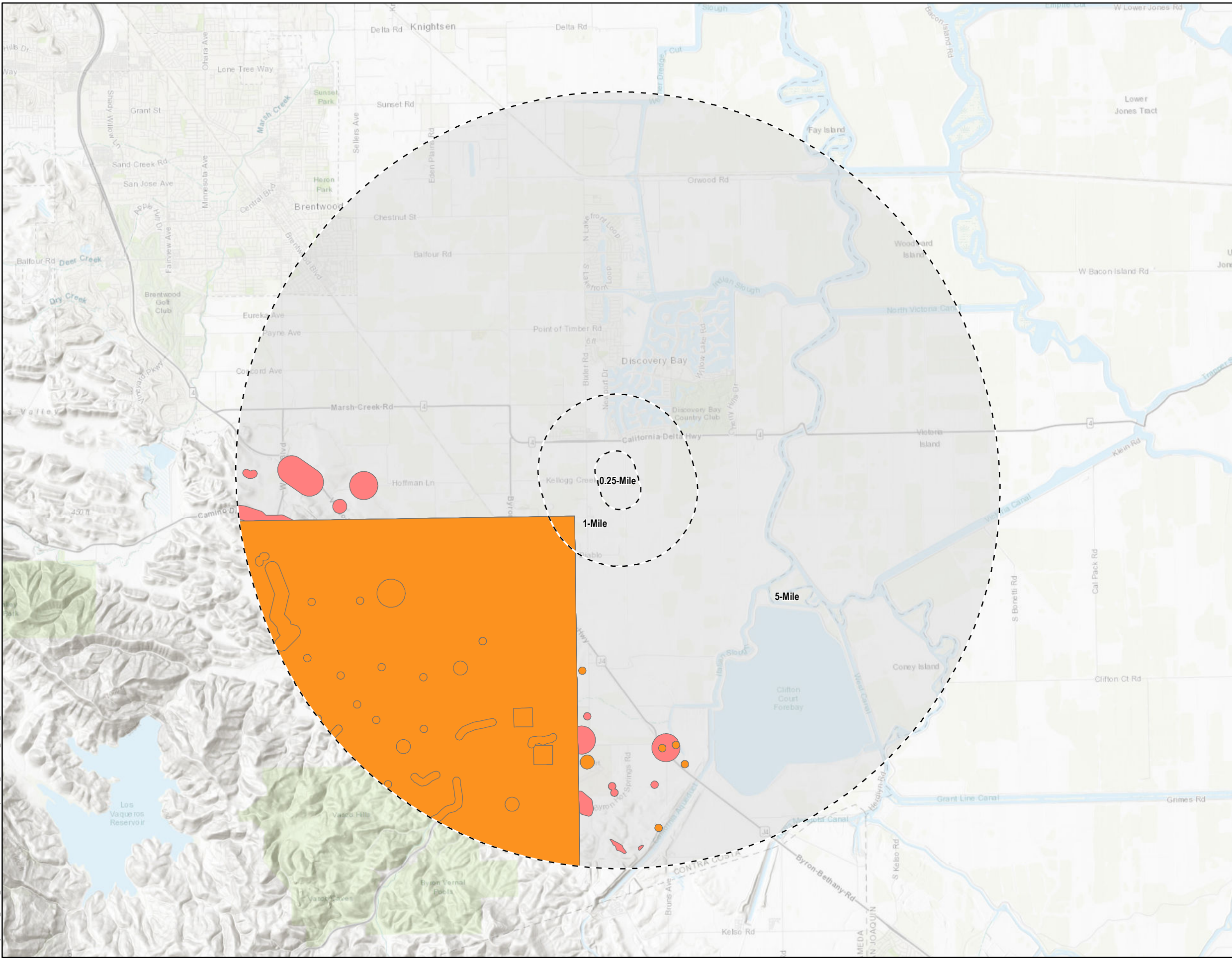
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Reptiles - Transposition Tower C**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Giant Gartersnake
- Northwestern Pond Turtle



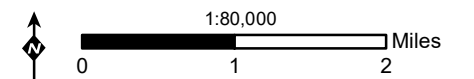
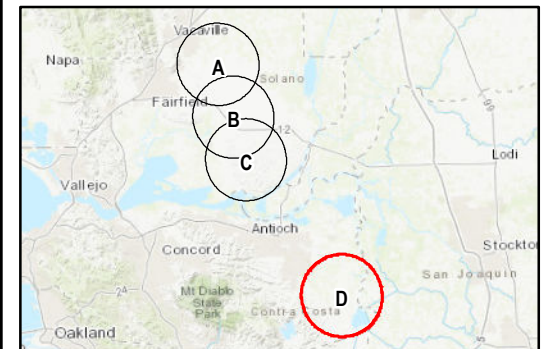
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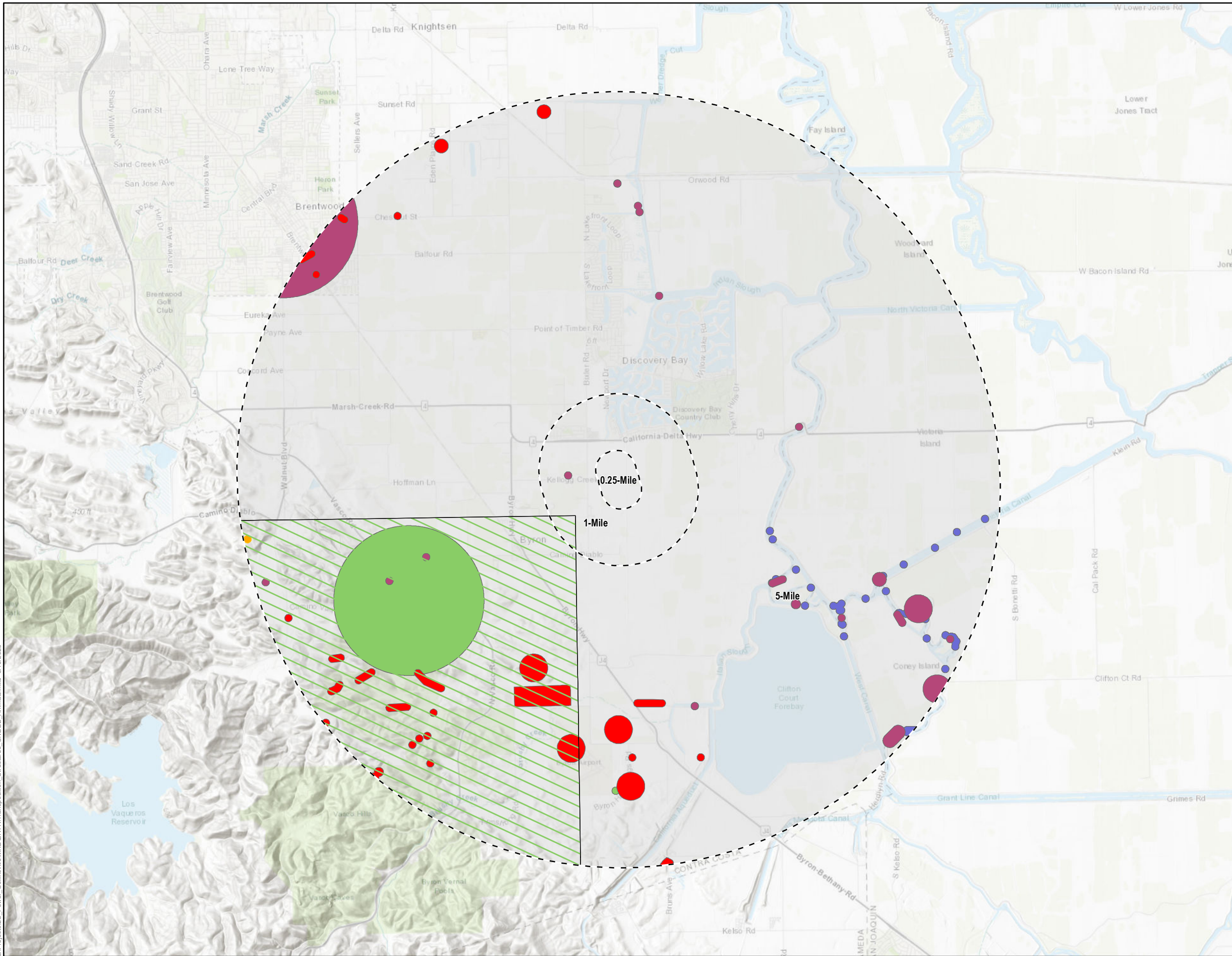
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Amphibians - Transposition Tower D**

**Collinsville 500/230 Kilovolt
Substation Project**

-  Proposed Project Buffer
-  California Red-Legged Frog
-  California Tiger Salamander - Central California DPS



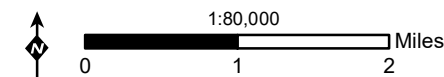
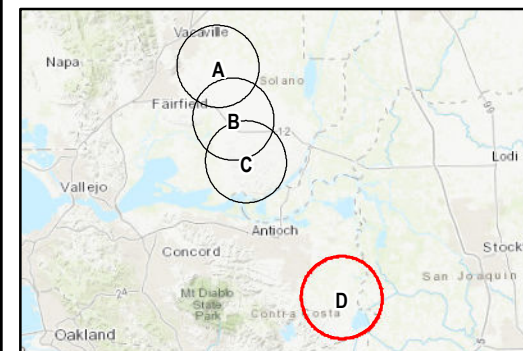
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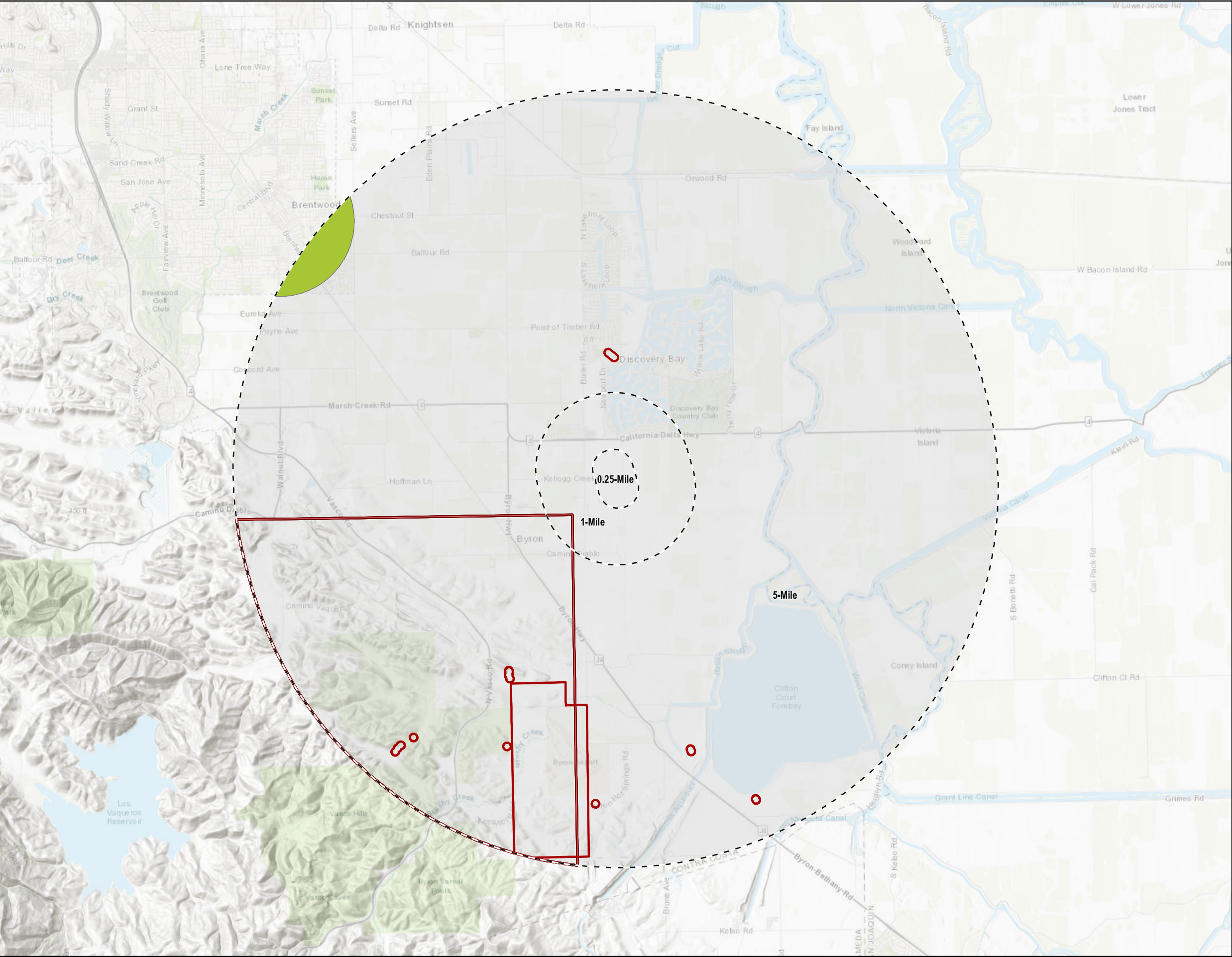
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Birds - Transposition Tower D**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Burrowing Owl
- California Black Rail
- Golden Eagle
- Prairie Falcon
- Song Sparrow ("Modesto" population)
- Swainson's Hawk
- Tricolored Blackbird



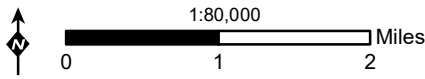
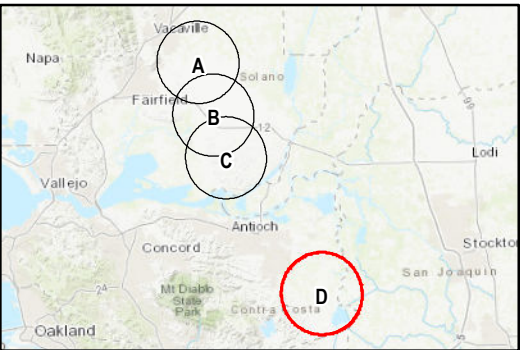
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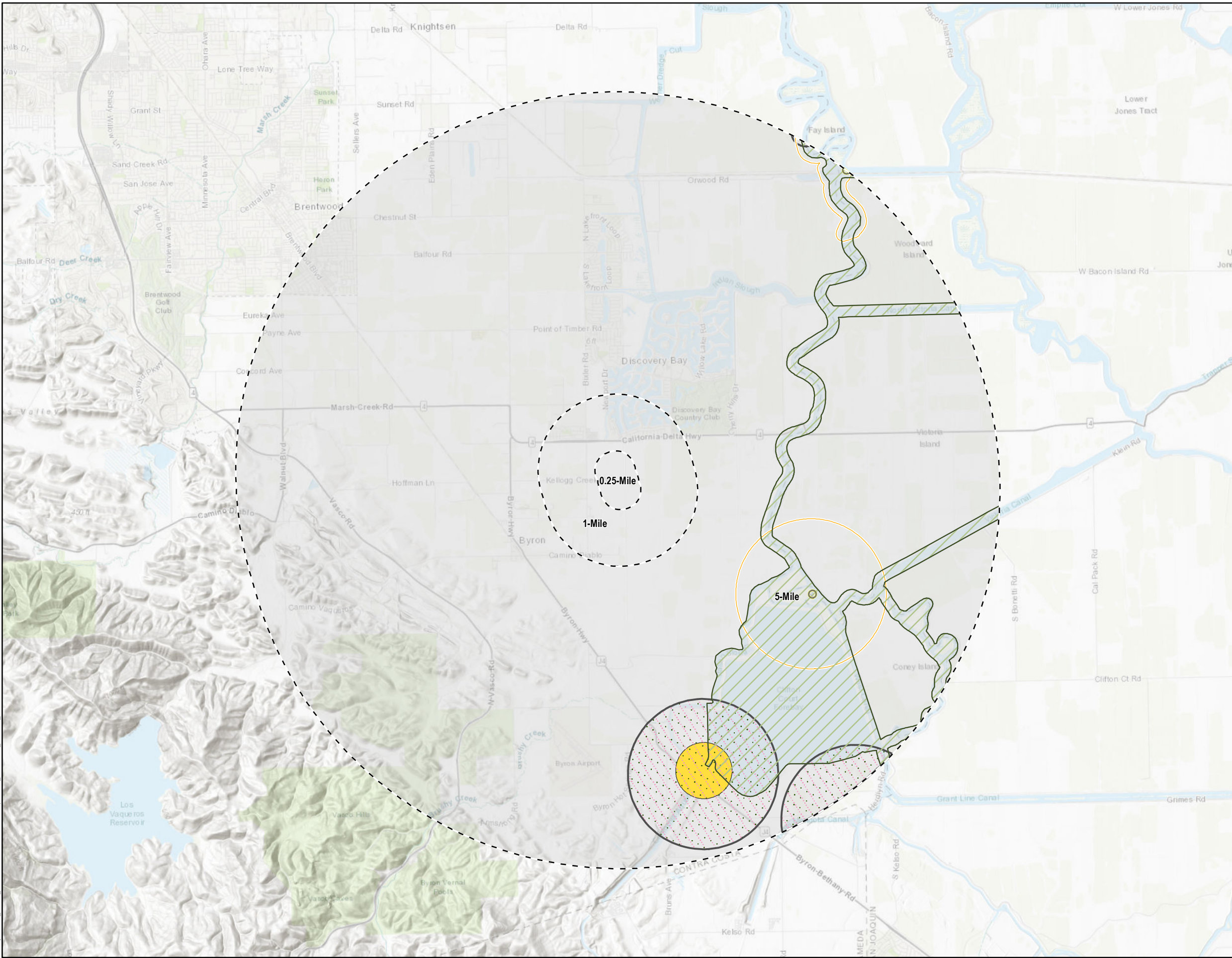
**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Crustaceans/Insects - Transposition Tower D**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Longhorn Fairy Shrimp
- Vernal Pool Fairy Shrimp
- Western Bumble Bee



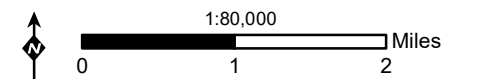
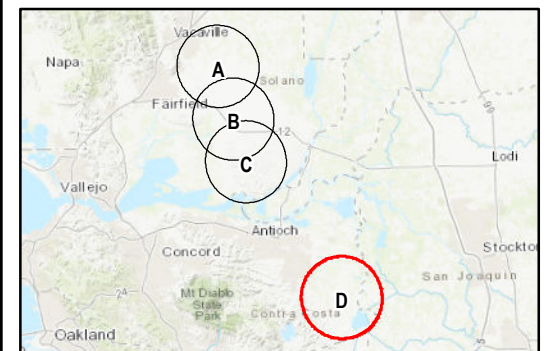
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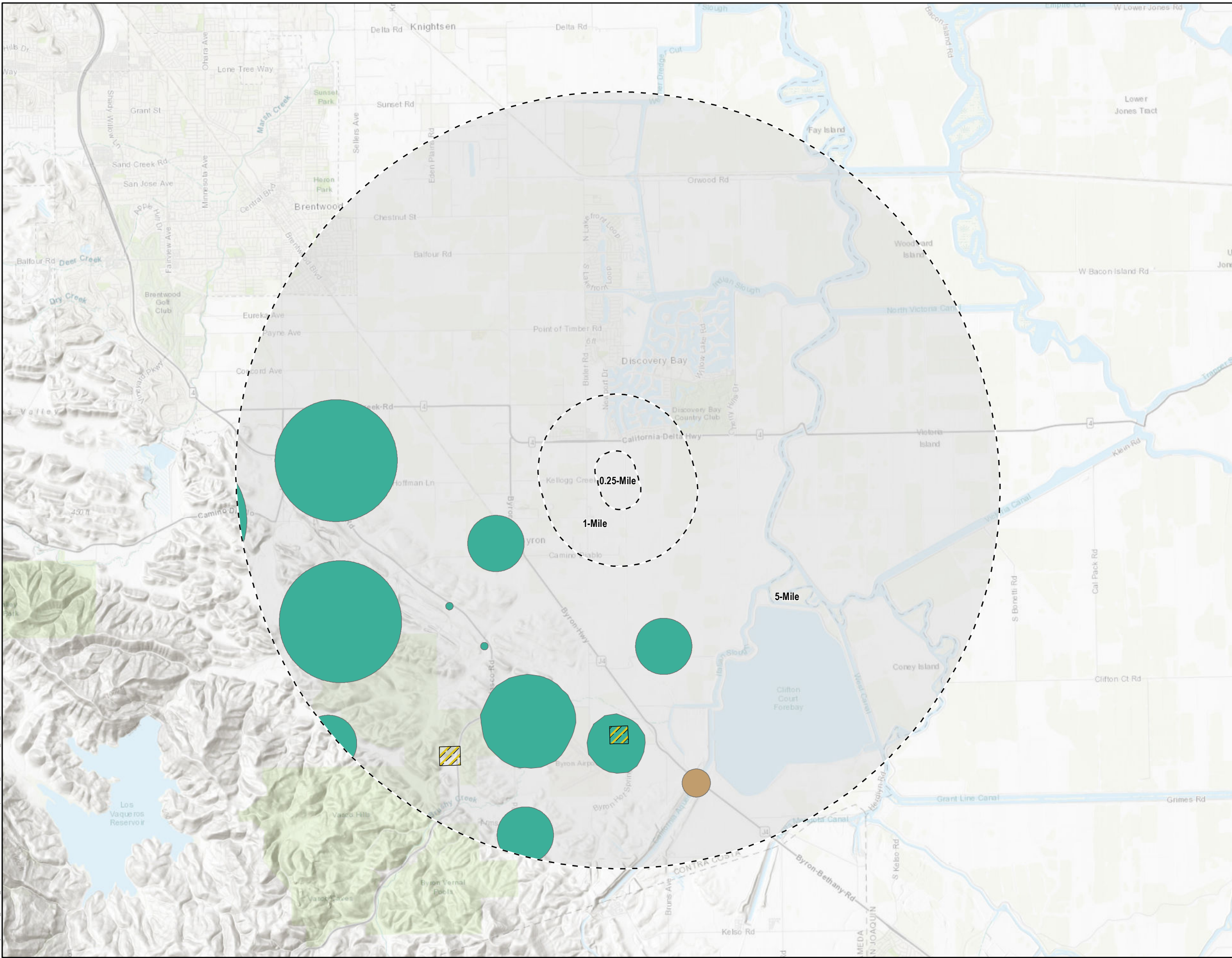
**Attachment D:
CNDDDB Occurrences of
Special-Status Wildlife Species
Fish - Transposition Tower D**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Delta Smelt
- Eulachon
- Green Sturgeon - Southern DPS
- Longfin Smelt
- Steelhead - Central Valley DPS



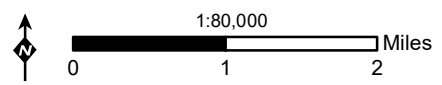
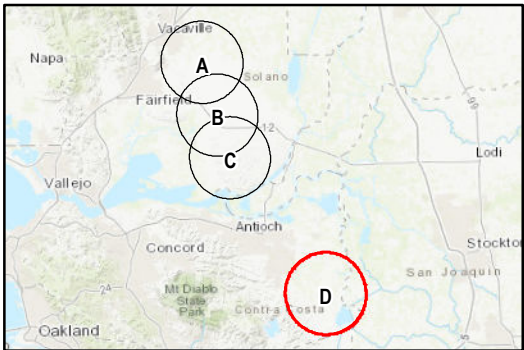
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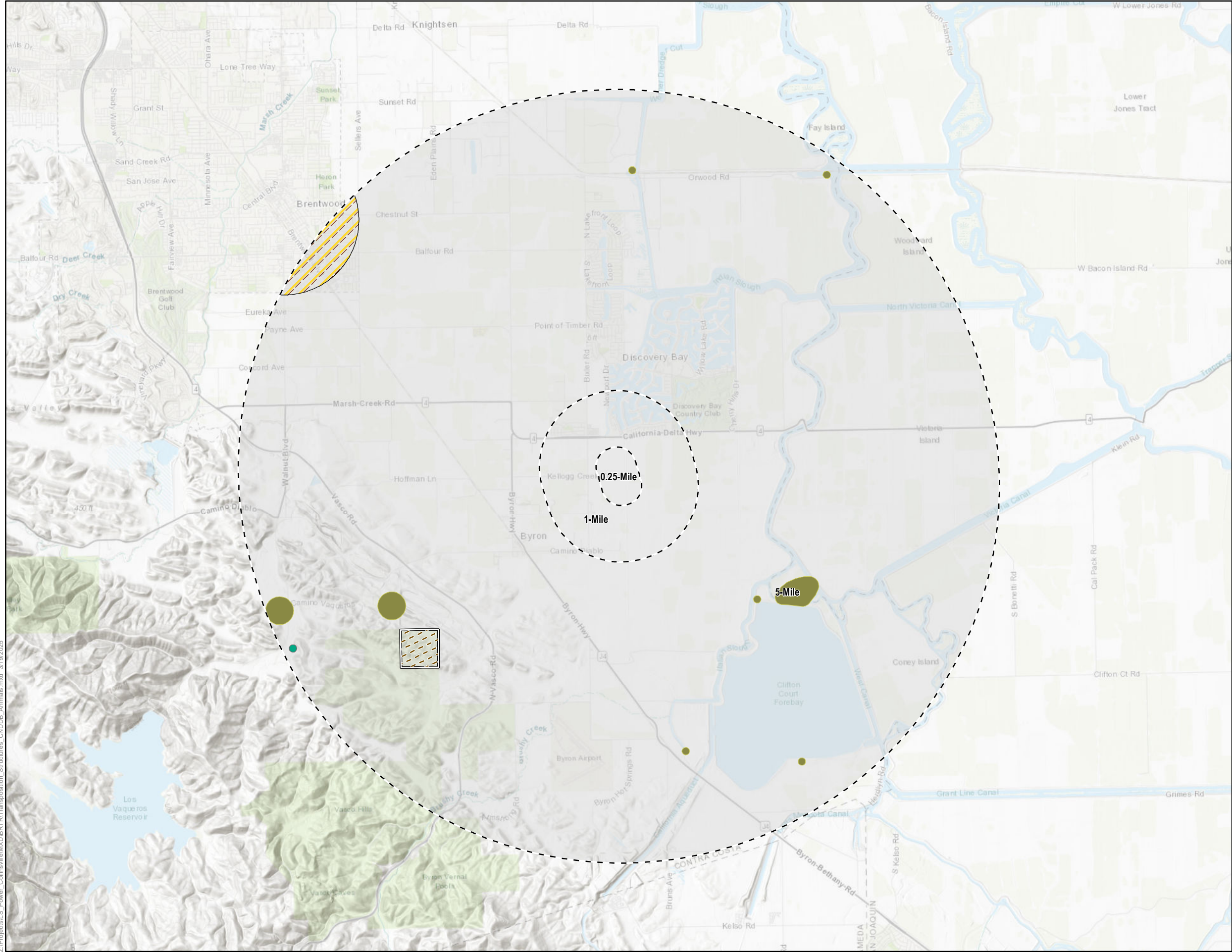


**Attachment D:
CNDDB Occurrences of
Special-Status Wildlife Species
Mammals - Transposition Tower D**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- American Badger
- San Joaquin Kit Fox
- San Joaquin Pocket Mouse

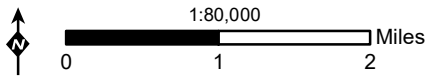
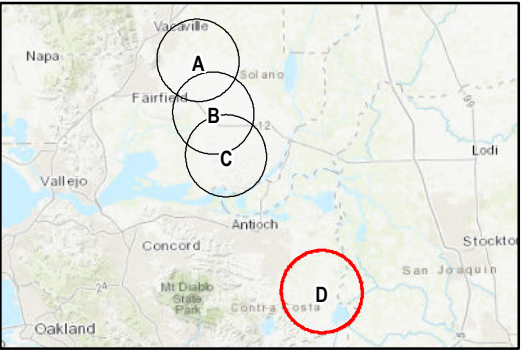




**Attachment D:
CNDDDB Occurrences of
Special-Status Wildlife Species
Reptiles - Transposition Tower D**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project Buffer
- Alameda Whipsnake
- Coast Horned Lizard
- Northwestern Pond Turtle
- Northern California Legless Lizard



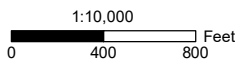
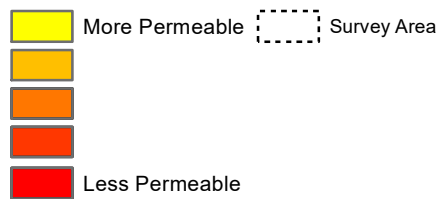
ATTACHMENT E: ESSENTIAL CONNECTIVITY AREAS

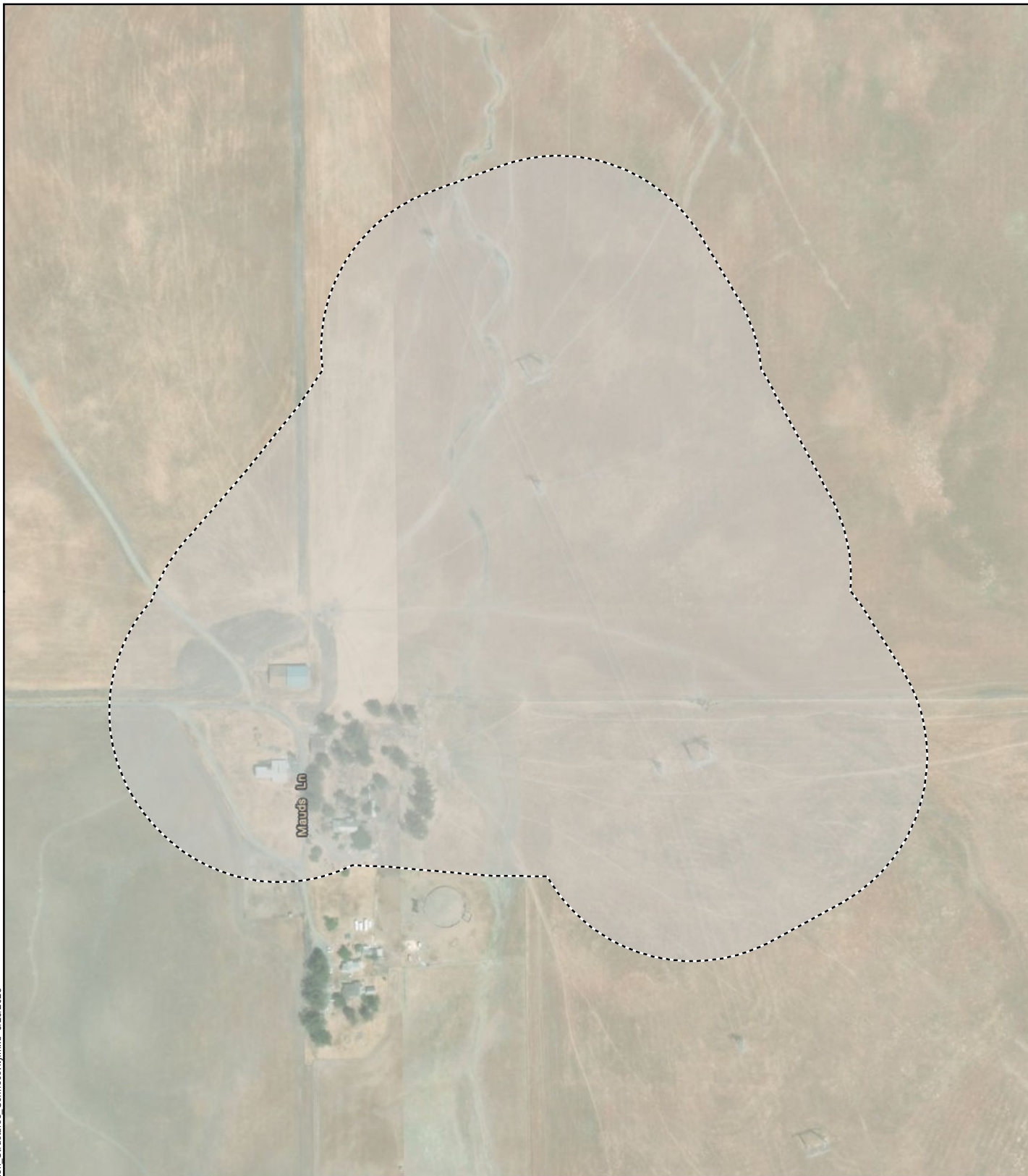
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Attachment E: Essential Connectivity Areas Tower A

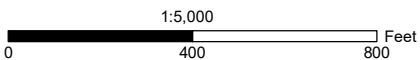
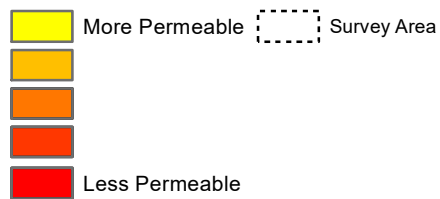
Collinsville 500/230 Kilovolt Substation Project

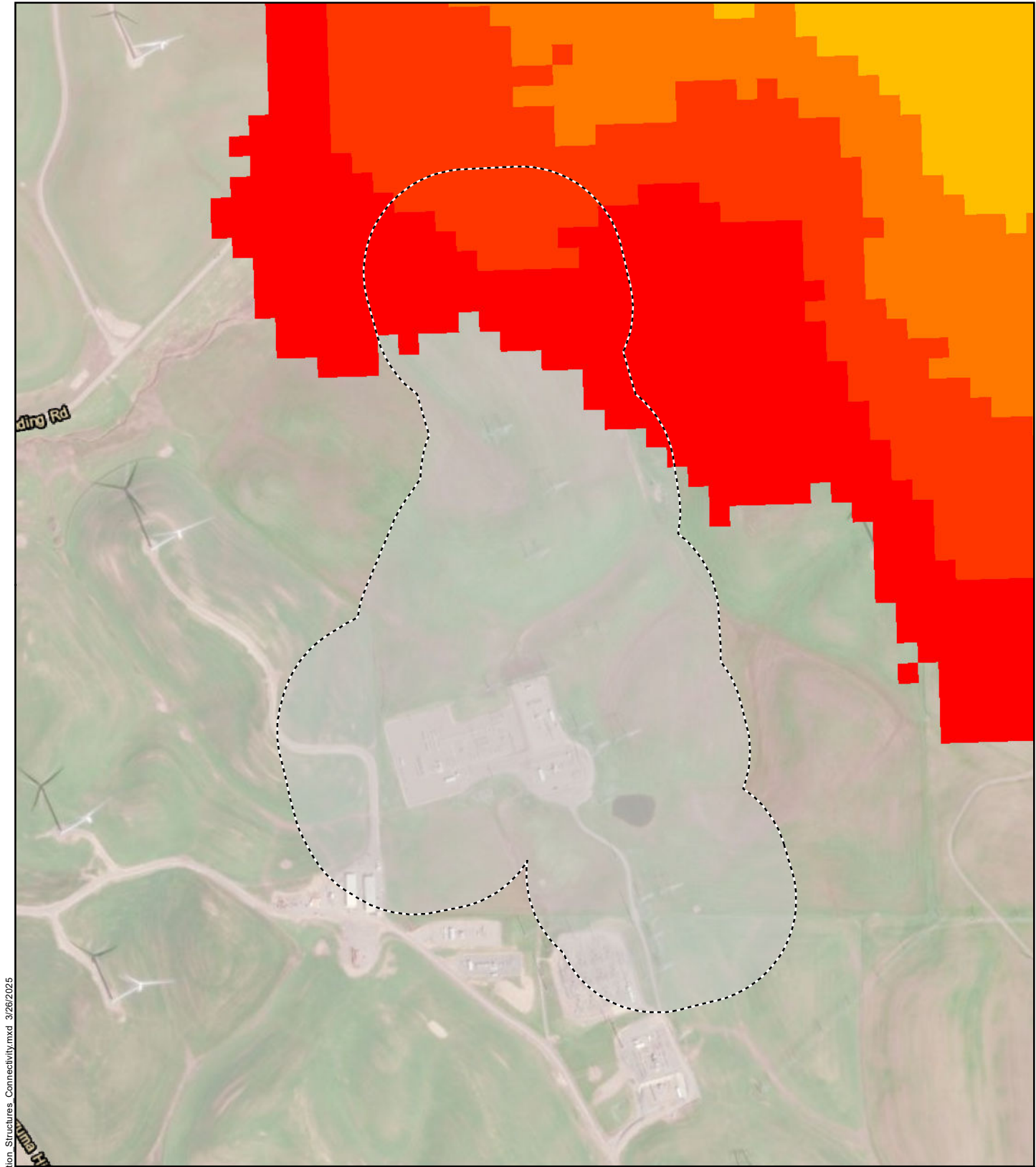




Attachment E: Essential Connectivity Areas Tower B

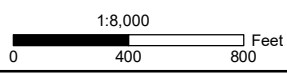
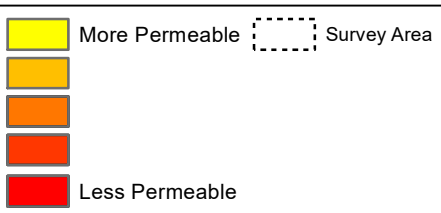
Collinsville 500/230 Kilovolt Substation Project





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Attachment E: Essential Connectivity Areas Tower C **Collinsville 500/230 Kilovolt Substation Project**

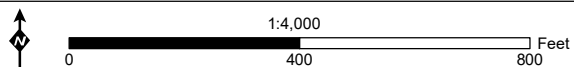
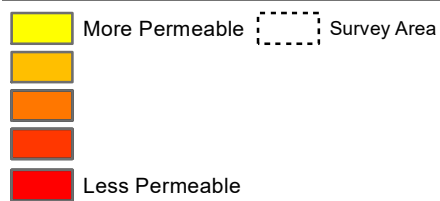


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Attachment E: Essential Connectivity Areas Tower D

Collinsville 500/230 Kilovolt Substation Project



ATTACHMENT F: LINEAR WATER FEATURE PHOTOGRAPHS

ATTACHMENT F: LINEAR WATER FEATURE PHOTOGRAPHS

TOWER A





Photograph 3:
D-2, facing
upstream and
east.



Photograph 4:
D-2, facing
downstream and
west.



Photograph 5:
D-3, facing
upstream and
east.



Photograph 6:
D-3, facing
downstream and
west.



Photograph 7:
D-4, facing
upstream and
south.



Photograph 8:
D-4, facing
downstream and
north.

TOWER B



Photograph 9:
D-5, facing
upstream and
south.



Photograph 10:
D-5, facing
downstream and
northeast.

TOWER C



Photograph 11:
D-6, facing
upstream and
southeast.



Photograph 12:
D-6, facing
downstream and
northeast.



Photograph 13:
D-7, facing
upstream and
southwest.



Photograph 14:
D-7, facing
downstream and
northwest.



Photograph 15:
D-8, facing
upstream and
south.



Photograph 16:
D-8, facing
downstream and
north.



Photograph 17:
D-9, facing
upstream and
north.



Photograph 18:
D-9, facing
downstream and
south.

TOWER D



Photograph 19:
D-10, facing
upstream and
west.



Photograph 20:
D-10, facing
downstream and
east.



Photograph 21:
D-11, facing
upstream and
east.



Photograph 22:
D-11, facing
downstream and
west.



Photograph 23:
D-12, facing
upstream and
south.



Photograph 24:
D-12, facing
downstream and
north.



Photograph 25:
D-13, facing
upstream and
southwest.



Photograph 26:
D-13, facing
downstream and
southeast.

ATTACHMENT G: WETLAND FEATURE PHOTOGRAPHS

ATTACHMENT G: WETLAND FEATURE PHOTOGRAPHS



Photograph 1:
W-1, facing
north.¹



Photograph 2:
W-2, facing
north.

¹ Foot access for surveys was restricted due to landowner access. Photos were taken from the nearest accessible area.



Photograph 3:
W-3, facing
southeast.



Photograph 4:
W-4, facing
south.



Photograph 5:
W-5, facing
north.



Photograph 6:
W-6, facing
east.²

² Photographs of W-7 are not available; however, this feature closely resembles W-4, W-5, and W-6 in size, shape, observed hydrology, and vegetation community.



Photograph 7:
W-8, facing
north.



Photograph 8:
W-9, facing
north.



Photograph 9:
W-10, facing
west.



Photograph 10:
W-11, facing
north.



Photograph 11:
W-12, facing
west.



Photograph 12:
W-13, facing
north.



Photograph 13:
W-14, facing
north.



Photograph 14:
W-15, facing
northeast.



Photograph 15:
W-16, facing
southwest.



Photograph 16:
W-17, facing
north.



Photograph 17:
W-18, facing
southeast.



Photograph 18:
W-19, facing
northwest.

ATTACHMENT H: POTENTIALLY JURISDICTIONAL WATER FEATURES TABLES

ATTACHMENT H: POTENTIALLY JURISDICTIONAL WATER FEATURES TABLES

Table H-1: Potentially Jurisdictional Wetland Features

Wetland Identification Number	Vegetation Type	Cowardin Classification	Page Number in Attachment A	Potential USACE- Jurisdictional Area within Survey Area (acres)	Potential RWQCB- Jurisdictional Area within Survey Area (acres)	Potential CDFW- Jurisdictional Area within Survey Area (acres)
Tower A						
W-1	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PEM2*	1	--	0.36	--
W-2	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC**	1	--	0.02	--
W-3	<i>Brassica nigra</i> – <i>Centaurea (solstitialis, melitensis)</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.03	--
W-4	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-5	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-6	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-7	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-8	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.01	--
W-9	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.01	--
W-10	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-11	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.54	--
W-12	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.08	--
W-13	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-14	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	<0.01	--
W-15	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.04	--

Wetland Identification Number	Vegetation Type	Cowardin Classification	Page Number in Attachment A	Potential USACE-Jurisdictional Area within Survey Area (acres)	Potential RWQCB-Jurisdictional Area within Survey Area (acres)	Potential CDFW-Jurisdictional Area within Survey Area (acres)
W-16	<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	PUBC	1	--	0.05	--
Tower B						
W-17	<i>Avena</i> spp. – <i>Bromus</i> spp. Herbaceous Semi-Natural Alliance	PUBC	2	--	0.01	--
W-18	<i>Avena</i> spp. – <i>Bromus</i> spp. Herbaceous Semi-Natural Alliance	PUBC	2	--	<0.01	--
W-19	<i>Avena</i> spp. – <i>Bromus</i> spp. Herbaceous Semi-Natural Alliance	PUBC	2	--	<0.01	--
Total***	--	--	--	--	1.19	--

*PEM2 = Palustrine Emergent Non-persistent Wetland

**PUBC = Palustrine Unconsolidated Bottom, Seasonally Flooded

***Due to rounding, totals may not sum.

Notes: USACE = United States Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife

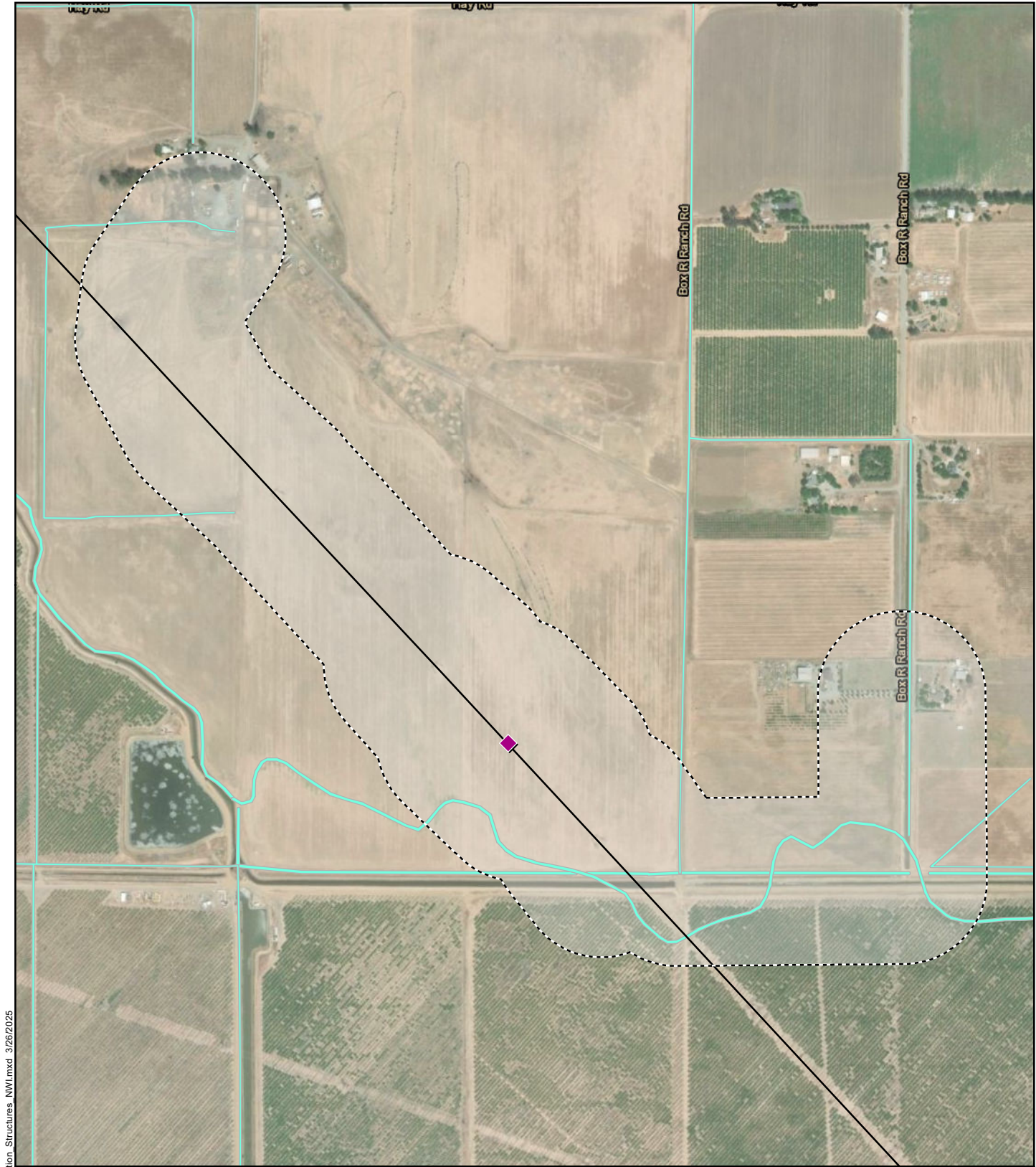
Table H-2: Potentially Jurisdictional Linear Water Features

ID	Feature Type	Page Number in Attachment A	Average Measurements (feet)					Jurisdictional Areas (acres)		
			Length	OHWM Width	OHWM Depth	TOB Width	TOB Depth	USACE	RWQCB	CDFW
Tower A										
D-1	Ephemeral	1	1,180.1	4.0	0.4	67.0	0.3	--	0.11	1.84
D-2	Ephemeral	1	2,923.1	2.0	0.4	35.0	10.0	0.13	0.13	2.35
D-3	Ephemeral	1	1,267.5	4.0	0.2	15.0	6.5	--	0.12	0.44
D-4	Ephemeral	1	1,574.9	40.0	2.0	60.0	15.0	--	1.46	2.20
Tower B										
D-5	Ephemeral	2	1,208.1	14.9	0.6	17.2	1.7	--	0.48	0.56
Tower C										
D-6	Ephemeral	3	588.9	1.5	0.4	8.5	3.25	--	0.02	0.12
D-7	Ephemeral	3	1,154.2	0.8	0.1	4.2	0.1	--	0.02	0.11
D-8	Ephemeral	3	687.4	1.2	0.1	1.2	0.1	--	0.02	0.02
D-9	Ephemeral	3	210.8	1.0	0.2	3.25	3.1	--	<0.01	0.02
Tower D										
D-10	Ephemeral	4	1,303.5	1.2	0.5	4.0	2.0	--	0.12	0.12
D-11	Ephemeral	4	1,363.2	0.7	0.1	3.0	1.0	--	0.09	0.09
D-12	Perennial	4	1,234.9	20.0	2.0	44.0	13.0	0.57	0.57	1.26
D-13	Perennial	4	774.4	20.0	2.0	40.0	15.0	0.36	0.36	0.73
Total*	--	--	--	--	--	--	--	0.93	3.51	9.85

*Due to rounding, totals may not sum.

Notes: OHWM = ordinary high water mark; TOB = top of bank

ATTACHMENT I: NATIONAL WETLANDS INVENTORY MAP

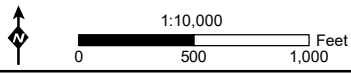


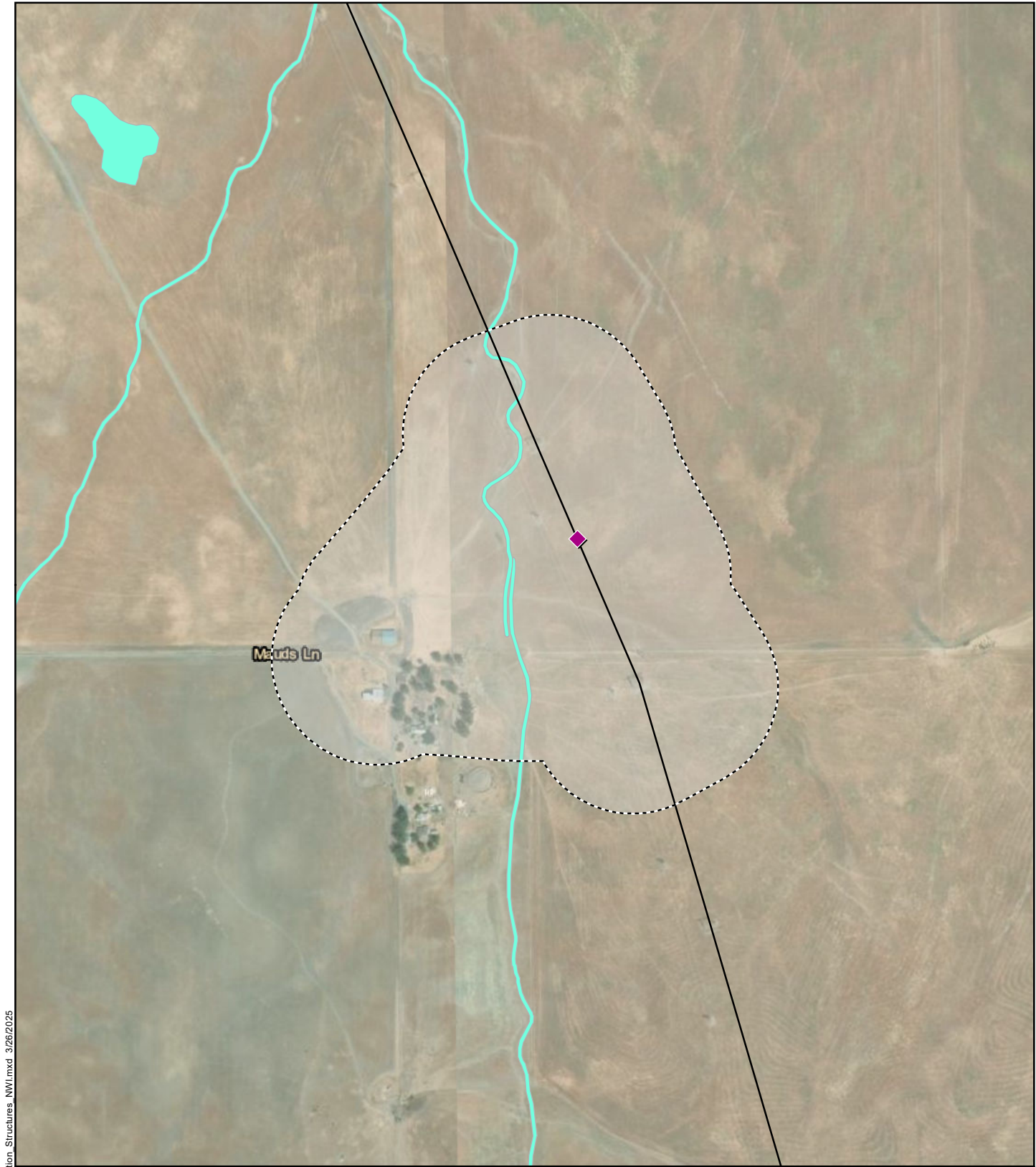
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Attachment I: National Wetlands Inventory Map 1 of 4

Collinsville 500/230 Kilovolt Substation Project

-  Proposed PG&E 500 kV Transposition Structure
-  Existing PG&E Vaca Dixon-Tesla Transmission Line
-  500-Foot Buffer
-  National Wetlands Inventory Feature

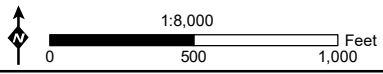


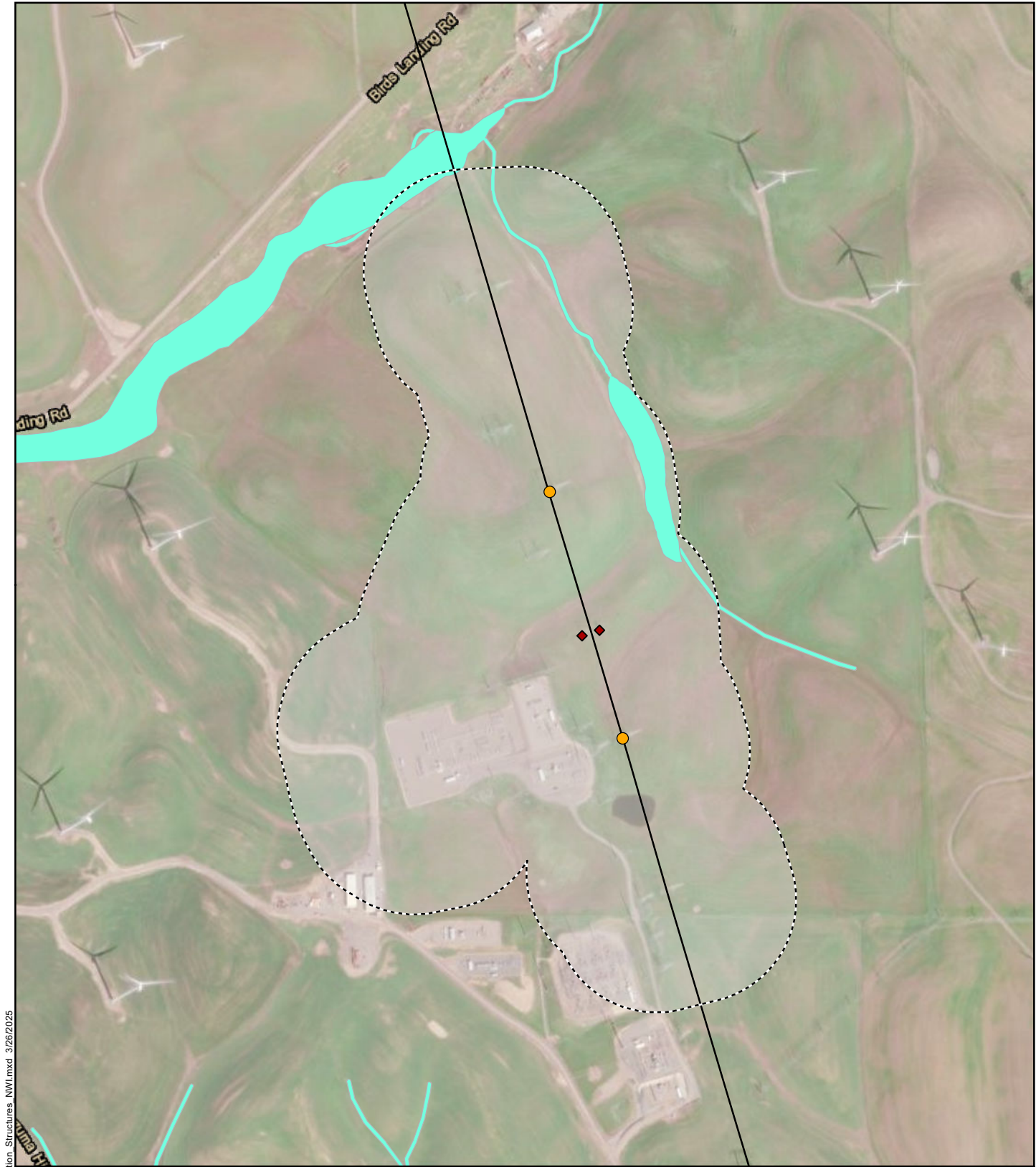


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Attachment I: National Wetlands Inventory Map 2 of 4 **Collinsville 500/230 Kilovolt Substation Project**

- ◆ Proposed PG&E 500 kV Transposition Structure
- Existing PG&E Vaca Dixon-Tesla Transmission Line
- - - 500-Foot Buffer
- National Wetlands Inventory Feature

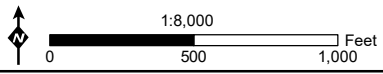


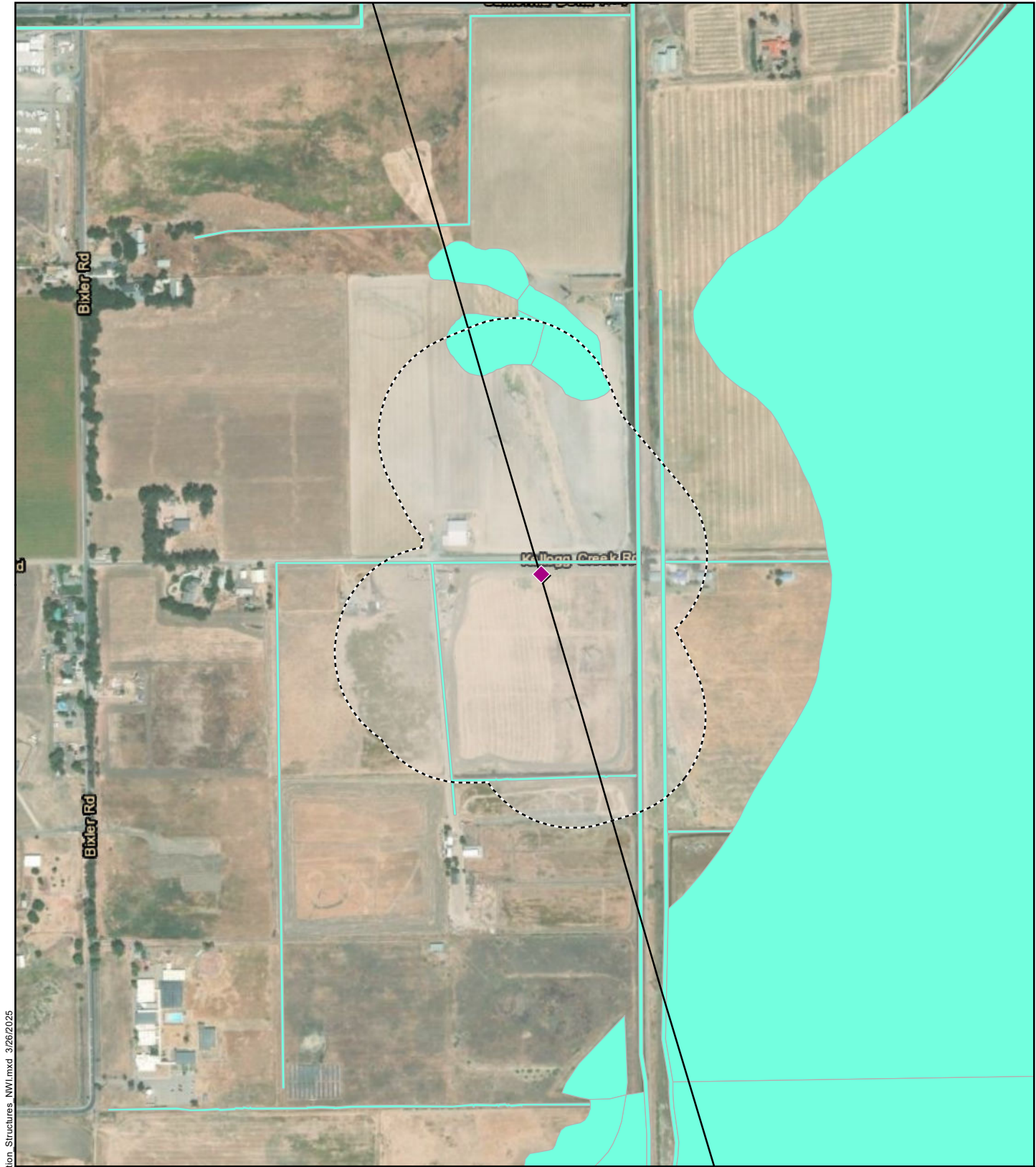


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Attachment I: National Wetlands Inventory Map 3 of 4 **Collinsville 500/230 Kilovolt Substation Project**

- ◆ Proposed PG&E LSP Removal
- Proposed PG&E Three-Pole Dead-End TSP
- Existing PG&E Vaca Dixon-Tesla Transmission Line
- - - 500-Foot Buffer
- National Wetlands Inventory Feature

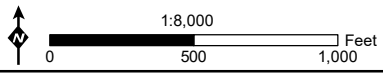




Attachment I: National Wetlands Inventory Map 4 of 4

Collinsville 500/230 Kilovolt Substation Project

-  Proposed PG&E 500 kV Transposition Structure
-  Existing PG&E Vaca Dixon-Tesla Transmission Line
-  500-Foot Buffer
-  National Wetlands Inventory Feature



**ATTACHMENT B: COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT AQUATIC
RESOURCES DELINEATION REPORT**

**LS POWER GRID CALIFORNIA, LLC
COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT**

AQUATIC RESOURCES DELINEATION REPORT

JUNE 2025

PREPARED FOR:



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Attachment B: Photograph Log
Attachment C: Wetland Determination Data Forms

1 – INTRODUCTION

LS Power Grid California, LLC (LSPGC) retained Insignia Environmental (Insignia) to conduct wetland and waters surveys for the Collinsville 500/230 Kilovolt (kV) Substation Project (Proposed Project). As depicted in Figure 1: Proposed Project Overview Map, the Proposed Project involves the construction of a new 500/230 kV substation (Collinsville Substation), the construction of two new 500 kV single-circuit transmission line segments that would interconnect Pacific Gas and Electric Company's (PG&E's) existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed Collinsville Substation, and the construction of one new 230 kV double-circuit transmission line (Proposed Project Transmission Line) that would connect the proposed Collinsville Substation to PG&E's existing Pittsburg Substation. The Proposed Project has been designed to address overloads on the existing Contra Costa-Newark 230 kV corridor and provide an additional supply into the northern greater San Francisco Bay Area to increase reliability to the area and advance additional power generation.

This Aquatic Resources Delineation Report (Report) presents the results of a delineation of wetlands and waters to support the necessary permits and authorizations prior to Proposed Project construction. Potentially jurisdictional wetlands and waters within the survey area, as defined in Section 4.1 Delineation of Wetlands and Waters, were assessed for jurisdiction under the United States (U.S.) Army Corps of Engineers (USACE), pursuant to Section 404 of the Clean Water Act (CWA), as well as the Regional Water Quality Control Board (RWQCB), pursuant to the Porter-Cologne Water Quality Control Act (California Water Code § 13000 et seq.) or Section 401 of the CWA. In addition, wetlands, waters, and associated riparian or hydrophytic vegetation were assessed for jurisdiction under the California Department of Fish and Wildlife (CDFW), pursuant to Section 1600 of the California Fish and Game Code. This report summarizes the regulatory framework, field methods, and results of the delineation of wetlands and waters.

2 – PROPOSED PROJECT DESCRIPTION

2.0 PROPOSED PROJECT LOCATION

The proposed Collinsville Substation would be located near the unincorporated community of Collinsville, which is located in the southwestern portion of Solano County. As depicted in Figure 2: Hydrologic Region Map, the survey area is located north and south of the Sacramento-San Joaquin River Delta (Delta). The Proposed Project would create a connection to PG&E's existing Pittsburg Substation, which is located in the City of Pittsburg in the northern portion of Contra Costa County.

2.1 PROPOSED PROJECT OVERVIEW

The following main components of the Proposed Project are depicted on Figure 1: Proposed Project Overview Map:

- A new approximately 11-acre 500/230 kV substation near the unincorporated community of Collinsville in Solano County (Proposed LSPGC Collinsville Substation);

- Two new approximately 1.5-mile-long single-circuit 500 kV, onshore transmission line segments (Proposed PG&E 500 kV Interconnection) that will interconnect PG&E's existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed Collinsville Substation;¹
- A new approximately 6-mile-long double-circuit 230 kV transmission line that will connect the proposed Collinsville Substation to PG&E's existing Pittsburg Substation and include the following components:
 - An approximately 1-mile-long overhead transmission line segment will connect between the proposed Collinsville Substation and the north shore of the Delta (Proposed LSPGC 230 kV Overhead Segment),
 - Approximately four 4.7-mile-long submarine cables installed below the bed of the Delta (Proposed LSPGC 230 kV Submarine Segment),
 - Four onshore underground utility vaults near PG&E's existing Pittsburg Substation that will transition the submarine cables to underground cables that will terminate at approximately two new riser poles adjacent to PG&E's existing Pittsburg Substation (Proposed LSPGC 230 kV Underground Segment); and
- Two new telecommunications paths to the proposed Collinsville Substation (a new microwave tower that will be constructed at the substation and a new fiber optic path that would be installed between existing fiber in the City of Pittsburg and the proposed Collinsville Substation (Proposed LSPGC Telecommunications Extension).

3 – REGULATORY FRAMEWORK

3.0 UNITED STATES ARMY CORPS OF ENGINEERS

3.0.0 Section 404 of the Clean Water Act

Under Section 404 of the CWA, the USACE has jurisdiction over waters of the U.S. (WOTUS). The purpose of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The USACE has regulatory authority to issue permits for the discharge of dredged or fill material in WOTUS, according to Title 33, Section 1344 of the U.S. Code. The USACE issues individual or general permits (i.e., Nationwide Permits) for such discharges. The Proposed Project is under the jurisdiction of the USACE’s San Francisco District.

Two Supreme Court of the U.S. (Supreme Court) cases—*Solid Waste Agency of Northern Cook County v. USACE* (SWANCC) and *Rapanos v. U.S.* (Rapanos)—redefined the USACE

¹ PG&E would be responsible for the final configuration of the northern tie-in of the 500 kV loop-in between the proposed Collinsville Substation and the existing Vaca Dixon-Tesla 500 kV Transmission Line. LSPGC would be responsible for the installation of dead-end structures near the proposed Collinsville Substation to facilitate looping in the 500 kV lines.

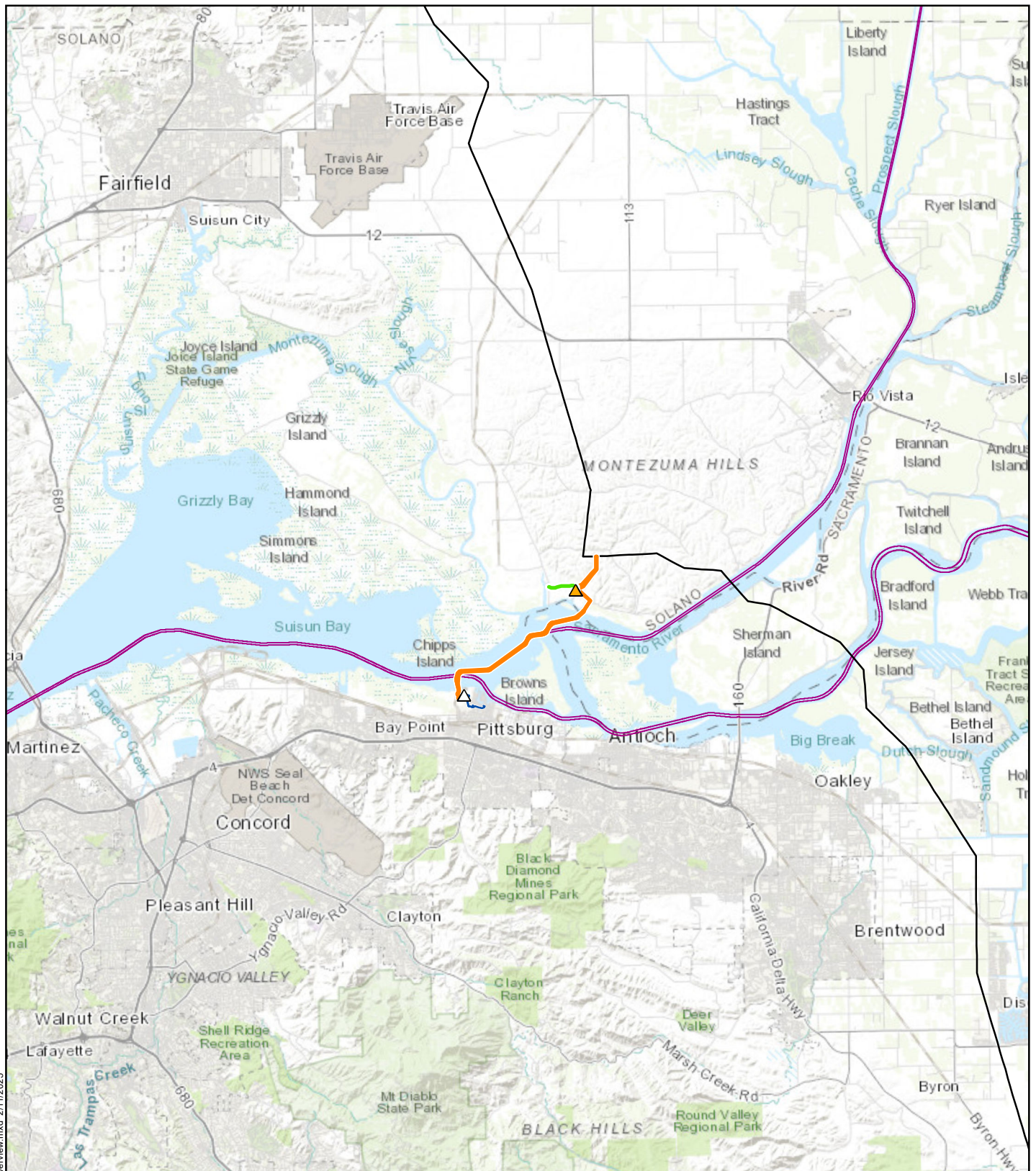
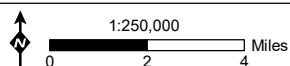


Figure 1: Proposed Project Overview Map

Collinsville 500/230 Kilovolt Substation Project

- ▲ Proposed LSPGC Collinsville Substation
- ▲ Existing PG&E Pittsburg Substation
- Proposed Project Transmission Lines
- Proposed PG&E 12 kV Overhead Distribution Line
- Existing PG&E Vaca Dixon-Tesla Transmission Line
- Proposed LSPGC Telecommunications Line
- Navigational Channel



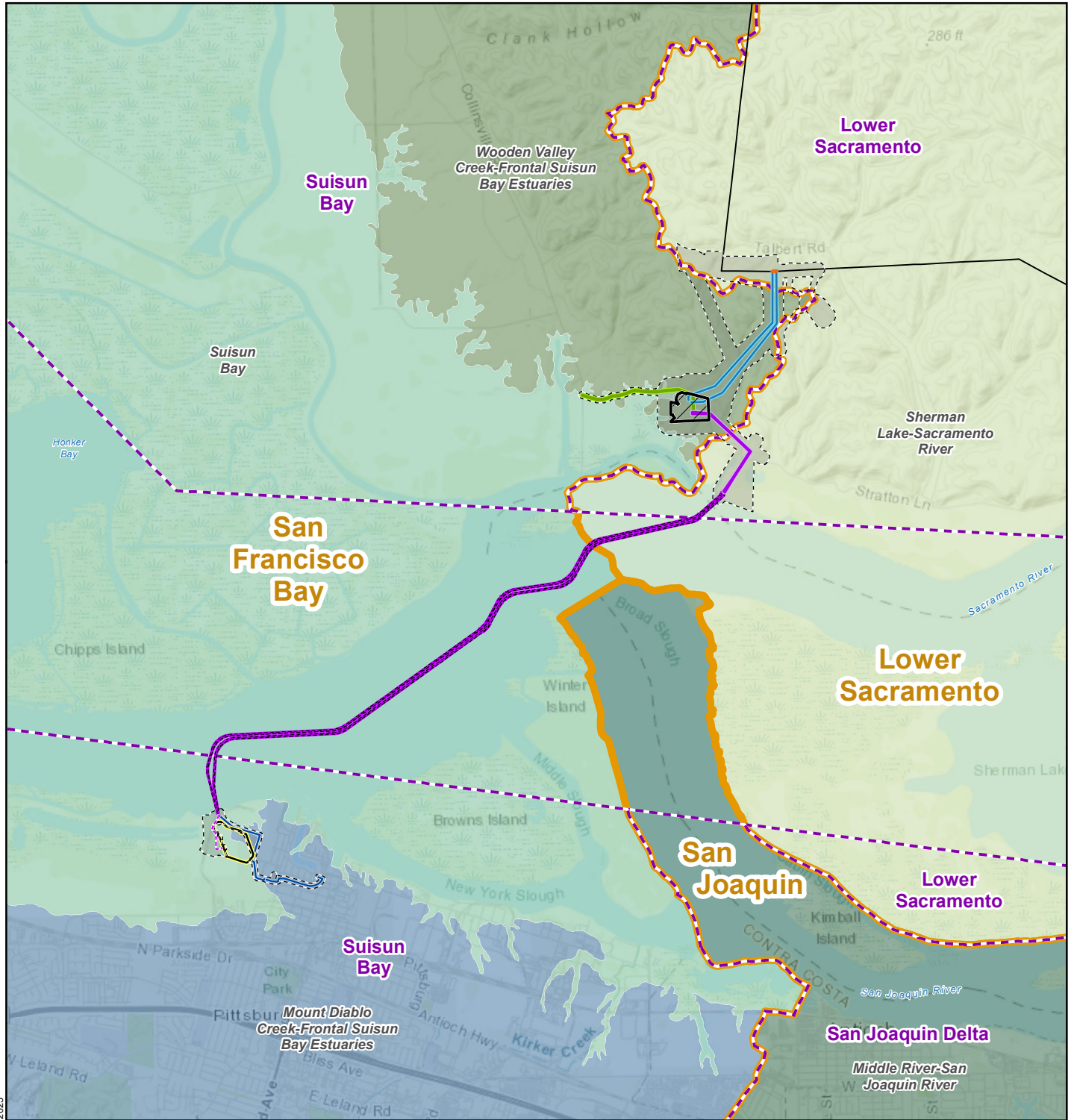
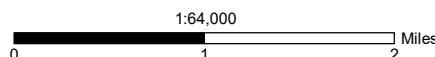


Figure 2: Hydrologic Region Map

Collinsville 500/230 Kilovolt Substation Project

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> Proposed LSPGC Telecommunications Line Proposed LSPGC 230 kV Overhead Segment Proposed LSPGC 230 kV Submarine Segment Proposed LSPGC 230 kV Underground Segment Proposed PG&E 500 kV Interconnection Proposed PG&E 12 kV Distribution Line Existing PG&E 500 kV Transmission Line to be Removed Existing PG&E Vaca Dixon-Tesla Transmission Line | <ul style="list-style-type: none"> Existing PG&E Pittsburg Substation Proposed LSPGC Collinsville Substation Site Survey Area Basin (HUC 6) Subbasin (HUC 8) | <p>Subbasin (HUC 10)</p> <ul style="list-style-type: none"> Middle River-San Joaquin River Mount Diablo Creek-Frontal Suisun Bay Estuaries Sherman Lake-Sacramento River Suisun Bay Wooden Valley Creek-Frontal Suisun Bay Estuaries |
|---|---|--|



jurisdiction within the parameters of the CWA. As a result of these court cases, the U.S. Environmental Protection Agency (EPA) and the USACE issued a joint memorandum addressing guidance on determining the jurisdiction of WOTUS (EPA and USACE 2008). Since that time, a final Revised Definition of “Waters of the United States” was published to the *Federal Register* on January 18, 2023, and it took effect on March 20, 2023 (EPA 2024).

However, a third Supreme Court case—*Sackett v. EPA* (Sackett)—further amended the definition of a WOTUS regarding jurisdiction over “adjacent wetlands” on May 25, 2023. The Supreme Court’s new two-part test for “adjacent wetlands” is: (1) the body of water to which the wetland is connected is a “relatively permanent body of water” that is connected to traditional navigable waters; and (2) the wetland has a “continuous surface connection with that [connected] water, making it difficult to determine where the ‘water’ ends and the wetland begins” (Supreme Court 2023). This decision modifies the Supreme Court’s existing ruling and eliminates the agencies’ jurisdiction over wetlands “adjacent” to non-navigable tributaries when those wetlands had “a significant nexus to a traditional navigable water.” On August 29, 2023, the EPA and USACE issued a final rule to amend the 2023 WOTUS rule to be consistent with the Supreme Court’s decision, and it became effective in certain states, including California, on September 8, 2023.

Under the final rule following the decision in *Sackett v. EPA*, Title 40, Section 120.2(a) of the Code of Federal Regulations (CFR) defines WOTUS as follows:

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

Title 40, Section 120.2(c) of the CFR defines wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that

under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Three parameters—hydrophytic vegetation, hydric soils, and wetland hydrology—must all be present to classify an area as a USACE-jurisdictional wetland under normal circumstances.

The limits of USACE jurisdiction are as follows:

1. Territorial Seas: The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction for a distance of 3 nautical miles (33 CFR § 329.12).
2. Tidal WOTUS: The landward limits of jurisdiction in tidal waters extend to the following:
 - the high tide line, or
 - the limits as identified in non-tidal WOTUS when adjacent to non-tidal waters of the U.S.
3. Non-Tidal WOTUS: The limits of jurisdiction in non-tidal waters extend to the following:
 - the ordinary high water mark (OHWM) in the absence of adjacent wetlands,
 - beyond the OHWM to the limit of adjacent wetlands when such wetlands are present, and
 - the limit of the wetland when the WOTUS consist only of wetlands.

The application of EPA and USACE guidance results in a formalized oversight process involving both agencies in the adoption of approved jurisdictional determinations (AJDs). The intent of this formal process is to ensure consistency in how the agencies interpret the rulings and guidance at all levels. The USACE issued Regulatory Guidance Letter No. 08-02 on the subject of jurisdictional determinations (USACE 2008a) to institute the program by which jurisdictional determinations are made. This guidance creates a distinction between an applicant’s request for a preliminary jurisdictional determination (PJD) and an AJD. If an applicant pursues a PJD, the determination would be inclusive of all features that have historically been regulated by the USACE under Section 404 of the CWA and Sections 9 and 10 of the Rivers and Harbors Appropriation Act of 1899 (i.e., prior to the SWANCC and Rapanos cases). A PJD excludes exempted jurisdictional waters, but not those excluded by court ruling interpretations. An AJD provides a more thorough evaluation of issues of isolation and adjacency as contemplated by the courts, and it excludes from USACE regulation any areas that fail to meet the necessary litmus tests of the Supreme Court decision and the agencies’ implementation guidance.

3.0.1 Rivers and Harbors Appropriation Act Section 10

The USACE regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 U.S. Code [USC] 403). Section 10 of the RHA requires USACE approval and a permit for excavation or fill, or alteration or modification of the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable WOTUS. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

3.1 REGIONAL WATER QUALITY CONTROL BOARD

3.1.0 Section 401 of the Clean Water Act

The RWQCB regulates activities in waters of the State—including wetlands—through Section 401 of the CWA (RWQCB 2014). While the USACE administers permitting programs that authorize impacts to WOTUS, any USACE permit authorized for a proposed project would be invalid unless the RWQCB has issued a project-specific water quality certification (WQC) or waiver of water quality. A WQC requires a finding by the RWQCB that the activities permitted by the USACE would not violate state water quality standards individually or cumulatively over the term of the issued USACE permit.

3.1.1 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code § 13260) requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the State to file a report of discharge” with the RWQCB through an application for waste discharge (California Water Code § 13260[a][1]) (RWQCB 2014). The term “waters of the State” is defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code § 13050[e]). Pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB also regulates “isolated wetlands,” or those wetlands considered to be outside of the USACE’s jurisdiction pursuant to court decisions. In 2019, the State Water Resources Control Board (SWRCB) further defined which wetlands are considered waters of the state in the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures). The Procedures became effective on May 28, 2020 (SWRCB 2021). According to the Procedures, an area is a wetland if it meets the following three criteria:

- The area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both
- The duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
- The area’s vegetation is dominated by hydrophytes, or the area lacks vegetation.

In April 2020, the SWRCB released the following implementation guidance that includes an updated definition of waters of the state (SWRCB 2020):

“California Code of Regulations, title 23, section 3831(w) states that ‘[a]ll waters of the United States are also ‘waters of the state.’ This regulation has remained in effect despite Supreme Court decisions such as *Rapanos* and *SWANCC*, which added limitations to what could be considered a water of the U.S. Therefore, the regulation reflects the Water Boards intent to include a broad interpretation of waters of the United States into the definition of waters of the state. Waters of the state includes features that have been determined by the U.S. EPA or the U.S. Army Corps of Engineers to be ‘waters of the U.S.’ in an approved jurisdictional determination; ‘waters of the U.S.’ identified in an aquatic resource report certified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of ‘waters of the U.S.’ or any current or historic federal regulation defining

‘waters of the U.S.’ Because the interpretation of waters of the U.S. in place at the time section 3831(w) was adopted was broader than any post-Rapanos or post-SWANCC regulatory definitions that incorporated more limitations into the scope of federal jurisdiction, it is consistent with the Water Boards’ intent to include both historic and current definitions of waters of the United States into the Water Boards’ wetland jurisdictional framework.”

The RWQCB generally considers filling in waters of the state to be pollution. Pollution is defined as an alteration of the quality of the waters of the state by waste that unreasonably affects its beneficial uses (California Water Code § 13050[1]). To determine whether a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB’s litmus test is if the action could result in any threat to water quality.

3.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

3.2.0 California Fish and Game Code Section 1600

Sections 1601 through 1606 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement (LSAA) application must be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal that includes measures to protect affected fish and wildlife resources. A LSAA is the final proposal that is mutually agreed upon by the CDFW and the applicant.

Generally, the CDFW-jurisdictional boundaries are broader than the USACE-jurisdictional boundaries and include the following:

- rivers/streams;
- lakes;
- entire floodplains;
- wetlands associated with rivers, streams, lakes, or wildlife resources; and
- artificial drainage ditches (in some circumstances).

The CDFW’s jurisdiction includes the following:

- areas with a definable bed, bank, or channel;
- areas that support periodic or intermittent flows, perennial flows, or subsurface flows; support fish or other aquatic life; or support riparian or hydrophytic vegetation in association with a streambed; and
- areas that simply have a hydrologic source and/or terminus.

4 – METHODS

4.0 LITERATURE AND DATABASE REVIEW

Prior to conducting field work, Insignia biologists reviewed U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory maps (USFWS 2024), U.S. Geological Survey (USGS)

National Hydrography Dataset maps (USGS 2024a), and color aerial photographs (both recent and past) of the survey area and surrounding area. In addition, the biologists reviewed and referenced the Natural Resources Conservation Service (NRCS) Web Soil Survey, and USGS topographic maps. National Oceanic and Atmospheric Administration (NOAA) seasonal rainfall data were also reviewed (NOAA 2024a). The database review was used to determine if any aquatic resources had been previously mapped or otherwise documented in the Proposed Project area and to create a list of features to verify in the field.

4.1 DELINEATION OF WETLANDS AND WATERS

Vegetation mapping and preliminary waters mapping were conducted for the Proposed Project by Insignia biologists during a habitat assessment conducted in May, June, July, September, and December 2023. At that time, potentially jurisdictional aquatic features were preliminarily mapped and identified for formal delineations. Insignia biologists conducted formal wetland and waters delineations from May 6, 2024, through July 10, 2024, for any feature that was identified during the vegetation and preliminary waters mapping. The survey area included a minimum buffer of 100 feet around the Proposed Project's Collinsville Substation and terrestrial linear components; however, the buffer varies from 100 feet to 500 feet in some locations to accommodate future design changes and to collect additional data in the field for certain areas. The survey area is depicted in Attachment A: Aquatic Resources Delineation Map. The approximately 578.8-acre survey area was also designed to include all potential terrestrial areas of temporary and permanent disturbance associated with the Proposed Project.

4.1.0 Drainage Mapping

Insignia biologists used guidance from *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (USACE 2008b) to determine the location and size of drainages potentially under the jurisdiction of the USACE and RWQCB. Culverts, if found within the survey area, were also mapped to assist with determining downstream connectivity for potential jurisdictional features within the survey area. The overall landforms, slopes, and climatic and hydrologic conditions were also assessed. Photographs were taken for each drainage feature to record downstream and upstream conditions, as well as OHWM indicators; these photographs are included in Attachment B: Photograph Log. Evidence supporting the delineation of each potentially jurisdictional drainage feature was recorded using a mobile data collection platform that reflected the USACE Arid West Ephemeral and Intermittent Stream OHWM Data Sheet.

Top-of-bank (TOB) measurements were noted for each drainage to assess the areas that may be CDFW-jurisdictional under Section 1600 of the California Fish and Game Code.

4.1.1 Wetland Mapping

Insignia biologists surveyed for wetlands under the jurisdiction of the USACE, RWQCB, and/or CDFW within the survey area. Wetland delineations were conducted in accordance with the USACE's wetlands delineation manual (USACE 1987) in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008c). For an area to be defined as a wetland under normal circumstances, the USACE's routine on-site determination methods call for determining the presence of

hydrophytic vegetation, hydric soils, and wetland hydrology. Insignia biologists determined the presence of hydric soils using the NRCS's Field Indicators of Hydric Soils in the United States (NRCS 2018). Each of these parameters is discussed in further detail in the subsections that follow.

Hydrophytic Vegetation

Hydrophytic vegetation is defined as “the community of macrophytes that occurs in areas where inundation or soil saturation is either permanent, or of sufficient frequency and duration to exert a controlling influence on the plant species present” (USACE 2008c). Hydrophytic vegetation is determined to be present when the plant community is dominated by species that can tolerate prolonged inundations or soil saturation during the growing season. The National Wetland Plant List (USACE 2018) provides a wetland indicator status for plant species in the U.S. The wetland indicator status is a predictor of the likelihood that the plant would occur in wetlands, and is defined as follows:

- Obligate Plant (OBL): a plant that almost always occurs in wetlands.
- Facultative Wetland Plant (FACW): a plant that usually occurs in wetlands, but may occur in non-wetlands.
- Facultative Plant (FAC): a plant that usually occurs in wetlands and non-wetlands.
- Facultative Upland Plant (FACU): a plant that usually occurs in non-wetlands, but may occur in wetlands.
- Upland Plant: a plant that almost never occurs in wetlands.

Hydrophytic vegetation was determined to be present if any of the following indicator tests were satisfied:

- Dominance Test (Indicator 1): More than 50 percent of the dominant plant species across all strata are rated OBL, FACW, or FAC.
- Prevalence Test (Indicator 2): The prevalence index, which is a weighted-average wetland indicator status of all plant species in the sampling plot, is 3.0 or less.
- Morphological Adaptations (Indicator 3): This procedure is used when FACU plant species in wetlands exhibit morphological adaptations to wetland conditions; or it is used in areas of problematic vegetation where hydrophytic vegetation is absent, but indicators of hydric soil and wetland hydrology are present.
- Problematic Hydrophytic Vegetation (Indicator 4): This procedure is used in areas of problematic vegetation where indicators of hydric soil and wetland hydrology are present.

Hydric Soils

A hydric soil is defined as “a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (USACE 2008c). Characteristic field indicators of hydric soils, as described in the Field Indicators of Hydric Soils in the United States (NRCS 2018), include the following:

- presence of a histic epipedon,
- presence of sulfidic material,
- presence of an aquic or peraquic moisture regime,
- reducing soil conditions,
- soil color (including gleyed soils or soils with a low matrix chroma, with or without bright mottles),
- iron or manganese concretions, and
- soils listed as hydric by the NRCS.

Hydric soil data was collected using a drain spade shovel to extract soil samples at least 12 inches in depth and color matched using the Munsell Soil Color Book. Following the analysis, the soil sample was returned to its original location.

Wetland Hydrology

Wetland hydrology is indicated by an area that is inundated or saturated for a period long enough to create anaerobic vegetation and soil conditions during the growing season (USACE 2008c). Primary field indicators of wetland hydrology are described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008c) and include surface water, high water table, soil saturation, water marks, sediment deposits, drift deposits, surface soil cracks, biotic crust, oxidized rhizospheres along living roots, presence of reduced iron, and water-stained leaves, among others. Secondary indicators include, but are not limited to, water marks, sediment deposits, drift deposits, and drainage patterns. These indicators were used in the field to make a determination on whether soil saturation or inundation exists for a long enough period of time during the growing season to create anaerobic conditions and thus conclude whether wetland hydrology was present.

4.1.2 Global Positioning System Data Collection

Drainage and wetland data were mapped using a Trimble DA2-BT Global Positioning System (GPS) unit with submeter accuracy. A data model within the GPS software ensured consistent data collection in the field and was developed in accordance with LSPGC schema. All spatial data was collected in the North American Datum 1983 State Plane California Zone 2 coordinate system.

5 – RESULTS

5.0 ENVIRONMENTAL SETTING

The survey area is located at the southern border of the Sacramento Valley Subregion and the northern border of the San Joaquin Valley Subregion of the California Floristic Province (Jepson eFlora 2024). Ground surface elevations throughout the survey area range from 3 feet to 250 feet above mean sea level. The highest points within the survey area exist along the northernmost components of the Proposed Project. Elevation gradually decreases to approximately 3 feet as the survey area intersects the Delta. The survey area receives an average of 23 inches of rainfall per year, with the majority of precipitation falling between November and March (NOAA 2024a). Average annual temperatures range from 48 to 73 degrees Fahrenheit (NOAA 2024b).

Many of the drainages within the survey area are ephemeral and only flow when it rains. However, several drainages within the survey area have been altered due to agriculture and development and differ from their historical locations and/or were channelized.

5.0.0 Hydrology

As depicted in Figure 2: Hydrologic Region Map, the survey area occurs within the San Francisco Bay basin and the Lower Sacramento basin (USGS 2024a). Subbasins crossed include the Suisun Bay subbasin, which encompasses three crossed watersheds, and the Lower Sacramento subbasin, which encompasses one crossed watershed. The portion of the survey area south of the Delta is highly developed, so stormwater runoff in this area mainly flows through storm drains. North of the Delta, unnamed and non-jurisdictional drainages run through the survey area and drain south into the Delta. Several wetland features identified were observed to have connectivity downstream. This portion of the survey area experiences a high amount of surface runoff as topography is very hilly and gradually decreases in elevation as it joins with the Delta. Findings from soil test pits, which are further detailed in Attachment C: Wetland Determination Data Forms, support this assessment of the hydrology with the presence of wetlands increasing in the southern portion of the survey area closer to the Delta.

5.0.1 Vegetation

Twenty-two vegetation communities and land cover types were identified within the survey area (Insignia 2024). The vegetation classification system and the associated vegetation community descriptions that were used conform to *A Manual of California Vegetation, Second Edition* (CNPS 2024). Insignia biologists observed that no riparian vegetation was present within the channel or riparian zone surrounding the drainage within the survey area.

Ten hydrophytic vegetation communities were identified throughout the survey area, with at least one of these communities occurring within each of the mapped wetland features. The following communities and their dominant plant species are defined according to the National Wetland Plant List (USACE 2018):

- *Distichlis spicata* Herbaceous Alliance – FAC,
- *Frankenia salina* Herbaceous Alliance – FACW,
- *Juncus arcticus* (var. *balticus*, *mexicanus*) Herbaceous Alliance – FACW,
- *Lolium perenne* Herbaceous Semi-natural Alliance – FAC,
- *Polygonum lapathifolium* – *Xanthium strumarium* Herbaceous Alliance – UPL,
- *Rosa californica* Shrubland Alliance – FAC,
- *Sarcocornia pacifica* (*Salicornia depressa*) Herbaceous Alliance – OBL,
- *Schoenoplectus (acutus, californicus)* Herbaceous Alliance – OBL,
- *Schoenoplectus acutus/Rosa californica* Association – OBL, and
- *Schoenoplectus americanus* Herbaceous Alliance – OBL.

5.0.2 Soils

Soils in the survey area that were mapped by the NRCS Web Soil Survey are shown in Figure 3: Soil Units Map and summarized in Table 1: Summary of NRCS Soil Descriptions.

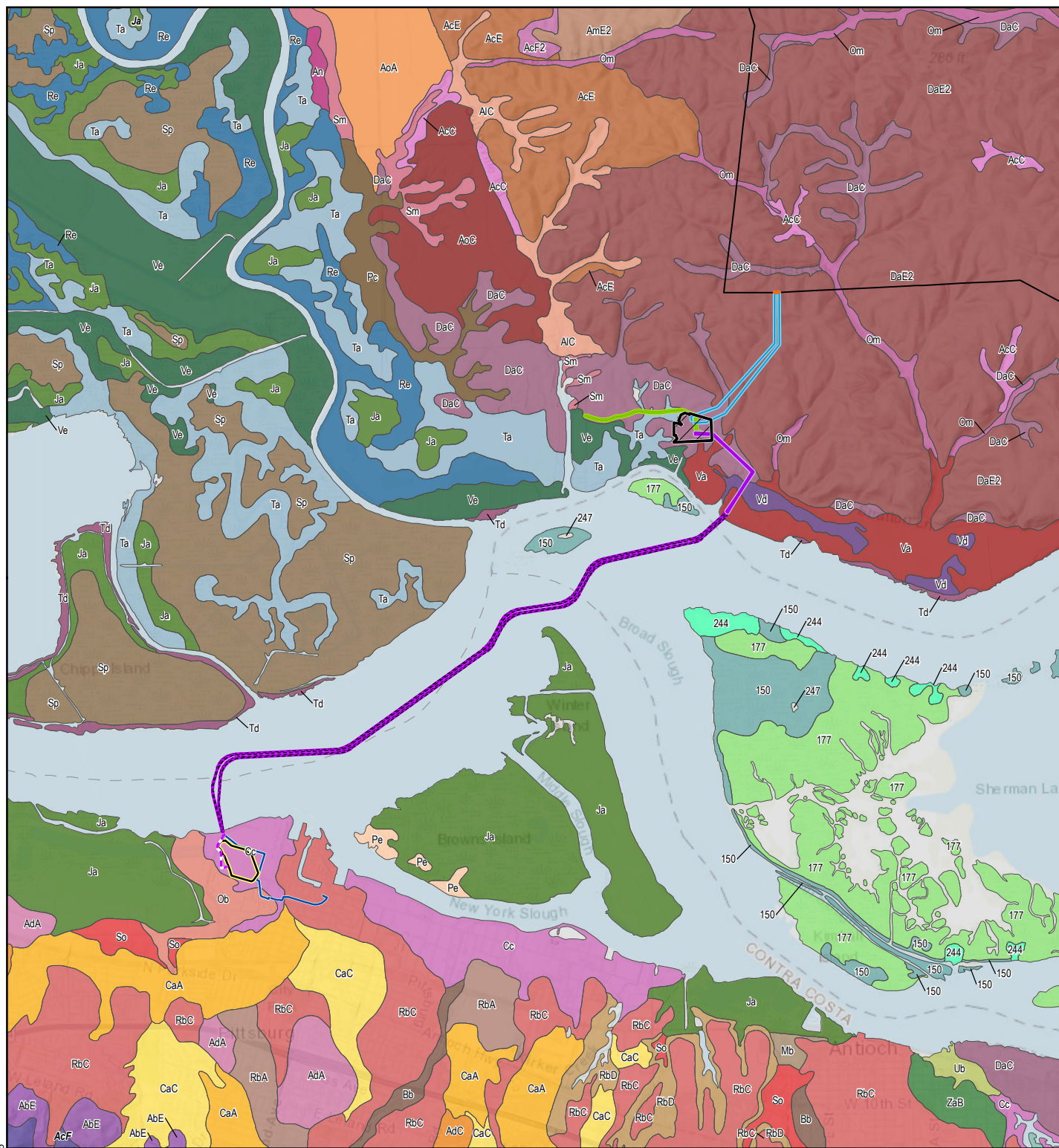


Figure 3: Soil Units Map

Collinsville 500/230 Kilovolt Substation Project

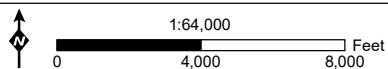
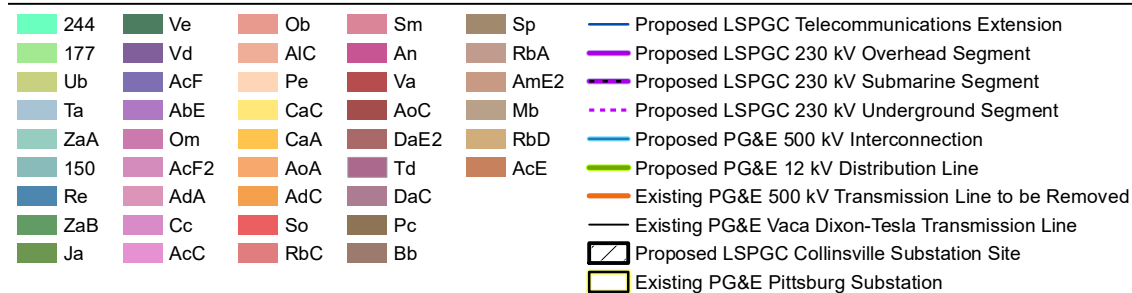


Table 1: Summary of NRCS Soil Descriptions

Map Unit Symbol	Soil Series	NRCS-Listed Hydric Soil (Yes/No)	Water Drainage	Material	Drainage and Permeability
Cc	Clear Lake clay, 0 to 15 percent slopes, MLRA 15	No	Poorly drained	Clayey alluvium derived from metamorphic and sedimentary rock	High runoff, slow to very slow permeability
DaC	Diablo-Ayar clays, 2 to 9 percent slopes	No	Well drained	Residuum weathered from weakly consolidated sediments	Very high runoff, slow permeability
DaE2	Diablo-Ayar clays, 9 to 30 percent slopes, eroded	No	Well drained	Residuum weathered from weakly consolidated sediments	Very high runoff, slow permeability
Ob	Omni silty clay	Yes	Poorly drained	Alluvium derived from sedimentary rock	Medium runoff, slow permeability
RbC	Rincon clay loam, 2 to 9 percent slopes, MLRA 14	No	Well drained	Clayey alluvium derived from sedimentary rock	High runoff
Ta	Tamba mucky clay, MLRA 16	Yes	Very poorly drained	Organic material and/or clayey alluvium derived from igneous, metamorphic, and sedimentary rock	Low runoff, moderate permeability
Va	Valdez silt loam, drained, 0 to 2 percent slopes, MLRA 16	Yes	Poorly drained	Fine-silty alluvium derived from igneous, metamorphic, and sedimentary rock	Low runoff, moderately slow permeability
Vd	Valdez silty clay loam, strongly saline, 0 to 2 percent slopes, MLRA 16	Yes	Poorly drained	Alluvium derived from igneous, metamorphic, and sedimentary rock	High runoff, moderately slow permeability

As shown in Table 1: Summary of NRCS Soil Descriptions, the following eight soil map units were mapped within the survey area:

- Clear Lake clay, 0 to 15 percent slopes, Major Land Resource Area (MLRA) 15;
- Diablo-Ayar clays, 2 to 9 percent slopes;
- Diablo-Ayar clays, 9 to 30 percent slopes, eroded;
- Omni silty clay;
- Rincon clay loam, 2 to 9 percent slopes, MLRA 14;
- Tamba mucky clay, MLRA 16;
- Valdez silt loam, drained, 0 to 2 percent slopes, MLRA 16; and
- Valdez silty clay loam, strongly saline, 0 to 2 percent slopes, MLRA 16.

Table 1: Summary of NRCS Soil Descriptions provides a summary of the NRCS soil descriptions, as well as NRCS-listed hydric soils, within the survey area. Sampling investigations were conducted within all the vegetation alliances listed in Section 5.0.1 Vegetation due to the presence of hydrophytic vegetation. Identified hydric soil indicators (NRCS 2018), including their alphanumeric listing, include the following:

- Depleted below dark surface (A11),
- Thick dark surface (A12),
- Depleted matrix (F3),
- Loamy gleyed matrix (F2),
- Redox dark surface (F6),
- Redox depressions (F8), and
- Sandy redox (S5).

5.1 POTENTIALLY JURISDICTIONAL HYDROLOGICAL FEATURES

In total, 20 potentially jurisdictional features (one ephemeral drainage and 19 wetlands) were mapped within the survey area; these potentially jurisdictional features are depicted in Attachment A: Aquatic Resources Delineation Map. All features were identified north of the Delta and no potentially jurisdictional features were identified within the survey area south of the Delta (i.e., portion of survey area in the City of Pittsburg). Further, the survey area overlaps the Delta, a feature regulated by the USACE, RWQCB, and CDFW. No culverts were identified in the survey area. Attachment B: Photograph Log presents photographs of each jurisdictional feature observed and mapped within the survey area. Table 2: Metrics for D-1 and Table 3: Features within the Survey Area present the characteristics of the observed features, including a unique feature identification number (ID), hydrological regime or Cowardin classifications, and an assessment of agency jurisdiction. Features that were preliminarily mapped during initial reconnaissance-level surveys are included in Table 3: Features within the Survey Area and have a corresponding feature ID; however, as presented in the table, those features do not meet any of the established criteria for a wetland. They were included in the table to show that they were fully analyzed, but they are not mapped in Attachment A. The wetland determination data for the potentially jurisdictional wetlands is detailed in Attachment C: Wetland Determination Data Forms. Eight wetlands are potentially under the jurisdiction of the USACE and CDFW, and all wetlands are potentially under the jurisdiction of the RWQCB, according to Insignia's professional opinion. The ephemeral drainage (D-1) is potentially under the jurisdiction of the CDFW and RWQCB, but does not meet the criteria of WOTUS.

Although W-3, W-5, W-7, and W-9 do not currently have surface connections to navigable waters, it is suspected they are hydrologically connected to the Delta via groundwater due to the presence of salt-tolerant vegetation in the areas. A review of historical aerial imagery suggests these features were once tidally influenced by a surface connection, but due to heavy modification to the landscape (i.e., the addition of a berm), they no longer exhibit a surface connection to the Delta or other tidal waterbody. Aerial imagery does not indicate when this modification occurred. As a result, these features would be considered historic wetlands and likely under the jurisdiction of the USACE. W-1, W-4, and W-6 are tidally influenced by the Delta, making the adjacent wetlands—W-3, W-5, W-7, and W-9—CDFW-jurisdictional.

Four aquatic features evaluated within the survey area—W-19, W-24, W-27, and W-30—satisfied the USACE’s vegetation criterion, but did not pass either the soils or hydrology test in accordance with USACE criteria. However, wetland delineator Christina Rodriguez observed that each feature had strong field indicators for the two respective tests they did pass and therefore initially concluded each of these features was a potential wetland. As a result, “Y [Yes]” was marked for the “Is the sampled area within a wetland?” section of the data forms while in the field. Subsequently, the datasheets were reviewed and further evaluation was given to each aquatic feature when determining which agencies have potential jurisdiction. Because the four aquatic features did not meet all three wetland parameters, the determination in the datasheet was changed to “N[No]” based exclusively on the three parameters documented in the field. Attachment C: Wetland Determination Data Forms details the findings and determinations of each of these features and notes any post-fieldwork modifications to the forms.

Table 4: Hydrological Feature Summary within the Survey Area summarizes the total assumed jurisdictional area, by agency, within the survey area.

Table 2: Metrics for D-1

Metric	Value
Feature ID	D-1
Hydrological Regime	Ephemeral
Page Number in Attachment A: Aquatic Resources Delineation Map	3
Approximate Length of Drainage in Survey Area (feet)	926.37
Average OHWM Depth (feet)	0.10
Average OHWM Width (feet)	3.00
Average Top of Bank (TOB Depth) (feet)	2.20
Average TOB Width (feet)	4.90
Approximate USACE-Jurisdictional Area (acres)	0.00
Approximate RWQCB-Jurisdictional Area (acres)	0.06
Approximate CDFW-Jurisdictional Area (acres)	0.10
Feature Description	Unnamed Tributary to the Delta

Table 3: Features within the Survey Area

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-1	E2EM1	4	14.66	14.66	14.66	The feature meets USACE wetland determination criteria for the Arid West Region and has connectivity to a tidal WOTUS. As a result, the feature is also jurisdictional to the RWQCB and CDFW.
W-2	PEM1	4	0.00	0.56	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-3	PEM2	4	0.03	0.03	0.03	The feature meets USACE wetland determination criteria for the Arid West Region. While currently separated by a man-made berm, the feature was historically connected to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction.
W-4	E2EM1	4	2.60	2.60	2.60	The feature meets USACE wetland determination criteria for the Arid West Region and has connectivity to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction. Steep terrain and rip rap separate W-4 from W-6, preventing substantial vegetation growth.

² PEM1 = Palustrine Emergent Wetland: persistent.

PEM2 = Palustrine Emergent Wetland: non-persistent.

E2EM1 = Estuarine Intertidal Emergent Wetland: persistent.

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-5	PEM2	4	0.07	0.07	0.07	The feature meets USACE wetland determination criteria for the Arid West Region. While currently separated by a man-made berm, the feature was historically connected to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction.
W-6	E2EM1	4	1.28	1.28	1.28	The feature meets USACE wetland determination criteria for the Arid West Region. While currently separated by a man-made berm, the feature was historically connected to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction. Steep terrain and rip rap separate W-6 from W-4, preventing substantial vegetation growth.
W-7	E2EM1	4	0.19	0.19	0.19	The feature meets USACE wetland determination criteria for the Arid West Region. While currently separated by a man-made berm, the feature was historically connected to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction.
W-8	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature is not an isolated wetland under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and is not under CDFW jurisdiction.

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-9	E2EM1	4	0.84	0.84	0.84	The feature meets USACE wetland determination criteria for the Arid West Region. While currently separated by a man-made berm, the feature was historically connected to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction.
W-10	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature is not an isolated wetland under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-11	PEM1	2	0.00	0.99	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-12	PEM1	2	0.85	0.85	0.85	The feature meets USACE wetland determination criteria for the Arid West Region. While currently separated by a man-made berm, the feature was historically connected to a tidal WOTUS. As a result, the feature would also be jurisdictional to the RWQCB. The feature is associated with the Delta and therefore under CDFW jurisdiction.
W-13	PEM1	2	0.00	0.46	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-14	PEM1	2	0.00	0.51	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-15	PEM1	2	0.00	0.02	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-16	PEM1	2	0.00	0.28	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream or lake and therefore is not under CDFW jurisdiction.
W-17	PEM1	2	0.00	0.03	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-18	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature is not an isolated wetland under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-19 ³	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature is not an isolated wetland under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-22	PEM1	2	0.00	0.95	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-23	PEM1	2	0.00	1.92	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-24	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.

³ Feature W-19 was initially thought to be three separate features (i.e., W-19, W-20, and W-21). Following additional evaluation, it was determined that one larger feature was present. As a result, the feature was named W-19, interrupting the sequential numbering of wetland features. This numbering scheme is reflected in Attachment A: Aquatic Resources Delineation Map and Attachment C: Wetland Determination Data Forms.

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-25	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-26	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-27	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-28	PEM1	1	0.00	0.45	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-29	PEM1	1	0.00	0.06	0.00	The feature meets USACE wetland determination criteria for the Arid West Region but does not have connectivity to a WOTUS. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.

Feature ID	Cowardin Classification ²	Attachment A Page Number	Approximate Size of Feature within Survey Area (acres)			Notes
			USACE	RWQCB	CDFW	
W-30	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
W-31	-	-	-	-	-	The feature does not meet the USACE wetland determination criteria for the Arid West Region. The feature was determined to be an isolated wetland and is therefore a Water of the State under the jurisdiction of the RWQCB. The feature is not associated with a river, stream, or lake and therefore is not under CDFW jurisdiction.
Total	--	--	20.52	26.75	20.52	-

Table 4: Hydrological Feature Summary within the Survey Area

Feature Type	Potential Jurisdiction					
	USACE		RWQCB		CDFW	
	Area (Acres)	Length (Linear Feet)	Area (Acres)	Length (Linear Feet)	Area (Acres)	Length (Linear Feet)
Wetlands	20.52	-	26.75	-	20.52	-
Ephemeral Drainages	-	-	0.06	926.37	0.10	926.37
Total	20.52	-	26.81	926.37	20.62	926.37

5.2 NON-JURISDICTIONAL FEATURES

Non-jurisdictional hydrological features, including swales and erosional features, were present throughout the survey area. These features were reviewed during the jurisdictional delineation survey and were determined to not fall under the jurisdiction of the USACE, RWQCB, or CDFW. Though these features can carry surface water, they are not included in this report because they are non-jurisdictional.

6 – CONCLUSION

In total, 20 potentially jurisdictional hydrological features were identified within the survey area, including one ephemeral drainage and 19 wetlands potentially under the jurisdiction of the USACE, RWQCB, and/or CDFW. If temporary or permanent impacts to jurisdictional features were to occur, a Section 404 authorization from the USACE, a Section 401 WQC and Waste Discharge Requirement permit from the RWQCB, and/or an LSAA from the CDFW would need to be obtained prior to construction.

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ATTACHMENT A: AQUATIC RESOURCES DELINEATION MAP

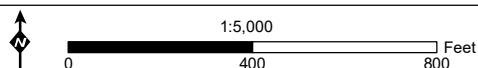


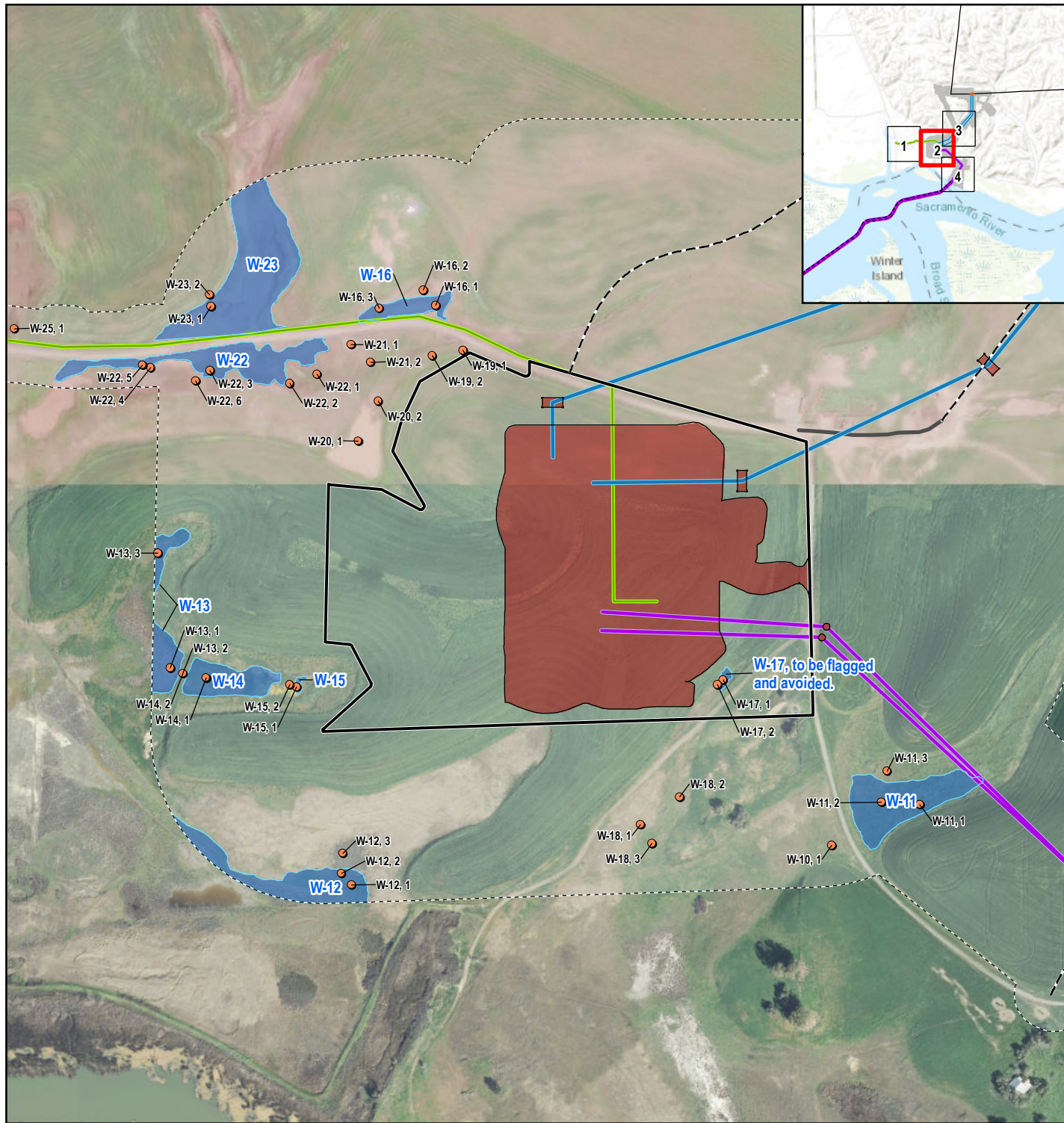
Attachment A: Aquatic Resources Delineation Map 1 of 4

Collinsville 500/230 Kilovolt Substation Project

- Sample Point
- Proposed PG&E 12 kV Distribution Line
- Potentially Jurisdictional Wetland
- Survey Area

Note: Only portions of the survey area with potentially jurisdictional features have been depicted.



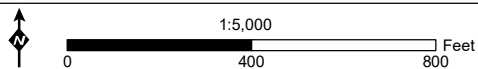


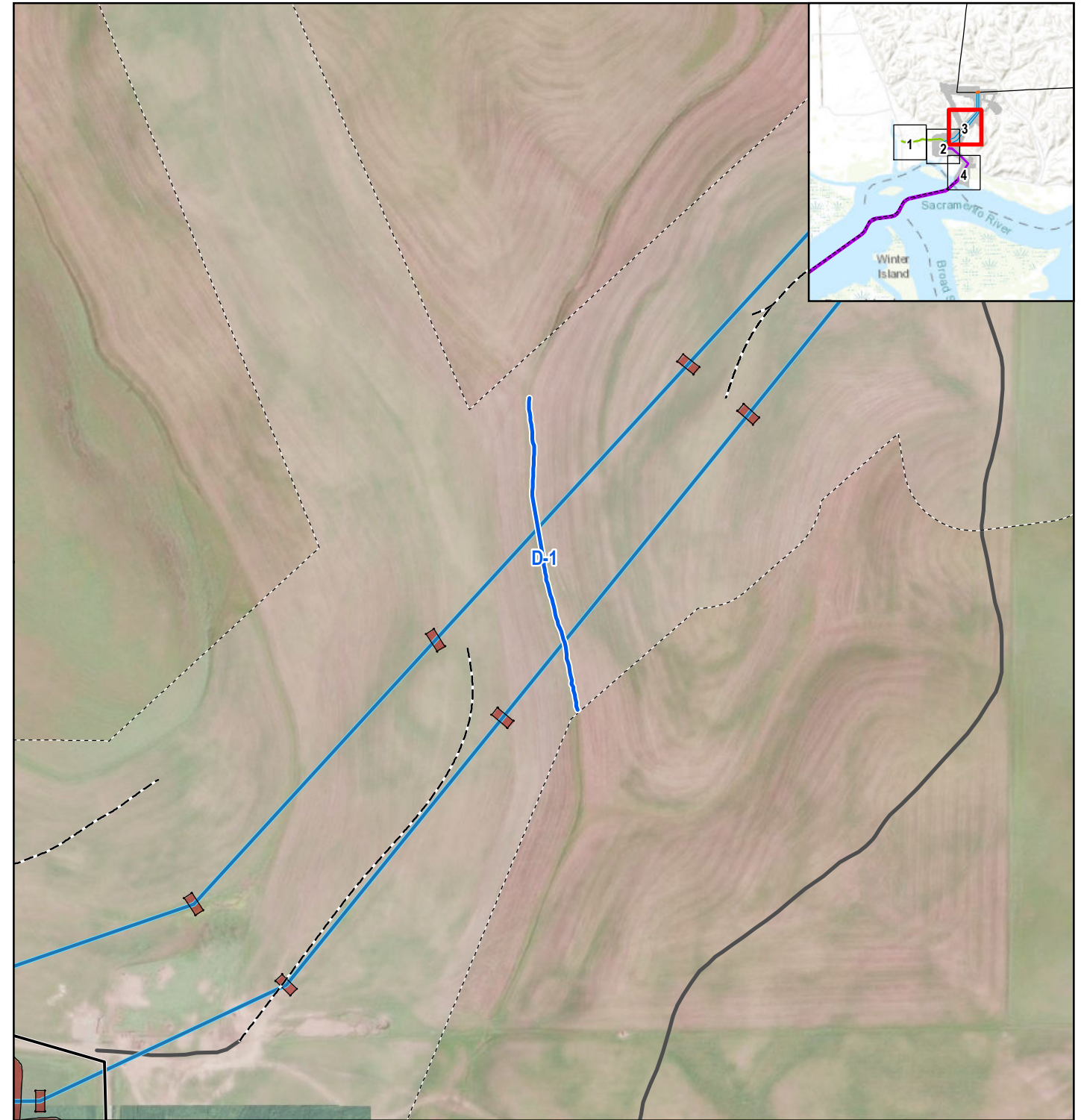
Attachment A: Aquatic Resources Delineation Map 2 of 4

Collinsville 500/230 Kilovolt Substation Project

- | | |
|--|--|
| ● Sample Point | Substation/Structure Footprint |
| — Proposed LSPGC 230 kV Overhead Segment | Survey Area |
| — Proposed PG&E 500 kV Interconnection | Proposed LSPGC Collinsville Substation Site |
| — Proposed PG&E 12 kV Distribution Line | |
| — Existing Road | |
| --- Proposed Temporary Access Road | |
| Potentially Jurisdictional Wetland | |

Note: Only portions of the survey area with potentially jurisdictional features have been depicted.



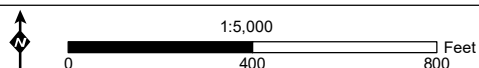


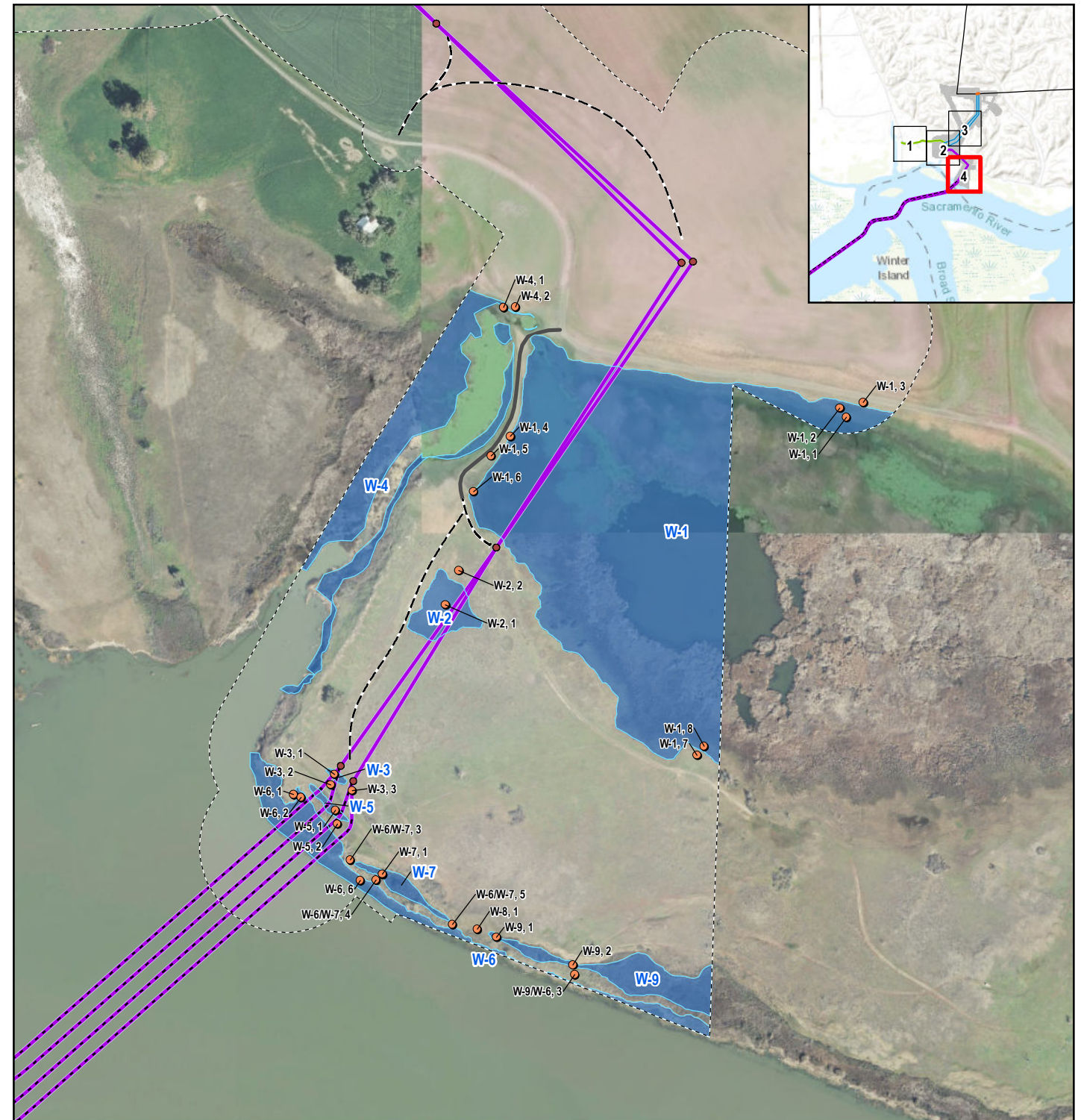
Attachment A: Aquatic Resources Delineation Map 3 of 4

Collinsville 500/230 Kilovolt Substation Project

- | | |
|--------------------------------------|---|
| Proposed PG&E 500 kV Interconnection | Substation/Structure Footprint |
| Existing Road | Survey Area |
| Proposed Temporary Access Road | Proposed LSPGC Collinsville Substation Site |
| Ephemeral Stream | |

Note: Only portions of the survey area with potentially jurisdictional features have been depicted.



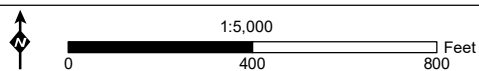


Attachment A: Aquatic Resources Delineation Map 4 of 4

Collinsville 500/230 Kilovolt Substation Project

- Sample Point
- Proposed LSPGC 230 kV Overhead Segment
- - - Proposed LSPGC 230 kV Submarine Segment
- Existing Road
- - - Proposed Temporary Access Road
- Potentially Jurisdictional Wetland
- Substation/Structure Footprint
- - - Survey Area

Note: Only portions of the survey area with potentially jurisdictional features have been depicted.



ATTACHMENT B: PHOTOGRAPH LOG

ATTACHMENT B: PHOTOGRAPH LOG



Photograph 1:
Northwest-facing
view of wetland
sample point at
W-1.



Photograph 2:
East-facing view
of W-1.



Photograph 3:
South-facing
view of wetland
sample point at
W-2.



Photograph 4:
Northwest-facing
view of wetland
sample point at
W-2.



Photograph 5:
West-facing
view of wetland
sample point at
W-3.



Photograph 6:
Northwest-facing
view of W-3.



Photograph 7:
South-facing
view of wetland
sample point at
W-4.



Photograph 8:
South-facing
view of W-4.



Photograph 9:
Northwest-facing
view of wetland
sample point at
W-5.



Photograph 10:
North-facing
view of W-5.



Photograph 11:
East-facing view
of wetland
sample point at
W-6.



Photograph 12:
East-facing view
of upland sample
point at W-6.



Photograph 13:
North-facing
view of wetland
sample point at
W-7.



Photograph 14:
South-facing
view of W-7.



Photograph 15:
North-facing
view of wetland
sample point at
W-9.



Photograph 16:
Southeast-facing
view of W-9.



Photograph 17:
East-facing view
of wetland
sample point at
W-11.



Photograph 18:
Southwest-facing
view of W-11.



Photograph 19:
Southwest-facing
view of wetland
sample point at
W-12.



Photograph 20:
West-facing
view of W-12.



Photograph 21:
North-facing
view of wetland
sample point at
W-13.



Photograph 22:
North-facing
view of W-13.



Photograph 23:
Northwest-facing
view of wetland
sample point at
W-14.



Photograph 24:
East-facing view
of W-14.



Photograph 25:
West-facing
view of wetland
sample point at
W-15.



Photograph 26:
East-facing view
of W-15.



Photograph 27:
West-facing
view of wetland
sample point at
W-16.



Photograph 28:
East-facing view
of W-16.



Photograph 29:
Northeast-facing
view of wetland
sample point at
W-17.



Photograph 30:
Northeast-facing
view of W-17.



Photograph 31:
Southwest-facing
view of wetland
sample point at
W-22.



Photograph 32:
North-facing
view of W-22.



Photograph 33:
Northeast-facing
view of wetland
sample point at
W-23.



Photograph 34:
Southwest-facing
view of W-23.



Photograph 35:
East-facing view
of wetland
sample point at
W-28.



Photograph 36:
South-facing
view of W-28.



Photograph 37:
Northeast-facing
view of wetland
sample point at
W-29.



Photograph 38:
Northwest-facing
view of W-29.

ATTACHMENT C: WETLAND DETERMINATION DATA FORMS

W-1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 5-6-24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Victoria Yefremenko Section, Township, Range: S00 T3N R3E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): flat Slope (%): 45
 Subregion (LRR): LRR-C Lat: 38.0749792 Long: -121.8269361 Datum: NAD82
 Soil Map Unit Name: Vardez silt loam, drained, 0 to 2% slopes, MLRA 16 NWI classification: E2EM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed?

Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic?

(If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
 Hydric Soil Present? Yes X No
 Wetland Hydrology Present? Yes X No

Is the Sampled Area
within a Wetland?

Yes X No

Remarks:

VEGETATION

Tree Stratum (Use scientific names.) r=30'
 1.
 2.
 3.
 4.

Total Cover: 0

Sapling/Shrub Stratum r=15'
 1.
 2.
 3.
 4.
 5.

Total Cover: 0

Herb Stratum r=5'
 1. Ditchlis spicata 80 Y FAC
 2. Typha latifolia 1 N OBL
 3. Phragmites australis 1 N FACW
 4. Cotula coronopifolia 5 N OBL
 5. Leridium latifolium 3 N FAC
 6. Atriplex prostrata 2 N FACW
 7. Schoenoplectus acutus 1 N OBL
 8. Frankenia salina 10 N FACW

Total Cover: 103

Woody Vine Stratum r=15'
 1.
 2.

Total Cover: 0

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Remarks:

Sample plot located within Frankenia salina/Ditchlis spicata alliance adjacent to Schoenoplectus alliance. Some Schoenoplectus/Typha/Phragmites extending into adjacent Veg community at small cover amounts but SP-1 located wholly within F. salina/D. spicata community.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>7</u>	x 1 = <u>7</u>
FACW species <u>13</u>	x 2 = <u>26</u>
FAC species <u>83</u>	x 3 = <u>249</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>103</u> (A)	<u>282</u> (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
X Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic
Vegetation
Present?

Yes X No

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	2.5 Y 3/2	60					SiCL	
	10Y 4/1	35					SiCL	Grey page
	N 2.5/0	5					SiCL	Grey page
5-16	5G 4/1	99	10YR 3/6	1	C	PL/RC	SiCL	Grey page

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

TOP 5" of soil is a mixture of several colors. Also meets A11 since surface layer is predominantly dark (i.e. 3/2) colored soil.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
☒ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☒ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☒ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)
- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1"
 Water Table Present? Yes ☒ No ☐ Depth (inches): 6"
 Saturation Present? Yes ☒ No ☐ Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-1

Project/Site: Collinsville City/County: Salerno County Sampling Date: 5-6-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Victoria Yefremenko Section, Township, Range: S09 T3N R1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): flat Slope (%): 45
 Subregion (LRR): LRRC Lat: 38.0750620 Long: -121.8269983 Datum: NAD83
 Soil Map Unit Name: Vardez silty loam, drained, 0 to 2% slopes, MLRA 16 NWI classification: E2EM1P

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: SP-2 is located on a slightly elevated area just north of SP-1. A depression is located just north of SP-2 and south of SP-3.		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>R=30'</u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
Sapling/Shrub Stratum <u>R=15'</u> Total Cover: <u>0</u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u>X</u> Prevalence Index is ≤3.0' ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Herb Stratum <u>R=5'</u> Total Cover: <u>0</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u>Frankenia salina</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Sarcocornia peruviana</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Lepidium latifolium</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
4. <u>Distichlis spicata</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
5. <u>Atriplex prostrata</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	Remarks:
6. <u>Festuca perennis</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7. <u> </u>				
8. <u> </u>				
Woody Vine Stratum <u>R=15'</u> Total Cover: <u>81</u>				
1. <u> </u>				Total Cover: <u>81</u>
2. <u> </u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	organic material						SICL	
3.5-5	2.5Y 3/2	100						
5-18	2.5Y 5/2	80	7.5YR 4/6	20	C	M/PL	SICL	Redox prominent

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A
Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
Water Table Present? Yes ☐ No ☒ Depth (inches):
Saturation Present? Yes ☐ No ☒ Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Return: $\frac{OBL + FACW}{FACU + UPL} = \frac{1+1}{0+6} = \frac{2}{6} \checkmark$

W-1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colinsville City/County: Solano County Sampling Date: 5-6-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-2
Investigator(s): Karen Bach, Victoria Yefremenko Section, Township, Range: S00 T3N R1E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): flat Slope (%): 45
Subregion (LRR): LRR C Lat: 38.0750620 Long: -121.8269983 Datum: NAD83
Soil Map Unit Name: Vardez silty loam, drained, 0 to 2 slopes, MLRA 14 NWI classification: E2EM1P

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: <u>SP-2 is located on a slightly elevated area just north of SP-1. A depression is located just north of SP-2 and south of SP-3.</u>		

VEGETATION

Tree Stratum	(Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
Total Cover:		<u>0</u>		
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
Total Cover:		<u>0</u>		
Herb Stratum				
1.	<u>Frankenia salina</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>
2.	<u>Salicornia pacifica</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>
3.	<u>Lepidium latifolium</u>	<u>1</u>	<u>N</u>	<u>FAC</u>
4.	<u>Distichlis spicata</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
5.	<u>Atriplex prostrata</u>	<u>1</u>	<u>N</u>	<u>FACW</u>
6.	<u>Festuca perennis</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
7.				
8.				
Total Cover:		<u>81</u>		
Woody Vine Stratum				
1.				
2.				
Total Cover:		<u>0</u>		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>25</u>	x 1 = <u>25</u>
FACW species <u>41</u>	x 2 = <u>82</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>81</u> (A)	<u>132</u> (B)

Prevalence Index = B/A = 1.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

Hydrophytic Vegetation Present? Yes X No

Remarks:

W-1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: collinsville City/County: Solano County Sampling Date: 5-6-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-3
 Investigator(s): Karen Bach, Victoria Yefremenko Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Slope Slope (%): LS
 Subregion (LRR): LARC Lat: 38.0751080 Long: -121.8267615 Datum: NAD83
 Soil Map Unit Name: Valdez silt loam drained, 0 to 2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>SP-3 is located just downslope of a dirt road. Minor amounts of fill material observed within soil pit but soil texture is consistent with other soils sampled in this location (SP-1 and SP-2)</u>	

VEGETATION

Tree Stratum (Use scientific names.) $r=30'$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50 %</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u>0</u>				Prevalence Index worksheet: Total % Cover of: <u>0</u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>3</u> x 2 = <u>6</u> FAC species <u>55</u> x 3 = <u>165</u> FACU species <u>61</u> x 4 = <u>244</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: <u>120</u> (A) <u>420</u> (B) Prevalence Index = B/A = <u>3.5</u>
Sapling/Shrub Stratum $r=15'$				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
Total Cover: <u>0</u>				
Herb Stratum $r=5'$				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is $\leq 3.0^1$ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Hordeum murinum</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Festuca perennis</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Distichlis spicata</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Franklinia salina</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
5. <u>Brassica nigra</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	
6. <u>Mulberry leprosa</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
7. <u> </u>				
8. <u> </u>				
Total Cover: <u>120</u>				
Woody Vine Stratum $r=15'$				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
1. <u> </u>				
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			
Remarks:				

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
3.5	organic layer							
0-8	2.5Y 3/2	99	10YR 3/6	41	C	M	SICK	
8-11	10YR 4/3	80	7.5YR 4/6	20	C	M	SICK	
11-15	10YR 4/1	80	7.5YR 3/4	20	C	m	SICK	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| ☐ 1 cm Muck (A9) (LRR C) |
| ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Reduced Vertic (F18) |
| ☐ Red Parent Material (TF2) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- | |
|--|
| ☐ Water Marks (B1) (Riverine) |
| ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Drift Deposits (B3) (Riverine) |
| ☐ Drainage Patterns (B10) |
| ☐ Dry-Season Water Table (C2) |
| ☐ Thin Muck Surface (C7) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Shallow Aquitard (D3) |
| ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____Water Table Present? Yes _____ No X Depth (inches): _____Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-1

Project/Site: Collinsville City/County: Solano County Sampling Date: 5-6-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-4
 Investigator(s): Karen Bach, Victoria Yefremova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Slope Slope (%): LS
 Subregion (LRR): LRR C Lat: 38.0748484 Long: -121.8303343 Datum: NAD83
 Soil Map Unit Name: Valdez silty clay loam, strongly saline, 0 to 2% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) $r=30'$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: <u>0</u>				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>83</u></td> <td>x 2 = <u>166</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>87</u> (A)</td> <td><u>179</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.05</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>83</u>	x 2 = <u>166</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>87</u> (A)	<u>179</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>83</u>	x 2 = <u>166</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>2</u>	x 4 = <u>8</u>																	
UPL species <u>1</u>	x 5 = <u>5</u>																	
Column Totals: <u>87</u> (A)	<u>179</u> (B)																	
Sapling/Shrub Stratum $r=15'$ 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>0</u>																		
Herb Stratum $r=5'$ 1. <u>Frankenia salina</u> <u>80</u> <u>Y</u> <u>FACW</u> 2. <u>Hordeum marinum</u> <u>1</u> <u>N</u> <u>FACU</u> 3. <u>Festuca perennis</u> <u>1</u> <u>N</u> <u>FACU</u> 4. <u>Carduus pycnocephalus</u> <u>1</u> <u>N</u> <u>UPL</u> 5. <u>Silybum marianum</u> <u>1</u> <u>N</u> <u>UPL</u> 6. <u>Atriplex prostrata</u> <u>3</u> <u>N</u> <u>FACW</u> 7. _____ 8. _____ Total Cover: <u>87</u>																		
Woody Vine Stratum $r=15'$ 1. _____ 2. _____ Total Cover: <u>0</u>																		
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>																		
Remarks:																		

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2.5	10YR 2/2 Mottled							
0-3	10YR 2/2	99	10YR 3/4	2	C	M	SICL	
3-12.5	2.5Y 4/2	75	10YR 4/6	25	C	M	SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1) ☐ Sandy Redox (S5)
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (LRR C) ☒ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (LRR D) ☐ Redox Dark Surface (F6)
☒ Depleted Below Dark Surface (A11) ☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12) ☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1) ☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1) ☐ Salt Crust (B11)
☐ High Water Table (A2) ☐ Biotic Crust (B12)
☐ Saturation (A3) ☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine) ☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine) ☐ Oxidized Rhizospheres along Living Roots (C3)
☒ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4)
☒ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☒ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 5-7-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-5
 Investigator(s): Karen Bach, Victoria Yefremenkova Section, Township, Range: SPD T3N R1E
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Slight slope Slope (%):
 Subregion (LRR): LRR C Lat: 38.0746872 Long: -121.8305195 Datum: NAD83
 Soil Map Unit Name: Valdez Silty clay loam, strongly saline, 0 to 2% MLRA 16 NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)														
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
Total Cover: <u>0</u>																		
Sapling/Shrub Stratum																		
1. <u>Rubus coccineus</u>	<u>25</u>	<u>X</u>	<u>FAC</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u> </u>	x 1 = <u> </u>																	
FACW species <u> </u>	x 2 = <u> </u>																	
FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u> </u>	x 4 = <u> </u>																	
UPL species <u> </u>	x 5 = <u> </u>																	
Column Totals: <u> </u> (A)	<u> </u> (B)																	
2. <u>Rosa californica</u>	<u>70</u>	<u>X</u>	<u>FAC</u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
Total Cover: <u>95</u>																		
Herb Stratum																		
1. <u>Carduus pycnocephalus</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Carum maculatum</u>	<u>15</u>	<u>X</u>	<u>FACW</u>															
3. <u>Marrubium vulgare</u>	<u>10</u>	<u>X</u>	<u>FACU</u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
Total Cover: <u>27</u>																		
Woody Vine Stratum																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
Total Cover: <u>0</u>																		
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>														

Remarks:

W-1

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	95	5YR 4/6	5	C	PL	STCL	Relay Hammer
12-16	10YR 4/3	98	7.5YR 4/4	2	C	M	STCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1) ☐ Sandy Redox (S5)
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (LRR C) ☐ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (LRR D) ☒ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12) ☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1) ☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1) ☐ Salt Crust (B11)
☐ High Water Table (A2) ☐ Biotic Crust (B12)
☐ Saturation (A3) ☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine) ☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine) ☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4)
☐ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):Water Table Present? Yes ☐ No ☒ Depth (inches):Saturation Present? Yes ☐ No ☒ Depth (inches):
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-1

Project/Site: Collinsville City/County: Solano County Sampling Date: 5/7/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-6
 Investigator(s): Karen Bach Victoria Yohannan Section, Township, Range: S09 T3N R1E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): toeslope Slope (%): _____
 Subregion (LRR): L22C Lat: 38.0744036 Long: -121.8307010 Datum: NAD 83
 Soil Map Unit Name: Under soil 10cm, drained, 0 to 2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>12</u></td> <td>x 2 = <u>24</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>92</u></td> <td>(A) <u>134</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.46</u>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>12</u>	x 2 = <u>24</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>92</u>	(A) <u>134</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>70</u>	x 1 = <u>70</u>																	
FACW species <u>12</u>	x 2 = <u>24</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>92</u>	(A) <u>134</u> (B)																	
Sapling/Shrub Stratum <u>r=15'</u> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>0</u>																		
Herb Stratum <u>r=5'</u> 1. <u>Salicornia pacifica</u> <u>70</u> <u>Y</u> <u>OBL</u> 2. <u>Frankenia salina</u> <u>10</u> <u>IV</u> <u>FACW</u> 3. <u>Atriplex prostrata</u> <u>2</u> <u>N</u> <u>FACW</u> 4. <u>Distichlis spicata</u> <u>5</u> <u>N</u> <u>FAC</u> 5. <u>Lepidium latroium</u> <u>3</u> <u>N</u> <u>FAC</u> 6. <u>Festuca perennis</u> <u>1</u> <u>N</u> <u>FAC</u> 7. <u>Hordeum maritum</u> <u>1</u> <u>N</u> <u>FAC</u> 8. _____ Total Cover: <u>92</u>																		
Woody Vine Stratum <u>r=15'</u> 1. _____ 2. _____ Total Cover: <u>0</u>																		
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>																		

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0¹
 _____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10 YR 3/1	99	7.5 YR 3/4	1	C	M	SICLLLO	
4-15	5Y 4/1	90	7.5 YR 3/4	10	C	M	SICK	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☒ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☒ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☒ Thin Muck Surface (E7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____
 Water Table Present? Yes _____ No ☒ Depth (inches): _____
 Saturation Present? Yes _____ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-1

Project/Site: Collinsville City/County: Solano County Sampling Date: 8-7-24
 Applicant/Owner: LS Power State: _____ Sampling Point: Sp-7
 Investigator(s): Karen Bach, Victoria Yefremova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Slight slope Slope (%): _____
 Subregion (LRR): LRRC Lat: 38.0722922 Long: -121.8284471 Datum: NAD83
 Soil Map Unit Name: Valdez silt loam, drained, 0 to 2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)														
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)														
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
Sapling/Shrub Stratum <u>r=15'</u>																		
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>100</u></td> <td>x 3 = <u>300</u></td> </tr> <tr> <td>FACU species <u>9</u></td> <td>x 4 = <u>36</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>112</u> (A)</td> <td><u>342</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>100</u>	x 3 = <u>300</u>	FACU species <u>9</u>	x 4 = <u>36</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>112</u> (A)	<u>342</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>3</u>	x 2 = <u>6</u>																	
FAC species <u>100</u>	x 3 = <u>300</u>																	
FACU species <u>9</u>	x 4 = <u>36</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>112</u> (A)	<u>342</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
Total Cover: <u>0</u>				Prevalence Index = B/A = <u>3.05</u>														
Herb Stratum <u>r=5'</u>																		
1. <u>Distichlis spicata</u>	<u>25</u>	<u>Y</u>	<u>CAC</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u>Festuca perennis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
3. <u>Lotus corniculatus</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>															
4. <u>Bromus hordeaceus</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
5. <u>Frankenia salina</u>	<u>3</u>	<u>N</u>	<u>FACW</u>															
6. <u>Asparagus officinalis</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. <u>Hordeum marinum</u>	<u>15</u>	<u>N</u>	<u>FAC</u>															
8. <u>Hordeum marinum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
Total Cover: <u>112</u>																		
Woody Vine Stratum <u>r=15'</u>																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____														
2. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>																		
Remarks:																		

W-1

SOIL

Sampling Point: SP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5" organic matter								
0-7	2.5Y 4/1	98	7.5YR 4/6	2	C	m/PL	SiCl	redox prominent
7-15	10YR 4/3	99	7.5YR 4/6	1	C	M	SiCl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
Water Table Present? Yes ☐ No ☒ Depth (inches): _____
Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-11

Project/Site: Collinsville City/County: Salerno County Sampling Date: 5-7-24
 Applicant/Owner: LS Power State: Sampling Point: Sp-8
 Investigator(s): Quinn Bach, Victoria Yelomskova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): flat Slope (%):
 Subregion (LRR): LRR C Lat: 38.0723654 Long: -121.8283719 Datum:
 Soil Map Unit Name: Valdez silty clay loam, strongly saline, 0 to 2', MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) <u>r = 30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)																		
1. <u> </u>																						
2. <u> </u>																						
3. <u> </u>																						
4. <u> </u>																						
Total Cover: <u>0</u>				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>8</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>92</u></td> <td>x 3 = <u>276</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>291</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.77</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>8</u>	x 2 = <u>10</u>	FAC species <u>92</u>	x 3 = <u>276</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>291</u> (B)	Prevalence Index = B/A = <u>2.77</u>			
Total % Cover of:	Multiply by:																					
OBL species <u>5</u>	x 1 = <u>5</u>																					
FACW species <u>8</u>	x 2 = <u>10</u>																					
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UPL species <u>0</u>	x 5 = <u>0</u>																					
Column Totals: <u>105</u> (A)	<u>291</u> (B)																					
Prevalence Index = B/A = <u>2.77</u>																						

Sapling/Shrub Stratum <u>r = 15'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u>X</u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u>0</u>				

Herb Stratum <u>r = 5'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>✓</u> No <u> </u>
1. <u>Distichlis spicata</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Frankenia latifolia</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. <u>Polygala monspeliensis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
4. <u>Perovskia altissima</u>	<u>2</u>	<u>N</u>	<u>ENC</u>	
5. <u>Schoenoplectus acutus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>	
6. <u>Atriplex prostrata</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
7. <u>Salicornia pacifica</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
8. <u> </u>				
Total Cover: <u>105</u>				

Woody Vine Stratum <u>r = 15'</u>	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>			
2. <u> </u>			
Total Cover: <u> </u>			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Remarks:

SOIL

Sampling Point: SP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 2/2	100					SICCLLO	
2-16	5Y 4/1	95	7.5YR 3/4	5	C M/RZ/RC		SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: N/A
 Depth (inches): _____
Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☒ Biotic Crust (B12)
☒ Aquatic Invertebrates (B13)
☒ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

 Surface Water Present? Yes _____ No X Depth (inches): _____
 Water Table Present? Yes X No _____ Depth (inches): 16
 Saturation Present? Yes X No _____ Depth (inches): 9
 (includes capillary fringe)
Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-2

Project/Site: Collinsville City/County: Solano County Sampling Date: 5-7-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Victoria Yettsenokawa Section, Township, Range: SPQ T3N R1E
 Landform (hillslope, terrace, etc.): bottomland Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): LRRC Lat: 38.073501 Long: -121.830988 Datum: NAD83
 Soil Map Unit Name: Vardez silty loam, drained, 0 to 2% slope, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: <u>0</u>				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>17</u></td> <td>x 1 = <u>17</u></td> </tr> <tr> <td>FACW species <u>26</u></td> <td>x 2 = <u>52</u></td> </tr> <tr> <td>FAC species <u>1</u></td> <td>x 3 = <u>3</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>44</u> (A)</td> <td><u>72</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>1.63</u>	Total % Cover of:	Multiply by:	OBL species <u>17</u>	x 1 = <u>17</u>	FACW species <u>26</u>	x 2 = <u>52</u>	FAC species <u>1</u>	x 3 = <u>3</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>44</u> (A)	<u>72</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>17</u>	x 1 = <u>17</u>																	
FACW species <u>26</u>	x 2 = <u>52</u>																	
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FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>44</u> (A)	<u>72</u> (B)																	
Sapling/Shrub Stratum <u>r=15'</u> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>0</u>																		
Herb Stratum <u>r=5'</u> 1. <u>Salicornia pacifica</u> <u>10</u> <u>Y</u> <u>OBL</u> 2. <u>Frankenia salina</u> <u>19</u> <u>Y</u> <u>FACW</u> 3. <u>Cotula coronopifolia</u> <u>5</u> <u>N</u> <u>OBL</u> 4. <u>Sarcocolla marina</u> <u>2</u> <u>N</u> <u>OBL</u> 5. <u>Atriplex prostrata</u> <u>1</u> <u>N</u> <u>FACW</u> 6. <u>Hordeum marinum</u> <u>1</u> <u>N</u> <u>FAC</u> 7. <u>Polygonum monspeliensis</u> <u>10</u> <u>Y</u> <u>FACW</u> 8. _____ Total Cover: <u>44</u>																		
Woody Vine Stratum <u>r=15'</u> 1. _____ 2. _____ Total Cover: <u>0</u>																		
% Bare Ground in Herb Stratum <u>60</u> % Cover of Biotic Crust <u>0</u>																		

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
X Prevalence Index is ≤3.0'
 _____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-8	10YR 4/2	80	5YR 7/6	20	C	M/PL	S:Cl	Salt layers present	
8-14	2.5Y 4/1	75	7.5YR 4/6	25	C	M/PL	S:Cl	Salt layers present	
14-16	10YR 3/1	85	10YR 2/4	15	C	M/PL	S:Cl	Salt layers present	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☒ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____	Hydric Soil Present? Yes ☒ No _____
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
☐ Surface Water (A1)	☒ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)
☒ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)
		☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): _____ Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Salerno County Sampling Date: 5-7-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-2
Investigator(s): Karen Beck, Victoria Johnson Section, Township, Range: S80 T3N R1E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): flat Slope (%):
Subregion (LRR): LPRC Lat: 38.073773 Long: -121.830852 Datum: NAD83
Soil Map Unit Name: Valdez silt loam, drained, 0 to 2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum <u>r=15'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>3</u> x 2 = <u>6</u> FAC species <u>93</u> x 3 = <u>279</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>111</u> (A) <u>345</u> (B) Prevalence Index = B/A = <u>3.11</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
Herb Stratum <u>r=5'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Festuca perennis</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Hordeum marinum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Frankenia salina</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
4. <u>Hordeum murinum</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
5. <u>Distichis spicata</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>111</u>				
Woody Vine Stratum <u>r=15'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

W-2

SOIL

Sampling Point: S1-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1.5	10YR 7/1	100					SICLL	
1.5-11	10YR 3/2	98	10YR 3/4	2	C	M	SICL	
11-15	10YR 7/1	85	7.5YR 3/3	15	C	M	SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)
		☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____Water Table Present? Yes _____ No ☒ Depth (inches): _____Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 5-8-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Sidney Wells Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): LRR C Lat: 38.0721470 Long: -121.8321079 Datum: NAD83
 Soil Map Unit Name: Waderz sil 10am, drained, 0-2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: <u>Isolated depression adjacent to manmade berm separating island from coastline to the south. NO inlet/outlet.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u> </u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100%</u> (A/B)
4. <u> </u>					
Total Cover: <u>0</u>					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. <u> </u>				Total % Cover of:	Multiply by:
2. <u> </u>				OBL species <u>25</u>	x 1 = <u>25</u>
3. <u> </u>				FACW species <u>5</u>	x 2 = <u>10</u>
4. <u> </u>				FAC species <u>75</u>	x 3 = <u> </u>
5. <u> </u>				FACU species <u> </u>	x 4 = <u> </u>
Total Cover: <u>0</u>				UPL species <u> </u>	x 5 = <u> </u>
				Column Totals: <u>105</u> (A)	<u>225</u> (B)
				Prevalence Index = B/A = <u>2.14</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Salicornia pacifica</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	<u>X</u> Dominance Test is >50%	
2. <u>Distichlis spicata</u>	<u>75</u>	<u>Y</u>	<u>FAC</u>	<u>X</u> Prevalence Index is ≤3.0 ¹	
3. <u>Frankenia salina</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <u> </u>				<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
Total Cover: <u>105</u>				¹ Indicators of hydric soil and wetland hydrology must be present.	
Woody Vine Stratum				Hydrophytic Vegetation Present?	
1. <u> </u>				Yes <u>X</u> No <u> </u>	
2. <u> </u>					
Total Cover: <u>0</u>					
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>					
Remarks:					

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100					Sic Lo	Mucky Peat. Greasy/stains fines when rubbed
2-16	Grey 10Y 4/1	80	5YR 3/4	20	C	M	Sic	Grey page Redox prominent

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☒ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Top layer of soil is mix of organic matter and a mucky loamy/mucky peat. Becomes greasy then turns powdery and stains finger when rubbed. Not thick enough to meet F1 indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☒ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☒ No ☐ Depth (inches): 14"
 Saturation Present? Yes ☒ No ☐ Depth (inches): 10"
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation starts at 10" deep and extends to water table at 14".

WETLAND DETERMINATION DATA FORM – Arid West Region

W-3

Project/Site: Collinsville City/County: Solano County Sampling Date: 5-8-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Sidney Wells Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): terrace / footslope Local relief (concave, convex, none): convex Slope (%):
 Subregion (LRR): LRR C Lat: 38.0720645 Long: -121.8321468 Datum: NAD 83
 Soil Map Unit Name: Valdez silt loam, 0-2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks: <u>Low terrace above SP-1 wetland plot, just below manmade berm.</u>					

VEGETATION

Tree Stratum (Use scientific names.) $r=30'$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet:	
Total Cover: <u>0</u>				Total % Cover of: <u> </u> Multiply by: <u> </u>	
Sapling/Shrub Stratum $r=15'$				OBL species <u> </u> x 1 = <u> </u>	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x 2 = <u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x 3 = <u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x 4 = <u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	UPL species <u> </u> x 5 = <u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Column Totals: <u> </u> (A) <u> </u> (B)	
Total Cover: <u>0</u>				Prevalence Index = B/A = <u> </u>	
Herb Stratum $r=5'$				Hydrophytic Vegetation Indicators:	
1. <u>Festuca perennis</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	<u>X</u> Dominance Test is >50%	
2. <u>Hordeum murinum</u>	<u>20</u>	<u>N</u>	<u>FACU</u>	<u> </u> Prevalence Index is $\leq 3.0^1$	
3. <u>Hordeum murinum</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Diskithis spiricata</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. <u>Lactuca scariola</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
6. <u>Foeniculum vulgare</u>	<u>2</u>	<u>N</u>	<u>UPL</u>		
7. <u>Frankenia salina</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
Total Cover: <u>134</u>				¹ Indicators of hydric soil and wetland hydrology must be present.	
Woody Vine Stratum $r=15'$				Hydrophytic Vegetation Present?	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Yes <u>X</u> No <u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
Total Cover: <u>0</u>					
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>					
Remarks:					

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-1.5	7.5YR 2.5/1	100					ORG. + sil	
1.5-14	2.5Y 4/3	95	10YR 4/6	5	C	M	sic	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____Water Table Present? Yes _____ No ☒ Depth (inches): _____Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 05-08-24
Applicant/Owner: LS Power State: _____ Sampling Point: SP-3
Investigator(s): Karen Bach, Sidney Wells Section, Township, Range: S09 T3N R1E
Landform (hillslope, terrace, etc.): upslope Local relief (concave, convex, none): flat Slope (%): 0
Subregion (LRR): LRR C Lat: 38.0720192 Long: -121.8319306 Datum: NAD83
Soil Map Unit Name: Varberz Silty loam, drained, 0-2% slopes, MLRA 16 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>Located on flat, gently sloping area slightly upslope and to the east of SP-1. NO obvious depression present.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
Total Cover: <u>0</u>			
Sapling/Shrub Stratum <u>r=15'</u>			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
Total Cover: <u>0</u>			
Herb Stratum <u>r=5'</u>			
1. <u>Salicornia pacifica</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>
2. <u>Distichlis spicata</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
3. <u>Festuca perennes</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
4. <u>Frankenia salina</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
Total Cover: <u>144</u>			
Woody Vine Stratum <u>r=15'</u>			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
Total Cover: <u>0</u>			
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>	
Remarks:			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
____ Prevalence Index is ≤3.0'
____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1						SiCLo	
2-18	2.5Y 4/1	75	7.5YR 3/3	25	C	M	SiC	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☒ 1 cm Muck (A9) (LRR D)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: N/A
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☒ FAC-Neutral Test (D5) = $\frac{OBL + FACW}{UPL + FACU} = \frac{1}{0}$

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____
 Water Table Present? Yes _____ No ☒ Depth (inches): _____
 Saturation Present? Yes ☒ No _____ Depth (inches): 22
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pit dug to 24 inches. No water table observed. Saturation starts at 22 inches. Located slightly higher in elevation than SP-1, no clear depression present in this area. SP-1 located in defined depression.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-4

Project/Site: Collinsville City/County: Solano County Sampling Date: 05-09-24
 Applicant/Owner: LS power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Sidney Wells Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.) <u>5 ft = r</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
Total Cover: <u>0</u>				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum <u>5 ft = r</u> 1. <u>Rubus armeniacus</u> <u>5</u> <u>Y</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: <u>5</u>																				
Herb Stratum <u>5 ft = r</u> 1. <u>Schoenoplectus americanus</u> <u>10</u> <u>N</u> <u>OBL</u> 2. <u>Typha latifolia</u> <u>5</u> <u>N</u> <u>OBL</u> 3. <u>Peltocaria amphibia</u> <u>20</u> <u>Y</u> <u>OBL</u> 4. <u>Schoenoplectus acutus occidentalis</u> <u>7</u> <u>N</u> <u>OBL</u> 5. <u>Denanthia sarmentosa</u> <u>10</u> <u>N</u> <u>OBL</u> 6. <u>Ludwigia pepioides</u> <u>25</u> <u>Y</u> <u>OBL</u> 7. <u>Juncus balticus</u> <u>25</u> <u>Y</u> <u>FACW</u> 8. <u>Juncus xiphioides</u> <u>15</u> <u>N</u> <u>OBL</u>																				
Total Cover: <u>117</u>																				
Woody Vine Stratum <u>5 ft = r</u> 1. _____ 2. _____																				
Total Cover: <u>0</u>																				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust _____																				
Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)																				
¹ Indicators of hydric soil and wetland hydrology must be present.																				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				
Remarks: <u>Radius of vegetation plots reduced to avoid crossing vegetation community, wetland boundary, and topographic boundary.</u>																				

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1.5	7.5YR 2.5/1	100					SiLo	
1.5-6	10YR 3/2	100					SiCLo	
6-11	Gley 1 N 4/0	90	7.5YR 4/6	10	C	M	SiCLo	
11-14	Gley 1 N 4/0	97	7.5YR 5/8	3	C	M	SiCLo	
14-16	Gley 1 N 4/0	95	Gley 10Y 6/1	5	D	M	SiCLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: N/A
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☒ Sediment Deposits (B2) (Nonriverine)
☒ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☒ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☒ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): _____
 Water Table Present? Yes ☒ No ☐ Depth (inches): 14"
 Saturation Present? Yes ☒ No ☐ Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water present approx 6ft south of soil pit. water table within pit at 14' deep.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-4

Project/Site: Collinsville City/County: _____ Sampling Date: 8-9-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Sidney Weiss Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No _____		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks:			

VEGETATION

Tree Stratum	(Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1.					
2.					
3.					
4.					
Total Cover: <u>0</u>					
Sapling/Shrub Stratum	(Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1.					
2.					
3.					
4.					
Total Cover: <u>0</u>					
Herb Stratum	(Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1.	<u>Marrubium vulgare</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>	
2.	<u>Festuca perennis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3.	<u>Bromus diandrus</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
4.	<u>Medicago polymorpha</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5.	<u>Hordeum murinum</u>	<u>7</u>	<u>N</u>	<u>FACU</u>	
6.	<u>Malva parvifolia</u>	<u>3</u>	<u>N</u>	<u>UPL</u>	
7.	<u>Silybum marianum</u>	<u>3</u>	<u>N</u>	<u>UPL</u>	
8.	<u>Frankenia salina</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
Total Cover: <u>95</u>					
Woody Vine Stratum	(Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1.					
2.					
Total Cover: <u>0</u>					
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust <u>0</u>					
Remarks: <u>Dimensions of vegetation plots reduced to avoid crossing vegetation community and topographical boundaries.</u>					

Sampling Point:

HYDROLOGY

Arid West – Version 11-1-2006

W-5

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 05-09-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-1
Investigator(s): Karen Bach, Sidney Wells Section, Township, Range: _____
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>✓</u> No _____	Is the Sampled Area within a Wetland? Yes <u>✓</u> No _____
Hydric Soil Present? Yes <u>✓</u> No _____	
Wetland Hydrology Present? Yes <u>✓</u> No _____	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
Total Cover: _____			
Sapling/Shrub Stratum			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
Total Cover: _____			
Herb Stratum			
1. <u>Distichlis spicata</u>	<u>65</u>	<u>Y</u>	<u>FAC</u>
2. <u>Salicornia pacifica</u>	<u>40</u>	<u>N</u>	<u>OBL</u>
3. <u>Juncus balticus</u>	<u>20</u>	<u>N</u>	<u>FACW</u>
4. <u>Schoenoplectus acutus occidentalis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
Total Cover: <u>130</u>			
Woody Vine Stratum			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
Total Cover: _____			
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>	
Remarks:			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

SOIL¹

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-1	Gley 1N	2.5%						Si	
1-6	2.5Y 3/1	100						Si CLo	
6-8	5Y 4/1	93	2.5Y 4/4	7				LoSa	
8-17	5Y 5/1	90	5YR 4/4	10	C	M/PL		Si	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (LRR C)	☒ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
☒ Surface Water (A1)	☐ Water Marks (B1) (Riverine)
☒ High Water Table (A2)	☐ Sediment Deposits (B2) (Riverine)
☒ Saturation (A3)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Thin Muck Surface (C7)
☒ Surface Soil Cracks (B6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard (D3)
☐ Salt Crust (B11)	☐ FAC-Neutral Test (D5)
☐ Biotic Crust (B12)	
☐ Aquatic Invertebrates (B13)	
☒ Hydrogen Sulfide Odor (C1)	
☐ Oxidized Rhizospheres along Living Roots (C3)	
☐ Presence of Reduced Iron (C4)	
☐ Recent Iron Reduction in Plowed Soils (C6)	
☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1.1"

Water Table Present? Yes ☒ No ☐ Depth (inches): 10"

Saturation Present? Yes ☒ No ☐ Depth (inches): surface

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-9

Project/Site: Collinsville City/County: _____ Sampling Date: 5-9-24
 Applicant/Owner: _____ State: _____ Sampling Point: SP-2
 Investigator(s): Kerstenbach, Sidney Marie Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>✓</u>
Hydric Soil Present? Yes _____ No <u>✓</u>	
Wetland Hydrology Present? Yes _____ No <u>✓</u>	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.) <u>r=15'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: <u>0</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum <u>r=15'</u> 1. <u>Rosa californica</u> <u>15</u> <u>Y</u> <u>FAC</u> 2. <u>Rubus armeniacus</u> <u>2</u> <u>N</u> _____ 3. _____ 4. _____ 5. _____				
Total Cover: <u>17</u>				
Herb Stratum <u>r=8'</u> 1. <u>Festuca perennis</u> <u>3</u> <u>N</u> <u>FAC</u> 2. <u>Foeniculum vulgare</u> <u>15</u> <u>N</u> _____ 3. <u>Juncus bartschii</u> <u>1</u> <u>N</u> <u>FACW</u> 4. <u>Distichlis spicata</u> <u>5</u> <u>N</u> <u>FAC</u> 5. <u>Festuca myuros</u> <u>80</u> <u>Y</u> <u>UPL</u> 6. <u>Bromus diandrus</u> <u>3</u> <u>N</u> _____ 7. _____ 8. _____				
Total Cover: <u>107</u>				
Woody Vine Stratum <u>r=15'</u> 1. _____ 2. _____ Total Cover: _____				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0' ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____ Remarks: <u>Tree plot size reduced to avoid crossing veg community boundaries.</u>				

W-5

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-2	10YR 2/1	100				Sand	
2-16	10YR 3/4	100				Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	
☐ Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) ☐ Surface Water (A1) ☐ Salt Crust (B11) ☐ High Water Table (A2) ☐ Biotic Crust (B12) ☐ Saturation (A3) ☐ Aquatic Invertebrates (B13) ☐ Water Marks (B1) (Nonriverine) ☐ Hydrogen Sulfide Odor (C1) ☐ Sediment Deposits (B2) (Nonriverine) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4) ☐ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Plowed Soils (C6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Water-Stained Leaves (B9)	☐ Water Marks (B1) (Riverine) ☐ Sediment Deposits (B2) (Riverine) ☐ Drift Deposits (B3) (Riverine) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Thin Muck Surface (C7) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-6

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Sierra County Sampling Date: 5-10-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-1
Investigator(s): Karen Buch, Wendy Weiss Section, Township, Range: 500 T3N R1E
Landform (hillslope, terrace, etc.): footslope Local relief (concave, convex, none): Slope Slope (%): 10
Subregion (LRR): LRR C Lat: 38.071987 Long: -121.832524 Datum: NAD83
Soil Map Unit Name: Valdez Silt loam, drained, 0-2% slopes NWI classification: N1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>r=10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>r=10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Herb Stratum (Plot size: <u>r=5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lotus tenuis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. <u>Hordeum marinum</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
3. <u>Lolium perenne</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>
4. <u>Elymus triticoides</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
5. <u>Frankenia salina</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
6. <u>Distichlis spicata</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
7. <u>Polypogon monspeliensis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
8. <u>Sonchus oleraceus</u>	<u>5</u>	<u>Y</u>	<u>UPL</u>
<u>114</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>r=10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>			
Remarks:			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
 Prevalence Index is ≤3.0'
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

Hydrophytic Vegetation Present? Yes X No

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-2	10YR 2/1	100					SiLo
2-5	10YR 4/4	70					SiCLo
	10YR 4/2	30					
5-16	10YR 4/4	100					SiCLo

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes _____ No ☒
Depth (inches): _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Biotic Crust (B12)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)
	☐ Water Marks (B1) (Riverine)
	☐ Sediment Deposits (B2) (Riverine)
	☐ Drift Deposits (B3) (Riverine)
	☐ Drainage Patterns (B10)
	☐ Dry-Season Water Table (C2)
	☐ Crayfish Burrows (C8)
	☐ Saturation Visible on Aerial Imagery (C9)
	☐ Shallow Aquitard (D3)
	☐ FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes _____ No ☒
Surface Water Present? Yes _____ No ☒	Depth (inches): _____	
Water Table Present? Yes _____ No ☒	Depth (inches): _____	
Saturation Present? Yes _____ No ☒ (includes capillary fringe)	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-6

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cominsville City/County: Solano County Sampling Date: 5-10-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Silky Wiers Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): footprint Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): LRR C Lat: 38.071965 Long: -121.832448 Datum: NAD83
 Soil Map Unit Name: Valdez silt loam, stony, 0-2% slopes NWI classification: E2EM1W
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>r=5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>r=5'</u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>r=5'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Scleropogon acutus ssp. occidentalis</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Typha latifolia</u>	<u>30</u>	<u>X</u>	<u>OBL</u>	
3. <u>Cortusa coronopifolia</u>	<u>7</u>	<u>N</u>	<u>OBL</u>	
4. <u>Cyperus eragrostis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Alisma gramineum</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>r=5'</u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>15</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: <u>plot size reduced to avoid crossing veg community, wetland, and topographic boundaries.</u>				

SOIL

Sampling Point: Sp-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-6	61y 1N 2.5/	30					Si L ₆	
	2.5y 5/2	55	10yR 4/6	15			Si L ₆	
6-16	2.5y 5/1	80	10yR 3/6	20			Si C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Top layer a mix of black high organic matter and gray soil from rest of profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☒ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☒ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☒ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 3"
Water Table Present? Yes ☒ No ☐ Depth (inches): Surface
Saturation Present? Yes ☒ No ☐ Depth (inches): Surface
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-6/W-7

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Salano County Sampling Date: 5-10-24
 Applicant/Owner: LS Power State: CA Sampling Point: Sq-3
 Investigator(s): Karen Bach, Sidney Weiss Section, Township, Range: SDD T3N R1E
 Landform (hillslope, terrace, etc.): footstone Local relief (concave, convex, none): slight slope Slope (%): 5
 Subregion (LRR): LRR C Lat: 38.071463 Long: -121.831953 Datum: NAD83
 Soil Map Unit Name: Vanderbilt silt loam (drained), 0-2% slopes NWI classification: E2EM1N
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum				
1. <u>Rosa californica</u>	<u>85</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Baccharis pilularis</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
3. <u>Rubus amurensis</u>	<u>3</u>	<u>N</u>	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
Total Cover: <u>98</u>				
Herb Stratum				
1. <u>Distichlis spicata</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Foeniculum vulgare</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
3. <u>Melilotus albus</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
4. <u>Elymus triticoides</u>	<u>11</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes ☒ No ☐
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>31</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	Remarks:
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

W-6

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 2/1	100					Si Lo	
7-11	2.5Y 3/1	60	10YR 4/4	40	C	M	Sa	
11-16	Gley 4N 4/0	93	10YR 4/6	7	C	RC	SCLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☒ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: None to 22"

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☐ No ☒ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Large drift deposits; may be from storm surges from the Delta / Bay. large logs and debris buried under shrubby vegetation. no signs of recent or frequent deposition observed within sample area.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-6/W-7

Project/Site: Colmville City/County: Sando County Sampling Date: 5-10-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-4
 Investigator(s): Karen Bach, Sidney Wells Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): berm/mid terrace Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR): LRR-C Lat: 38.071301 Long: -121.831692 Datum: NAD83
 Soil Map Unit Name: Under 2 ft 100m, drained, 0-2% slopes NWI classification: E2EMIN

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Located on a raised, dry berm between high tide line and wetland to the north.</u>	

VEGETATION

Tree Stratum (Use scientific names.) $r=10^1$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>30%</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum $r=10^1$				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u>Rosa californica</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Baccharis pilularis</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
3. <u>Rubus armeniacus</u>	<u>10</u>	<u>N</u>		
4. <u> </u>				
Total Cover: <u>45</u>				
Herb Stratum $r=5^1$				Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Foeniculum vulgare</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Raphanus sativus</u>	<u>2</u>	<u>N</u>		
3. <u>Rumex crispus</u>	<u>2</u>	<u>N</u>		
4. <u>Elymus triticoides</u>	<u>3</u>	<u>N</u>		
Total Cover: <u>41</u>				
Woody Vine Stratum $r=10^1$				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
1. <u> </u>				
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			
Remarks: <u>veg plots reduced in size to avoid crossing wetland, veg community, and topography boundaries.</u>				

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
<u>0-7</u>	<u>10YR 2/1</u>	<u>100</u>				<u>1</u>	<u>Losa</u>	
<u>7-13</u>	<u>2.5Y 3/2</u>	<u>97</u>	<u>10YR 3/4</u>	<u>3</u>	<u>C</u>	<u>M</u>	<u>Sa</u>	
<u>13-17</u>	<u>2.5Y 4/1</u>	<u>60</u>	<u>2.5Y 4/3</u>	<u>40</u>	<u>C</u>	<u>M/PL</u>	<u>Salo</u>	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)
		☐ FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
<u>Large, old drift deposits (i.e. scattered large logs, trash, etc.) present within sample area, seem to be the result of storm surges. NO evidence of frequent/recent drift deposits present in this area.</u>		

W-6/7

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 06-03-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-5
 Investigator(s): Sidney Wells, Karen Bach Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Slope Slope (%): 3
 Subregion (LRR): LRRC Lat: 38.070948 Long: -121.830918 Datum: NAD83
 Soil Map Unit Name: Vulde2 silt loam, drained, 0-2% slopes NWI classification: E2EM1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: <u>Slight upslope at toeslope of hill to the north</u>	

VEGETATION

Tree Stratum (Use scientific names.) $r=15'$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum $r=18'$																				
1. <u>Rosa californica</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Total Cover: <u>40</u>																				
Herb Stratum $r=8'$				Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is $\leq 3.0^1$ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																
1. <u>Lathyrus jepsonii</u>	<u>5</u>	<u>N</u>	<u>OBL</u>																	
2. <u>Pistia spicata</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>																	
3. <u>Xanthium strumarium</u>	<u>2</u>	<u>N</u>	<u>FAC</u>																	
4. <u>Rumex crispus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>																	
5. <u>Helminthotheca echioides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
Total Cover: <u>94</u>																				
Woody Vine Stratum $r=15'$																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
Total Cover: _____																				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>																			

Remarks:

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10 YR 4/3	100					Sa	
9-10	10 YR 2/1	100					Lo Sa	
10-14	10 YR 3/2	100					SiCLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: none
 Depth (inches): 0
Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): _____
Water Table Present?	Yes ☐ No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Large woody debris and drift deposits likely from storm surges rather than regular tide.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-6

Project/Site: Collinsville City/County: Solano County Sampling Date: 6-4-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-6
 Investigator(s): Karen Bach, Sidney Vells Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR): LRR C Lat: 38.071301 Long: -121.831849 Datum: NAD83
 Soil Map Unit Name: Valdez Silt loam, drained, 0-2% NWI classification: E2E MIN

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) $r=10^1$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: <u>0</u>				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum $r=10^1$ 1. <u>Sesbania punicea</u> <u>2</u> <u>Y</u> <u>FACW</u> 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum $r=5^1$ 1. <u>potentilla anserina ssp. pacifica</u> <u>20</u> <u>Y</u> <u>OBL</u> 2. <u>Juncus mexicanus</u> <u>45</u> <u>Y</u> <u>FACW</u> 3. <u>Hydrocotyle verticillata</u> <u>7</u> <u>N</u> <u>OBL</u> 4. <u>plantago lanceolata</u> <u>3</u> <u>N</u> <u>FAC</u> 5. <u>Distichlis spicata</u> <u>10</u> <u>N</u> <u>FAC</u> 6. <u>Schlotheimia acutis var. occidentalis</u> <u>2</u> <u>N</u> <u>OBL</u> 7. _____ 8. _____ Total Cover: <u>87</u>																				
Woody Vine Stratum $r=10^1$ 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust <u>0</u>																				

Remarks:

SOIL

Sampling Point: SP-6W-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2.5	2.5Y 3/2	98	7.5YR 4/6	2	C	M	SaC	
2.5-6.5	Gley N 4/	92	10YR 4/6	8	C	M	SaLo	
6.5-9.5	Gley 1N 5/	90	10YR 3/6	10	C	M/PL	C	
9.5-13.5	5Y 4/1	90	10YR 4/6	10	C	M	Sa	
13-18.5	Gley 1N 4/	92	10YR 5/6	8	C	M/PL/RC	SaCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☒ Loamy Mucky Mineral (F1)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A to 20"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☒ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☒ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): _____Water Table Present? Yes ☐ No ☐ Depth (inches): _____Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Drift deposits present from regular tidal action including large and small drift

NO water table present in pit at time of sample however water table present 10 ft. from shoreline.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-7

Project/Site: Collinsville City/County: Solano County Sampling Date: 6/3/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Beck, Sidney Wells Section, Township, Range: SOOT3N R1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LPRC Lat: 38.071350 Long: -121.831629 Datum: NAD83
 Soil Map Unit Name: Valdez Silty loam, drained, 0-2% slopes, MLRA 16 NWI classification: E2EM1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: <u>Isolated wetland separated from coastline by wind berm</u>	

VEGETATION

Tree Stratum (Use scientific names.) $r=15^1$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum $r=15^1$	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Rosa californica</u>	<u>3</u>	<u>Y</u>	<u>FAC</u>	Total % Cover of: <u> </u> Multiply by: <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x 1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x 2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x 3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x 4 = <u> </u>
Total Cover: <u>3</u>				UPL species <u> </u> x 5 = <u> </u>
				Column Totals: <u> </u> (A) <u> </u> (B)
Herb Stratum $r=5^1$	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index = B/A = <u> </u>
1. <u>Cotula coronopifolia</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Typha angustifolia</u>	<u>4</u>	<u>N</u>	<u>OBL</u>	
3. <u>Ludwigia pedicoides</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Scenoplectus acutus</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
5. <u>Cyperus eragrostis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>69</u>				
Woody Vine Stratum $r=15^1$	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u> Dominance Test is >50%
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u> Prevalence Index is $\leq 3.0^1$
Total Cover: <u>0</u>				<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
% Bare Ground in Herb Stratum <u>45</u>	% Cover of Biotic Crust <u>2</u>			¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>

Remarks:

W-7

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	99	7.5YR 4/6	1	C	M	CLo	
7-8	2.5Y 3/1	95	2.5Y 4/4	5	C	M	SLo	
8-9.5	2.5Y 3/1	90	7.5YR 3/4	10	C	M	LoSa	
9.5-16	5Y 4/2	93	10YR 4/4	7	C	M	SiCLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☒ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 12.5"

Saturation Present? Yes ☒ No ☐ Depth (inches): 7"
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Large woody debris and drift deposits likely from storm surges rather than regular tide.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-8

Project/Site: CONINSURITE City/County: Solano County Sampling Date: 6-3-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Sidney Weiss Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LPRC Lat: 38.070911 Long: -121.830671 Datum: NAD83
 Soil Map Unit Name: Vulderz Silt+loam, drained, 0-2%, sloped NWI classification: E2EM1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____ Hydric Soil Present? Yes _____ No ☒ Wetland Hydrology Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes _____ No ☒
Remarks: <u>Small isolated depression separated from bay delta by upland berm.</u>	

VEGETATION

Tree Stratum (Use scientific names.) <i>r=15'</i>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)														
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)														
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
Sapling/Shrub Stratum <i>r=15'</i>																		
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
Herb Stratum <i>r=5'</i>																		
1. <u>Duthillia spicata</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Salicornia pacifica</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>															
3. <u>Atriplex prostrata</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
Total Cover: <u>112</u>																		
Woody Vine Stratum <i>r=15'</i>																		
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.														
2. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>5</u>				Hydrophytic Vegetation Present? Yes ☒ No _____														

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100					Sa	
2-6	10YR 3/1	100					Sa	
6-27	6YR 1/3	100					Sa	
27+	2.5Y 3/1	100					SiCLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: none to 27"
 Depth (inches): _____
Hydric Soil Present? Yes _____ No ☒

Remarks:

two soil pits excavated within potential wetland both with same soil profile, took multiple slices. lower layers very dark no redox to 27". let soil dry, no redox or lightening occurred at moist (not saturated) condition

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☒ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

 Surface Water Present? Yes _____ No ☒ Depth (inches): _____
 Water Table Present? Yes ☒ No _____ Depth (inches): 7"
 Saturation Present? Yes ☒ No _____ Depth (inches): 60"
 (includes capillary fringe)
Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Large drift deposits found within SP result of storm surge rather than regular tidal action

WETLAND DETERMINATION DATA FORM – Arid West Region

W-9

Project/Site: Collinsville City/County: Colano County Sampling Date: 06-03-24
 Applicant/Owner: LS power State: CA Sampling Point: SP-1
 Investigator(s): Sidney Wells, Karen Bach Section, Township, Range: 500T3N R1E
 Landform (hillslope, terrace, etc.): topologic Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRR C Lat: 38.070842 Long: -121.830475 Datum: NAD83
 Soil Map Unit Name: Valdez silt loam, drained, 0-2r NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Hydric Soil Present?	Yes ☒ No _____	
Wetland Hydrology Present?	Yes ☒ No _____	
Remarks:		

VEGETATION

Tree Stratum	(Use scientific names.)	$r=10'$	Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
Total Cover:			<u>0</u>		
Sapling/Shrub Stratum		$r=10'$			
1.					
2.					
3.					
4.					
5.					
Total Cover:			<u>0</u>		
Herb Stratum		$r=5'$			
1.	<u>Distichlis spicata</u>		<u>65</u>	<u>Y</u>	<u>FAC</u>
2.	<u>Frankenia salina</u>		<u>17</u>	<u>N</u>	<u>FACW</u>
3.	<u>Lepidium latifolium</u>		<u>20</u>	<u>N</u>	<u>FAC</u>
4.	<u>Rumex crispus</u>		<u>5</u>	<u>N</u>	<u>FAC</u>
5.	<u>Schoenoplectus acutus var. occidentalis</u>		<u>35</u>	<u>Y</u>	<u>OBL</u>
6.	<u>Heliotropium curassavicum</u>		<u>3</u>	<u>N</u>	<u>FACU</u>
7.					
8.					
Total Cover:			<u>145</u>		
Woody Vine Stratum		$r=10'$			
1.					
2.					
Total Cover:			<u>0</u>		
% Bare Ground in Herb Stratum <u>0</u>			% Cover of Biotic Crust <u>2</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No _____

Remarks:

W-9
SP-1

SOIL

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	10YR 2/1	90	7.5YR 3/4	10	C	M	ClL	
3-16	Gley 2 10Y 3/1	90	7.5YR 3/4	10	C	M	sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☒ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☒ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none
Depth (inches): 0

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☒ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
Water Table Present? Yes ☒ No ☐ Depth (inches): 20"
Saturation Present? Yes ☒ No ☐ Depth (inches): 10"
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Drift deposits likely from storm surges rather than regular tidal influence.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-9

Project/Site: Collinsville City/County: Solano Sampling Date: 6-4/24
 Applicant/Owner: LS Paver State: CA Sampling Point: SP-2
 Investigator(s): Karen Buch, Sidney Wren Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): foothill Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): LRA C Lat: 38.070622 Long: -121.829704 Datum: NAD83
 Soil Map Unit Name: Valdez silt loam, orange, 0-2% NWI classification: E2EM1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix laevigata</u> 30x5ft	<u>10</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. <u> </u>				
4. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
Total Cover: <u>10</u>				
Sapling/Shrub Stratum				
1. <u>Rosa californica</u> 15x5ft	<u>10</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>	<u>5</u>	<u>N</u>	<u> </u>	
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
Total Cover: <u>15</u>				
Herb Stratum				
1. <u>typha angustifolia</u> 5x5ft	<u>50</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Alisma gramineum</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
3. <u>Distichlis spicata</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	
4. <u>Juncus balticus</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
5. <u>Bumelia crispus</u>	<u>4</u>	<u>N</u>	<u>FAC</u>	
6. <u>Lathyrus jepsonii</u>	<u>4</u>	<u>N</u>	<u>OBL</u>	
7. <u>Schoenoplectus oahuensis var. occidentalis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
8. <u> </u>				
Total Cover: <u>120</u>				
Woody Vine Stratum				
1. <u>15ft x 5ft</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>5</u>				

Remarks:

Shape/size of plots adjusted to avoid crossing wetland/veg community boundary

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	10YR 2/2	97	7.5YR 3/3	3	C	M	SiCl	
3-4.5	Gley 1 10Y 3/1	98	10YR 3/4	2	C	M	SiCl	
4.5-12	Gley 2 N 4/1	90	10YR 3/6	10	C	M	SiCl	
12-16	Gley 2 N 4	90	10YR 3/6	10	C	M	LoSa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1) ☐ Sandy Redox (S5)
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4) ☒ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (LRR C) ☒ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (LRR D) ☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12) ☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1) ☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☒ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☒ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1.5"Water Table Present? Yes ☒ No ☐ Depth (inches): SurfaceSaturation Present? Yes ☒ No ☐ Depth (inches): Surface
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-97

Project/Site: Countryside City/County: Solano County Sampling Date: 6/4/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-3
 Investigator(s): Karen Bach, Sidney Davis Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): 0
 Subregion (LRR): LRR C Lat: 38.070648 Long: -121.829686 Datum: NAD83
 Soil Map Unit Name: valley silt loam, drained, 1-2% NWI classification: E2E M1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) <u>r=20'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum <u>r=15'</u>				
1. <u>Rosa californica</u>	<u>7</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>7</u>				
Herb Stratum <u>r=5'</u>				
1. <u>Foeniculum vulgare</u>	<u>4</u>	<u>N</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0' ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Elymus triticoides</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Fragaria salina</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
4. <u>Dilichius spicata</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
5. <u>Carex barbarae</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Helianthus scaberrimus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>83</u>				
Woody Vine Stratum <u>r=15'</u>				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-7.5	10YR 2/1	100				LoSa	
7.5-9	2.5Y 3/2	100				Sa	
9-14	7.5YR 3/2	100				CLo	
14-16	2.5Y 4/2	80	10YR 3/6	20	C M	SiC	Redox prominent

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

☐ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Biotic Crust (B12)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No ☒	Depth (inches): _____
Water Table Present?	Yes _____ No ☒	Depth (inches): _____
Saturation Present?	Yes _____ No ☒	Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-1D

Project/Site: collinsville City/County: Solano county Sampling Date: 6-9-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Sidney Webb Section, Township, Range: 500 T3W R1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Slight concave Slope (%): 0
 Subregion (LRR): LRR C Lat: 38.078510 Long: -121.833547 Datum: NAD83
 Soil Map Unit Name: Warder silt loam, drained, 0-2% slopes NWI classification: DEMIC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks: <u>Slight depression adjacent to road where water appears to perch above clay layer during short periods in the wet season but not long enough to develop wetland conditions</u>		

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum <u>r=15'</u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
Herb Stratum <u>r=5'</u>				Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0' <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Distichlis spicata</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Rumex crispus</u>	<u>30</u>	<u>N</u>	<u>FAC</u>	
3. <u>Heliotropium curassavicum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Bromus madritensis</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
5. <u>Helminthotheca echioides</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
6. <u>Suncus mexicanus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
7. <u>Furcraea salina</u>	<u>8</u>	<u>N</u>	<u>FACW</u>	
8. <u>Lactuca serotia</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
Total Cover: <u>165</u>				
Woody Vine Stratum <u>r=15'</u>				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u>0</u>			

Remarks:

W-1D

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 3/1	98	7.5YR 4/6	2	C	M/PL	S/C	
2-4	2.5Y 4/2	95	7.5YR 4/6	35	C	M/PL	S/C	remeasured several times
4-6	2.5Y 3/2	100					Sa	
6-7.5	2.5Y 3/2	97	10YR 3/6	3	C	M	SaLo	
7.5-14	2.5Y 3/2	100					Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: NRE to 20"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-11

Project/Site: Collinsville City/County: Solano County Sampling Date: 06-06-24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
 Investigator(s): Sidney Wells, Karen Bach Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): foeslope Local relief (concave, convex, none): slight convex Slope (%): 0
 Subregion (LRR): LRR C Lat: 38.0785 97 Long: -121.833439 Datum: NAD83
 Soil Map Unit Name: Valdez silt loam, drainage, 0-2% slopes NWI classification: PEM1ch

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																		
Herb Stratum 1. <u>Rumex crispus</u> <u>Common dock</u> <u>15</u> <u>N</u> <u>FAC</u> 2. <u>Xanthium strumarium</u> <u>(Pachylobos)</u> <u>70</u> <u>Y</u> <u>FAC</u> 3. <u>Schoenoplectus acutus</u> <u>var. occidentalis</u> <u>35</u> <u>Y</u> <u>OBL</u> 4. <u>Iva axillaris</u> <u>Groenland</u> <u>3</u> <u>N</u> <u>FACU</u> 5. <u>Asclepias fascicularis</u> <u>unflowered</u> <u>2</u> <u>N</u> <u>FAC</u> 6. <u>Festuca perennans</u> <u>25</u> <u>N</u> <u>FAC</u> 7. _____ 8. _____ Total Cover: <u>160</u>																		
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																		
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																		
Remarks:																		

SOIL

Sampling Point: SP-1

W-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6.5	10YR 2/1	99	10YR 5/6	1	C	M	CI	
6.5-13.5	2.5Y 4/2	65	10YR 4/6	35	C	M	SiCLo	
13.5-16	2.5Y 4/2	65	10YR 5/8	35	C	M	SiCI	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 2011
Depth (inches): _____Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☒ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☒ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-11

Project/Site: Collinsville City/County: Colano County Sampling Date: 06-05-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Sidney Wells, Karen Baeh Section, Township, Range: 500 T3N R1E
 Landform (hillslope, terrace, etc.): 100 slope Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR): LPRC Lat: 38.078688 Long: -121.833471 Datum: NAD83
 Soil Map Unit Name: Valdez silty loam, drained, 0-2% slopes NWI classification: DEM1Ch
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Rumex crispus</u> <u>25</u> <u>Y</u> <u>FAC</u> 2. <u>Polygonum monspeliensis</u> <u>15</u> <u>N</u> <u>FACW</u> 3. <u>Distichlis spicata</u> <u>35</u> <u>Y</u> <u>FAC</u> 4. <u>Xanthium strumarium</u> <u>7</u> <u>N</u> <u>FAC</u> 5. <u>Bromus madritensis</u> <u>15</u> <u>N</u> <u>UPL</u> 6. <u>Cressa truxillensis</u> <u>2</u> <u>N</u> <u>FACW</u> 7. _____ 8. _____ Total Cover: <u>99</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum <u>4</u> % Cover of Biotic Crust <u>0</u>																				

Remarks:

SOIL

Sampling Point: SP-2

W-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5.5	10YR 2/1						SiCl	
5.5-11	2.5Y 3/2	9B	10YR 5/6	2	C	M	SalLo	
11-16	2.5Y 4/2	9.5	10YR 4/6	5	C	M	SiClLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☒ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: None to 20"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)
☒ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)
		☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-11

Project/Site: Collinsville City/County: Solano County Sampling Date: 6/5/21
 Applicant/Owner: LS Power State: CA Sampling Point: SP-3
 Investigator(s): Karen Bach, Victoria Yefremenkova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR): LRRC Lat: 38.078891 Long: -121.233543 Datum: NAD83
 Soil Map Unit Name: Under silty loam, drained, 0-2% slope NWI classification: PEM1Ch

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) $r=30'$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: <u>0</u>				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum $r=15'$ 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>0</u>																				
Herb Stratum $r=5'$ 1. <u>Festuca perennis</u> <u>60</u> <u>Y</u> <u>FAC</u> 2. <u>Bromus madritensis</u> <u>45</u> <u>Y</u> <u>UPL</u> 3. <u>Frankenia salina</u> <u>5</u> <u>N</u> <u>FACW</u> 4. <u>Rumex crispus</u> <u>1</u> <u>N</u> <u>FAC</u> 5. <u>Diplichlis spicata</u> <u>8</u> <u>N</u> <u>FAC</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>119</u>																				
Woody Vine Stratum $r=15'$ 1. _____ 2. _____ Total Cover: <u>0</u>																				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>																				

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
☐ Prevalence Index is $\leq 3.0^1$
☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

W-1

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	100					Lo	
5-15	2.5Y 3/2	100					Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 20"
Depth (inches):

Hydric Soil Present? Yes No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes No ☒ Depth (inches):
Water Table Present? Yes No ☒ Depth (inches):
Saturation Present? Yes No ☒ Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano, county Sampling Date: 6/6/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Victoria Yeteremakova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LRR C Lat: 38.078139 Long: -121.838506 Datum: NAD83
 Soil Map Unit Name: Valdez silty clay loam, clay substratum NWI classification: NIA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
Total Cover: <u>0</u>			

Sapling/Shrub Stratum <u>r=15'</u>	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
Total Cover: <u>0</u>			

Herb Stratum <u>r=8'</u>	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Schoenoplectus acutus ssp. occidentalis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
2. <u>Lepidium latifolium</u>	<u>6</u>	<u>Y</u>	<u>FAC</u>
3. <u>Dilichia spicata</u>	<u>8</u>	<u>Y</u>	<u>FAC</u>
4. <u>Bolboschoenus maritimus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
5. <u>Atriplex prostrata</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
6. <u>Heliotropium curassavicum</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
7. <u>Rumex crispus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>
8. _____			
Total Cover: <u>37</u>			

Woody Vine Stratum <u>r=15'</u>	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
Total Cover: _____			

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
 _____ Prevalence Index is ≤3.0¹
 _____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: Sp-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	99	7.5YR 3/4	1	C	M	Sa	organic matter, 15% presence
4-9.5	5Y 4/1	91	10YR 3/4	9	C	M	LoSa	
9.5-16	2.5Y 3/2	97	10YR 4/4	8	C	M	Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 20"
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☒ Sediment Deposits (B2) (Nonriverine)
- ☒ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☒ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☒ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
Water Table Present? Yes ☒ No ☐ Depth (inches): 6.5
Saturation Present? Yes ☒ No ☐ Depth (inches): to surface
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-12

Project/Site: Colinsville City/County: Sando County Sampling Date: 6/6/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Victoria Yelmenov Section, Township, Range: S8P T3N R1E
 Landform (hillslope, terrace, etc.): foothill Local relief (concave, convex, none): Slope Slope (%): 10
 Subregion (LRR): LRCC Lat: 38.078236 Long: -121.838606 Datum: NAD83
 Soil Map Unit Name: Valley City clay-loam, clay substatum NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>		
Remarks: <u>Slightly elevated area adjacent to SP-1.</u>			

VEGETATION

Tree Stratum	(Use scientific names.)	r = 30'	Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
Sapling/Shrub Stratum			r = 15'	Total Cover: <u>8</u>	
1.					
2.					
3.					
4.					
5.					
Herb Stratum			r = 5'	Total Cover: <u>8</u>	
1.	<u>Lepidium latifolium</u>		<u>100</u>	<u>Y</u>	<u>FAC</u>
2.	<u>Schlotheimia acutius var.</u>		<u>3</u>	<u>N</u>	<u>OBL</u>
3.	<u>occidentalis</u>				
4.	<u>Poa annua</u>		<u>55</u>	<u>Y</u>	<u>FAC</u>
5.					
6.					
7.					
8.					
Woody Vine Stratum			r = 15'	Total Cover: <u>15%</u>	
1.					
2.					
			Total Cover: <u>6</u>		
% Bare Ground in Herb Stratum <u>8</u>			% Cover of Biotic Crust <u>8</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

 Prevalence Index is ≤3.0¹

 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present?

Yes X No

Remarks:

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 2/2	99	10YR 3/4	1	C	M/PL	CLLO	
2-6	2.5Y 3/1	95	7.5YR 4/6	5	C	M/PL	SaCLLO	Redox prominent
6-9.5	2.5Y 4/2	65	7.5YR 3/4	35	C	M/PL	Sa	
9.5-16	5Y 4/1	97	10YR 3/6	3	C	M	Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☒ Redox Dark Surface (F6) | |
| ☒ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 20"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|---|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☒ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-12

Project/Site: Colinsville City/County: Solano County Sampling Date: 6/6/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-3
 Investigator(s): Karen Duch, Victoria yef renovado Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): Slope Slope (%): 10
 Subregion (LRR): LRR C Lat: 38.078393 Long: -121.838587 Datum: NAD 83
 Soil Map Unit Name: Vanduz silty clay loam, clay substratum NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) $r=30'$	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum $r=15'$ 1. <u>Rosa californica</u> <u>90</u> <u>y</u> <u>FAC</u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u>90</u>				
Herb Stratum $r=5'$ 1. <u>Baccharis glutinosa</u> <u>3</u> <u>y</u> <u>FACW</u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is $\leq 3.0^1$ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Polygonum monspeliensis</u> <u>5</u> <u>y</u> <u>FACW</u>				
3. <u>Juncus balticus</u> <u>1</u> <u>y</u> <u>FACW</u>				
4. <u>Distichlis spicata</u> <u>5</u> <u>y</u> <u>FAC</u>				
5. <u> </u>				
Total Cover: <u>14</u>				
Woody Vine Stratum $r=15'$ 1. <u> </u>				¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/2	100					Sc	
6-15	2.5Y 3/2	98	10YR 4/6	2	C	M	Sc	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

☐ Histosol (A1)	☒ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 20"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

☐ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Biotic Crust (B12)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 6/6/24
Applicant/Owner: LS Power State: CA Sampling Point: SP-1
Investigator(s): Harun Berktol, Victoria Yedemnon Section, Township, Range: S00 T3N R1E
Landform (hillslope, terrace, etc.): foreslope Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): LRRC Lat: 38.079872 Long: -121.840326 Datum: NAD83
Soil Map Unit Name: Tamba heavy clay NWI classification: RYSBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> X </u> No <u> </u> Remarks:	Is the Sampled Area within a Wetland? Yes <u> X </u> No <u> </u>
--	--

VEGETATION

Tree Stratum (Use scientific names.) <i>r=30'</i>		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
Total Cover:		<i>0</i>		

Sapling/Shrub Stratum <i>r=15'</i>		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
Total Cover:		<i>0</i>		

Herb Stratum <i>r=5'</i>		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Salicornia pacifica</i>	<i>75</i>	<i>Y</i>	<i>OBL</i>
2.	<i>Polygona monspeliensis</i>	<i>1</i>	<i>N</i>	<i>FACW</i>
3.				
4.				
5.				
6.				
7.				
8.				
Total Cover:		<i>76</i>		

Woody Vine Stratum		Absolute % Cover	Dominant Species?	Indicator Status
1.		<i>0</i>		
2.		<i>0</i>		
Total Cover:		<i>76</i>		

% Bare Ground in Herb Stratum *25*

% Cover of Biotic Crust *0*

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: *1* (A)

Total Number of Dominant Species Across All Strata: *1* (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100* (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No _____

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3.5	2.5Y 4/1	45	10YR 4/4	5	C	M	SicL	
3.5-6	5Y 4/1	45	7.5YR 3/3	5	E	M/PL	SicL	
	5Y 3/1	45	7.5YR 3/3	5	C	M/PL	SicL	
6-10	2.5Y 4/1	40	7.5YR 3/4	10	C	M/PL	SicL	
10-16	5Y 1N 2.5/1	95	7.5YR 3/3	5	C	M	SicL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☒ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

☐ Surface Water (A1)	☒ Salt Crust (B11)
☐ High Water Table (A2)	☐ Biotic Crust (B12)
☒ Saturation (A3)	☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine)	☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)
☒ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No ☒	Depth (inches): _____
Water Table Present?	Yes _____ No ☒	Depth (inches): _____
Saturation Present?	Yes ☒ No _____	Depth (inches): <u>10"</u>

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-13

Project/Site: Couderville City/County: Solano County Sampling Date: 6/6/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Buch, Victoria Yetremakova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR): LRRC Lat: 38.079026 Long: -121.840203 Datum: NAD83
 Soil Map Unit Name: Tamba mucky clay/Diablo-Ayar clay 2-9% slopes NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: <u>Potentially manmade berm separating W-13 and W-14</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>10'x20'</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
4. <u> </u>				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum <u>10'x15'</u>				Prevalence Index worksheet:
1. <u> </u>				Total % Cover of: <u> </u> Multiply by: <u> </u>
2. <u> </u>				OBL species <u> </u> x 1 = <u> </u>
3. <u> </u>				FACW species <u> </u> x 2 = <u> </u>
4. <u> </u>				FAC species <u> </u> x 3 = <u> </u>
5. <u> </u>				FACU species <u> </u> x 4 = <u> </u>
Total Cover: <u>0</u>				UPL species <u> </u> x 5 = <u> </u>
				Column Totals: <u> </u> (A) <u> </u> (B)
Herb Stratum <u>5'x5'</u>				Prevalence Index = B/A = <u> </u>
1. <u>Festuca perennis</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
2. <u>Bromus madritensis</u>	<u>45</u>	<u>Y</u>	<u>UPL</u>	<u>X</u> Dominance Test is >50%
3. <u>Polygala monspeliensis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	<u> </u> Prevalence Index is ≤3.0 ¹
4. <u>Fruticosa salina</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Salicornia pacifica</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
Total Cover: <u>140</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
Woody Vine Stratum <u>10'x15'</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

W-13

SOIL

Sampling Point: SE-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	2.5Y 5/4	100					Silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 20"

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Several small angular rock fragments present in top 6" of soil. May be old fill along constructed berm

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____Water Table Present? Yes _____ No X Depth (inches): _____Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry berm between two low depressional wetlands

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano Sampling Date: 6-7-24
 Applicant/Owner: US Power State: CA Sampling Point: SP-3
 Investigator(s): Victoria Geronemus, Maren Beck Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR): L RRC Lat: 38.080785 Long: -121.840447 Datum: NAD83
 Soil Map Unit Name: Diablo-Agar clays 2-9% slopes / Tambora clay NWI classification: R4SBA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u> </u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u> </u>	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u> </u>				
2. <u> </u>				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum <u>R=15'</u>				Prevalence Index worksheet:
1. <u> </u>				Total % Cover of: <u> </u> Multiply by: <u> </u>
2. <u> </u>				OBL species <u> </u> x 1 = <u> </u>
3. <u> </u>				FACW species <u> </u> x 2 = <u> </u>
4. <u> </u>				FAC species <u> </u> x 3 = <u> </u>
5. <u> </u>				FACU species <u> </u> x 4 = <u> </u>
Total Cover: <u>0</u>				UPL species <u> </u> x 5 = <u> </u>
Herb Stratum <u>R=5'</u>				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Festuca perennis</u>	<u>98</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = <u> </u>
2. <u>Distichlis spicata</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Sarcocornia pacifica</u>	<u>8</u>	<u>N</u>	<u>OBL</u>	
4. <u>Frankenia salina</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
Total Cover: <u>119</u>				
Woody Vine Stratum				Hydrophytic Vegetation Indicators:
1. <u> </u>				<u>X</u> Dominance Test is >50%
2. <u> </u>				<u> </u> Prevalence Index is ≤3.0 ¹
Total Cover: <u>0</u>				<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			Loc ²
0-12	61y 2.5/0	100					S:CL	
12-14.5	5Y 4/2	95	10YR 4/4	5	C	M	S:CL	
14.5-22	2.5Y 4/1	63	5Y 7/1	35	D	M	C	
			10YR 5/6	2	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☒ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: none to 24"
 Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
☐ Surface Water (A1)	☒ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)
☒ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)
		☐ FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes ☒ No ☐
Surface Water Present? Yes ☐ No ☒	Depth (inches):	
Water Table Present? Yes ☐ No ☒	Depth (inches):	
Saturation Present? Yes ☐ No ☒	Depth (inches):	
(includes capillary fringe)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Salt crust present within top 6" of soil but not on surface due to dense vegetation

WETLAND DETERMINATION DATA FORM – Arid West Region

W-14

Project/Site: calinsville City/County: Salinas County Sampling Date: 6/7/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Victoria Yefremova Section, Township, Range: S00 R3N T1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): CRRC Lat: 38.079793 Long: -121.839967 Datum: NAD83
 Soil Map Unit Name: Tamba mucky clay NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.) <u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum <u>r=15'</u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
Total Cover: <u>0</u>				
Herb Stratum <u>r=5'</u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Salicornia pacifica</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
2. <u>Polypogon monspeliensis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
3. <u>Cotula coronopifolia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4. <u>Chenopodium murale</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
5. <u>Spergularia marina</u>	<u>90</u>	<u>Y</u>	<u>OBL</u>	
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
Total Cover: <u>113</u>				
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			

Remarks:

W-14

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%						
0-7.5	5Y 4/1	93	7.5YR 4/6	7			C	M/RC	S:CL	
7.5-11	2.5Y 3/1	98	5YR 3/4	2			C	M/RC	S:CL	
11-18	10YR 2/1	83	2.5Y 4/2	15			D	M		
			10YR 3/6	2			C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 22"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☒ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☒ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- | |
|--|
| ☐ Water Marks (B1) (Riverine) |
| ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Drift Deposits (B3) (Riverine) |
| ☐ Drainage Patterns (B10) |
| ☐ Dry-Season Water Table (C2) |
| ☐ Thin Muck Surface (C7) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Shallow Aquitard (D3) |
| ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): _____
Water Table Present?	Yes ☐ No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches): _____

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-15

Project/Site: Collinsville City/County: Sokno County Sampling Date: 6/7/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Karen Bach, Victoria Yelmenkova Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): feeslope Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR): LRRC Lat: 38.079719 Long: -121.839053 Datum: NAD83
 Soil Map Unit Name: Tamba mucky clay NWI classification: R4SBA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

VEGETATION

Tree Stratum	(Use scientific names.)	r=5'	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
1.						
2.						
3.						
4.						
Total Cover:			<u>0</u>			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
Sapling/Shrub Stratum r=5'						
1.						Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u>
2.						
3.						
4.						
5.						OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B)
Total Cover:			<u>0</u>			
Herb Stratum r=5'						
1.	<u>Salicornia pacifica</u>		<u>2</u>	<u>N</u>	<u>OBL</u>	
2.	<u>Spergularia maritima</u>		<u>8</u>	<u>Y</u>	<u>OBL</u>	
3.	<u>Cotula coronopifolia</u>		<u>1</u>	<u>N</u>	<u>OBL</u>	
4.	<u>Bromus madriensis</u>		<u>5</u>	<u>Y</u>	<u>UPL</u>	
5.	<u>Polypogon monspeliensis</u>		<u>4</u>	<u>Y</u>	<u>FACW</u>	
6.						Prevalence Index = B/A = <u> </u>
7.						
8.						
Total Cover:			<u>20</u>			
Woody Vine Stratum r=5'						Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0' <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1.						
2.						
Total Cover:			<u>0</u>			
% Bare Ground in Herb Stratum		<u>50</u>	% Cover of Biotic Crust		<u>0</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
Remarks:						

SOIL

Sampling Point: SP-1

[W-15]

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-8	2.5Y 3/1	99	10YR 2/6	1	C	M	Silt
8-16	2.5Y 4/1	98	2.5Y 4/4	2	C	M	Silt Redox distinct

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☒ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☒ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☒ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☒ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

 Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)
Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-15

Project/Site: CAINWIRE City/County: SOLEDAD COUNTY Sampling Date: 6/7/24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Vickie Yelamanchi Section, Township, Range: S00 T3N R1E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR): LPRC Lat: 38.079740 Long: -121.839122 Datum: NAD83
 Soil Map Unit Name: Tamba very clay NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		
Remarks: <u>Slightly higher elevation grassy area between W-14 and W-15</u>			

VEGETATION

Tree Stratum	(Use scientific names.)	<u>r=30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.						
2.						Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3.						Percent of Dominant Species That Are OBL, FACW, or FAC: <u>30%</u> (A/B)
4.						
Sapling/Shrub Stratum <u>r=15'</u> Total Cover: <u>0</u>						Prevalence Index worksheet:
1.						
2.						OBL species <u> </u> x 1 = <u> </u>
3.						FACW species <u> </u> x 2 = <u> </u>
4.						FAC species <u> </u> x 3 = <u> </u>
5.						FACU species <u> </u> x 4 = <u> </u>
Herb Stratum <u>r=5'</u> Total Cover: <u>0</u>						UPL species <u> </u> x 5 = <u> </u>
1.	<u>Festuca perennis</u>		<u>30</u>	<u>Y</u>	<u>FAC</u>	Column Totals: <u> </u> (A) <u> </u> (B)
2.	<u>Bromus madritensis</u>		<u>45</u>	<u>Y</u>	<u>UPL</u>	Prevalence Index = B/A = <u> </u>
3.	<u>Bromus hordeaceus</u>		<u>60</u>	<u>Y</u>	<u>FACU</u>	
4.	<u>Frankia salina</u>		<u>1</u>	<u>N</u>	<u>OBL</u>	
5.	<u>Salicornia peruviana</u>		<u>1</u>	<u>N</u>	<u>FACW</u>	
6.	<u>Eva axillaris</u>		<u>1</u>	<u>N</u>	<u>FACU</u>	
7.						
8.						
Woody Vine Stratum <u>r=15'</u> Total Cover: <u>0</u>						Hydrophytic Vegetation Indicators:
1.						
2.						<u> </u> Prevalence Index is ≥3.0 ¹
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>						<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
						<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:						¹ Indicators of hydric soil and wetland hydrology must be present.
						Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9.5	2.5Y 3/1	99	7.5YR 2/4	1	C	M	SiC	
9.5-16	2.5Y 4/1	70	7.5YR 2/4	5	C	M	SiC	
	2.5Y 2.5/1	25						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☒ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: none to 20"
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

☐ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Biotic Crust (B12)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No ☒	Depth (inches): _____
Water Table Present?	Yes _____ No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____ No ☒	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-161

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Delaware Sampling Date: 6/7/24
Applicant/Owner: LS Power State: CA Sampling Point: SP-1
Investigator(s): Nathan, Victoria Section, Township, Range: S23 T3N R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): LRR C Lat: 38.082683 Long: -121.837654 Datum: NAD83
Soil Map Unit Name: Tamba mucky clay NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>P = 15</u>			
2. <u> </u>			
3. <u> </u>			
4. <u> </u>			
Total Cover: <u>0</u>			
Total Cover: <u>0</u>			
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>P = 10</u>			
2. <u> </u>			
3. <u> </u>			
4. <u> </u>			
5. <u> </u>			
Total Cover: <u>0</u>			
Total Cover: <u>0</u>			
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>P = 5</u>			
2. <u>Polygonum monspeliensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
3. <u>Spergularia maritima</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>
4. <u>Juncus baeffianus</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
5. <u>Distichlis spicata</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
6. <u> </u>			
7. <u> </u>			
8. <u> </u>			
Total Cover: <u>75</u>			
Total Cover: <u>0</u>			
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>			
2. <u> </u>			
Total Cover: <u>0</u>			
Total Cover: <u>0</u>			
% Bare Ground in Herb Stratum <u>27</u> % Cover of Biotic Crust <u>0</u>			
Remarks:			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

 Prevalence Index is ≤3.0¹

 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ✓ No

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	2.5Y 5/1	99	7.5YR 3/4	1	C	M	Cl	Redox Concretion
7-16	10Y/R 4/3	100					Si Cl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none to 20"

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☒ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☒ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-16

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano County Sampling Date: 6/7/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-2
 Investigator(s): Karen Bach, Victoria Yetremnikov Section, Township, Range: S23 T3N R1E
 Landform (hillslope, terrace, etc.): footslope Local relief (concave, convex, none): Slope Slope (%): 9
 Subregion (LRR): LRR C Lat: 38.082666 Long: -121.837785 Datum: NAD83
 Soil Map Unit Name: Diablo-Ayar clay 2-9% slopes NWI classification: NIA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>10'x20'</u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u>0</u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum <u>10'x15'</u>				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
Total Cover: <u>0</u>				
Herb Stratum <u>r=5'</u>				Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Frankenia salina</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
2. <u>Juncus balticus</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Distichlis spicata</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Bromus madritensis</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
Total Cover: <u>125</u>				
Woody Vine Stratum <u>10'x15'</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point:

W-16

Sp-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100					LO	
3-8.5	2.5Y 4/1	100					SalO	
8.5-16	2.5Y 3/1	100					SiCl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____
 Water Table Present? Yes _____ No ☒ Depth (inches): _____
 Saturation Present? Yes _____ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-16

Project/Site: Collinsville City/County: Selma Sampling Date: 6/7/24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-3
 Investigator(s): Karen Buch, Victoria Yefremchuk Section, Township, Range: S23 T3N R1E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Slope Slope (%): 5
 Subregion (LRR): LRR C Lat: 38.082653 Long: -121.838206 Datum: NAD83
 Soil Map Unit Name: Tamba muddy clay NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Sapling/Shrub Stratum <u>R=10'</u> Total Cover: <u>0</u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Herb Stratum <u>R=5'</u> Total Cover: <u>0</u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Distichlis spicata</u>	<u>85</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Festuca perennis</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Bromus maritensis</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
4. <u>Polygala monspeliensis</u>	<u>5</u>	<u>IV</u>	<u>FACW</u>	
5. <u>Franklinia selma</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
Total Cover: <u>191</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
Total Cover: <u>19.1</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-6	2.5Y 3/1	97	2.5YR 3/4	3		C	M	S:CL	
6-15	10YR 4/1	25	2.5Y 4/4	5		C	M	SalO	
	2.5Y 3/1	67	10YR 3/4	3		C	M	S:CL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☒ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	
☐ Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No _____
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) ☐ Surface Water (A1) ☒ Salt Crust (B11) ☐ High Water Table (A2) ☐ Biotic Crust (B12) ☐ Saturation (A3) ☐ Aquatic Invertebrates (B13) ☐ Water Marks (B1) (Nonriverine) ☐ Hydrogen Sulfide Odor (C1) ☐ Sediment Deposits (B2) (Nonriverine) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4) ☒ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Plowed Soils (C6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Water-Stained Leaves (B9)	☐ Water Marks (B1) (Riverine) ☐ Sediment Deposits (B2) (Riverine) ☐ Drift Deposits (B3) (Riverine) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Thin Muck Surface (C7) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): _____ Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

W-17

Project/Site: Collinsville City/County: Solano Sampling Date: Dec-24-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Christina Rodriguez, Sidney Wells Section, Township, Range: 3N 1E 26
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): NONE Slope (%): 0
 Subregion (LRR): C Lat: 38.079777 Long: -121.833901 Datum: NAD1983
 Soil Map Unit Name: DIABLO-AYAR CLAYS, 2 to 9% slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ = Total Cover <u>0</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5 sq ft</u>) 1. <u>DISTICHLIS SPICATA</u> <u>5</u> <u>N</u> <u>FAC</u> 2. <u>RUMEX CRISPUS</u> <u>25</u> <u>Y</u> <u>FAC</u> 3. <u>FRANKENIA SALINA</u> <u>35</u> <u>Y</u> <u>FACW</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ = Total Cover <u>65</u>				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ = Total Cover <u>0</u>				
% Bare Ground in Herb Stratum <u>35</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP-1

W-17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/2	85	5YR 4/6	15	C	M	Cl	
10-11	7.5YR 4/1	97	5YR 4/6	3	C	M	Cl	
11-15	7.5YR 3/1	100					Cl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrologic source NHD Ephemeral Stream / River
 Redox concentrations in the dark layer

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☒ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-17

Project/Site: Collinsville City/County: Solano Sampling Date: 06-24-24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 26
 Landform (hillslope, terrace, etc.): Flat to slight hillslope Local relief (concave, convex, none): NONE Slope (%): <2
 Subregion (LRR): C Lat: 38.079765 Long: -121.833901 Datum: NAD1983
 Soil Map Unit Name: DIABLO-AYAR CLAYS, 2 to 9% slopes NWI classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: _____) ☒ = Total Cover				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>50g ft.</u>) ☒ = Total Cover				
1. <u>Polygonum monspeliensis</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Distichlis spicata</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: _____) <u>120</u> = Total Cover				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u> ☒ = Total Cover				
Remarks:				

W-17

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-9	5Y 3/2	100				Salo	
9-13	10YR 3/2	100				Salo	
13-19	10YR 3/1	100				Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	
☐ Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No ☒
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Remarks: NHD Ephemeral Stream/River

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Biotic Crust (B12)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)
☐ Water Marks (B1) (Riverine)	☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)	☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)	☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)	☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)	☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)	☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)	☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)	☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): _____ Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No ☒
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-18

Project/Site: Collinsville City/County: Solano Sampling Date: 00-24-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Christina Rodriguez, Sidney Wells Section, Township, Range: 00 3N 1E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): NONE Slope (%): 0
 Subregion (LRR): C Lat: 38.078615 Long: -121.835576 Datum: NAD 1983
 Soil Map Unit Name: Valdez silt loam, drained, 0 to 2% slopes MLRA 16 NWI classification: FRESHWATER EMERGENT WETLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☐ No ☒		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																																																																																															
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Remarks:																																																																																																			

W-18

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	10YR 2/1	100					SAND	
3.5-9	7.5 YR 3/3	100					SAND	
9-15.5	7.5YR 3/2	95	10YR 5/6	5%	C	M	SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-18

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
 See ERDC/EL TR-08-28; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 06/30/2024
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: COUNSVILLE City/County: SOLANO Sampling Date: 6-25-24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): SIDNEY WEUS & CY RODRIGUEZ Section, Township, Range: 00 3N 1E
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.078828 Long: -121.835184 Datum: NAD 1983
 Soil Map Unit Name: Valdez silt loam, drained 0 to 2% slopes, MURA 16 NWI classification: FRESHWATER EMERGENT WETLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
<u> </u> = Total Cover				
Sapling/Shrub Stratum	(Plot size: <u> </u>)			
1.				
2.				
3.				
4.				
5.				
<u> </u> = Total Cover				
Herb Stratum	(Plot size: <u>5 sq ft</u>)			
1.	<u>Rumex crispus</u>	<u>4</u>		<u>FAC</u>
2.	<u>Distichlis spicata</u>	<u>100</u>	<u>14</u>	<u>FAC</u>
3.	<u>Brassica? sp. (nigra?)</u>	<u><1</u>		
4.	<u>Centaurea solstitialis (dead)</u>	<u>15</u>		
5.	<u>Lolium perenne</u>	<u>1</u>		<u>FAC</u>
6.	<u>Hordeum maritimum</u>	<u>2</u>		<u>FAC</u>
7.	<u>Juncus sp. (balticus?)</u>	<u>12</u>		<u>FACIN</u>
8.				
<u>135</u> = Total Cover				
Woody Vine Stratum	(Plot size: <u> </u>)			
1.				
2.				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u>		% Cover of Biotic Crust <u> </u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: The Juncus sp. & BRASSICACEAE did not have all parts for identification confirmation. Centaurea solstitialis is dead.

W-18

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	7.5 YR 2/1						LoSa	
3.5-8.5	10YR 3/4	96	10YR 4/4	4	dPL	M	Sa	
8.5-16.5	7.5 YR 4/6	93	7.5 YR 4/6	7	C	M	Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Iron-Manganese Masses (F12) (LRR D)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Reduced Vertic (F18)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Red Parent Material (F21)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (F22)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No ☒
Remarks: _____	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) (Nonriverine) ☐ Sediment Deposits (B2) (Nonriverine) ☐ Drift Deposits (B3) (Nonriverine) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) ☐ Salt Crust (B11) ☐ Biotic Crust (B12) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)

Field Observations: Surface Water Present? Yes _____ No ☒ Water Table Present? Yes _____ No ☒ Saturation Present? Yes _____ No ☒ (includes capillary fringe)	Depth (inches): _____ Depth (inches): _____ Depth (inches): _____	Wetland Hydrology Present? Yes _____ No ☒
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____		
Remarks: _____		

W-18

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-08-28; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 06/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: COLLINSVILLE City/County: SOLANO Sampling Date: 6-25-24
Applicant/Owner: LS POWER State: CA Sampling Point: SP-3
Investigator(s): S. WELLS + C. RODRIGUEZ Section, Township, Range: 00 3N 1E
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: 38.078463 Long: -121.835468 Datum: NAD1983
Soil Map Unit Name: VALDEZ SIL LOAM, drained, 0 to 2% slope, MURA 1b NWI classification: FRESHWATER EMERGENT WETLAND
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Reverted to look for hydrology 07-08-24. none observed.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		<u>0</u> = Total Cover		
Sapling/Shrub Stratum	(Plot size: <u> </u>)			
1.				
2.				
3.				
4.				
5.				
		<u>0</u> = Total Cover		
Herb Stratum	(Plot size: <u>539 ft.</u>)			
1.	<u>SCHOENOPLECTUS CALIFORNICUS</u>	<u>15</u>	<u>N</u>	<u>DBL</u>
2.	<u>PUMEX CRISPUS</u>	<u>25</u>	<u>N</u>	<u>FAC</u>
3.	<u>FRANKENIA SALINA</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>
4.	<u>HELIOTROPISM CURASSAVICUM</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5.	<u>XANTHIUM STRUMARIUM</u>	<u>15</u>	<u>N</u>	<u>FAC</u>
6.	<u>PSEUDOGNAPHALUM STAMINEUM</u>	<u>3</u>	<u>N</u>	<u>FAC</u>
7.	<u>DISTICHUS SPICATA</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>
8.				
		<u>148</u> = Total Cover		
Woody Vine Stratum	(Plot size: <u> </u>)			
1.				
2.				
		<u>0</u> = Total Cover		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		
Remarks: <u>Xanthium strumarium dead but spines not observed at nodes.</u> <u>(orientale in Japan)</u>				

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

SOIL

Sampling Point: W-18
SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	97	7.5YR 5/6	3	C	PL, M	5a C1 L0	OXIDIZED RHIZOSPHERES among Very little, not 20% small fibrous roots.
5-9	10YR 3/3	98	5YR 4/6	2	C	M	5a	
9-15	2.5Y 3/2	95	7.5YR 4/6	5	C	M	8a	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Iron-Manganese Masses (F12) (LRR D)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Reduced Vertic (F18)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Red Parent Material (F21)
☐ 1 cm Muck (A9) (LRR D)	☒ Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (F22)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present?

Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Secondary Indicators (minimum of two required)

☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Oxidized Rhizospheres in the first layer were observed on tiny fibrous roots but limited and hard to see once wetted. Pulled a second core for pit to look for more & again, hard to tell if roots were alive @ not 20%, only a few.

Note:
This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

W-19

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 06/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Colima City/County: Solan Sampling Date: 10-25-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-1
Investigator(s): Sidha Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR): C Lat: 38.082449 Long: -121.837352 Datum: NAD 1983
Soil Map Unit Name: DIABLO-AYAR CLAYS, 2 to 9% slopes NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> <u>SW 11/25/24</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>Strong indicators of Hydrophytic Vegetation and wetland hydrology as well as landscape position. Problematic hydric soil likely! Seasonally ponded soil.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		<u>0</u> = Total Cover		
Sapling/Shrub Stratum	(Plot size: <u> </u>)			
1.				
2.				
3.				
4.				
5.				
		<u>0</u> = Total Cover		
Herb Stratum	(Plot size: <u>50ft</u>)			
1.	<u>CENTROMADIA PUNGENS</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
2.	<u>DISTICHLIS SPICATA</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>
3.	<u>LOLUM PERENNE</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
4.				
5.				
6.				
7.				
8.				
		<u>65</u> = Total Cover		
Woody Vine Stratum	(Plot size: <u> </u>)			
1.				
2.				
		<u>0</u> = Total Cover		
% Bare Ground in Herb Stratum <u>32%</u>		% Cover of Biotic Crust <u>3%</u>		
Remarks: <u>Centromachia pungens spp. pungens = FAC, C. parryi = FACW → both FAC.</u>				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)
Prevalence Index = B/A = <u> </u>	

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

 Prevalence Index is ≤3.0¹

 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Sampling Point: SP-1

HYDROLOGY

Arid West – Version 2.0

Note:
This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

W-19

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 06/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Collinsville City/County: Solano Sampling Date: 06-26-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-2
Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: 38.082532 Long: -121.837631 Datum: NAD 1983
Soil Map Unit Name: TAMBA MUCKY CLAY, MLRA 16 NWI classification: 0

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>X</u> SW 11/25/24
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>Strong indicators of Hydrophytic Vegetation + wetland hydrology as well as landscape position. Problematic hydric soil likely; seasonally ponded soil</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
		<u>0</u> = Total Cover		
Sapling/Shrub Stratum	(Plot size: <u> </u>)			
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
		<u>0</u> = Total Cover		
Herb Stratum	(Plot size: <u>5 sq. ft.</u>)			
1. <u>Centromadia pungens</u>		<u>60</u>	<u>Y</u>	<u>FACW</u>
2. <u>Distichlis spicata</u>		<u>40</u>	<u>Y</u>	<u>FAC</u>
3. <u>Hordeum sp.</u>		<u>1</u>	<u>N</u>	<u>FACCU</u>
4. <u> </u>				
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
		<u>101</u> = Total Cover		
Woody Vine Stratum	(Plot size: <u> </u>)			
1. <u> </u>				
2. <u> </u>				
		<u>0</u> = Total Cover		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>2</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: <u> </u> (A)	<u> </u> (B)
Prevalence Index = B/A = <u> </u>	

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

 Prevalence Index is ≤3.0¹

 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: Hordeum jubatum (FAC), maritimum (FAC), murinum (FACU), likely maritimum or murinum but 10 features not present, plants dead.

W-19

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	2.5Y 3/2	99	2.5 YR 5/8	1	C	PL/M	CI	
5-14	2.5Y 4/2						CI	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Iron-Manganese Masses (F12) (LRR D)
☐ Reduced Vertic (F18)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

 Type: CLAY
 Depth (inches): 0-14

Hydric Soil Present?

Yes

No ☒

Remarks:

May be a recently developed wetland or is a seasonally ponded soil.
 Likely seasonally ponded soil due to restrictive clay layer. Landscape position generally sloping 'downhill' along NHD flowline path.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☒ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☒ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒
 Water Table Present? Yes ☐ No ☒
 Saturation Present? Yes ☐ No ☒
 (includes capillary fringe)

Depth (inches):
 Depth (inches):
 Depth (inches):

Wetland Hydrology Present?

Yes

No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Next to ephemeral stream/river NHD flowline. Biotic crust is polygon shaped by characteristic upturned edges + darker surface layer.

Note:
This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

W-19

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 06/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: COLLINSVILLE City/County: SUISUN CITY/SOLANO Sampling Date: 6-26-24
Applicant/Owner: LS POWER State: CA Sampling Point: SP-3
Investigator(s): S. WELLS + C.Y. RODRIGUEZ Section, Township, Range: 00 3N 1E
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): NONE Slope (%): 0
Subregion (LRR): C Lat: 38.082512 Long: -121.838496 Datum: NAD83
Soil Map Unit Name: TAMPA MUCKY CLAY, MLRA 16 NWI classification: RIVERINE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>X</u> <u>SW 11/25/24</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>Strong indicators of Hydrophytic vegetation and wetland hydrology as well as landscape position. Problematic hydric soil likely; seasonally ponded soil.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		<u>0</u> = Total Cover		
Sapling/Shrub Stratum	(Plot size: <u> </u>)			
1.				
2.				
3.				
4.				
5.				
		<u>0</u> = Total Cover		
Herb Stratum	(Plot size: <u>5 sq ft</u>)			
1.	<u>SALICORNIA PACIFICA</u>	<u>20%</u>	<u>Y</u>	<u>OBL</u>
2.				
3.				
4.				
5.				
6.				
7.				
8.				
		<u>20%</u> = Total Cover		
Woody Vine Stratum	(Plot size: <u> </u>)			
1.				
2.				
		<u>0</u> = Total Cover		
% Bare Ground in Herb Stratum <u>80%</u>		% Cover of Biotic Crust <u>0</u>		
Remarks: <u>Salicornia pacifica can handle saline conditions.</u>				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)
Prevalence Index = B/A = <u> </u>	

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

 Prevalence Index is ≤3.0¹

 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

W-19

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			
0-16.5	7.5YR 3/1	99	5YR 4/6	1	C M	CLAY		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Iron-Manganese Masses (F12) (LRR D)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Reduced Vertic (F18)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Red Parent Material (F21)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (F22)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☒ Other (Explain in Remarks)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>CLAY</u> Depth (inches): <u>0-16.5</u>	Hydric Soil Present? Yes ☐ No ☒
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Remarks: Soils my faint or no indicators! Recently Developed Wetland or Seasonally Ponded Soil. Likely seasonally ponded soil due to restrictive clay layer. Seems to have been happening for a long time.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
☐ Surface Water (A1)	☒ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☒ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)

Field Observations:				Wetland Hydrology Present? Yes ☒ No ☐
Surface Water Present?	Yes ☐ No ☒	Depth (inches):		
Water Table Present?	Yes ☐ No ☒	Depth (inches):		
Saturation Present?	Yes ☐ No ☒	Depth (inches):		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Located in NW riverine. Hard/brittle salt crust from evaporation of saline surface water (presence of Salicornia pacifica).

Note:
This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-19

Project/Site: Collinsville City/County: SUISUN CITY/SOLANO Sampling Date: 6-26-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-4
Investigator(s): CY RODRIGUEZ + S. WELLS Section, Township, Range: 23 3N 1E
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): NONE Slope (%): 0
Subregion (LRR): C Lat: 38.0820237817 Long: -121.838289534 Datum: NAD 1983
Soil Map Unit Name: TAMBA MUCKY CLAY NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>

Is the Sampled Area within a Wetland? Yes X No X SW 11/25/24

Remarks: Strong indicator of hydrophytic vegetation + likely a wetland 'periodically lacking indicators of wetland hydrology' due to VERY SEASON! Problematic hydric soil likely seasonally ponded soil. Landscape position, vicinity to other wetlands supports as well as aerial imagery.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			

Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			

Herb Stratum (Plot size: <u>5 sq. ft.</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Distichlis spicata</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>
2. <u>Frankenia salina</u>	<u>1</u>	<u>N</u>	<u>FACW</u>
3. <u>Hordeum maximum</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>
4. <u>Lolium perenne</u>	<u>1</u>	<u>N</u>	<u>FAC</u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>127</u> = Total Cover			

Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No

Remarks: Hordeum maximum was very dm and inflorescence was broken/blown away on all specimens. Species identified through familiarity; also possibly Hordeum maximum. Atriplex sp. next to area to be incl. w/ W-20 salt on leaves + stems of the Distichlis spicata.

SOIL

Sampling Point: SP-4

W 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-8.5	5Y 3/1	99	10YR 5/6	1	C	M	Cl	
3.5-10	2.5Y 3/2	100					Cl	
10-12	10YR 4/2	100					SaCl	
12-15	2.5Y 4/2	100					SiCl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3) ✓ *no redox concentrations*
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8) *not no redox*
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

 Type: CLAY
 Depth (inches): 0-10
Hydric Soil Present? Yes ☐ No ☒

Remarks:

Likely seasonally ponded soil due to restrictive clay layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

 Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)
Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

 Period of potential inundation visible on aerial imagery as well as salt crust. Salt visible on *Dactyloctenium aegyptium* in the area. Landscape position indicates that surface water inundation likely during rain season (visit is during dry season). Located on the fringe of wetland, level, & restrictive layer.

Note:
This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Swain City/Solano Sampling Date: 6-26-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-5
Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): NONE Slope (%): 0
Subregion (LRR): C Lat: 38.082511 Long: -121.838500 Datum: NAD 1983
Soil Map Unit Name: TAMBA MUCKY CLAY, MICA 16 NWI classification: RIVERINE
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☒ <u>SW 11/25/24</u>
Hydric Soil Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: <u>Strong indicators of hydrophytic vegetation and wetland hydrology as well as landscape pattern. Problematic hydric soil likely; seasonally ponded soil.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
Herb Stratum (Plot size: <u>55 sq. ft.</u>)				Column Totals: _____ (A) _____ (B)
1. <u>Distichlis spicata</u>	<u>7</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Polypogon monspeliensis</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	☒ Dominance Test is >50%
2. _____	_____	_____	_____	☐ Prevalence Index is ≤3.0 ¹
= Total Cover				☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				☐ Problematic Hydrophytic Vegetation ¹ (Explain)
% Bare Ground in Herb Stratum <u>83</u> % Cover of Biotic Crust <u>12</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks:				Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: W-19
SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 3/1	100					Clay	
10-15.25	10YR 3/2	100					Clay	Slight horizon of sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1) ☐ Sandy Redox (S5)
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (LRR C) ☐ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (LRR D) ☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12) ☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1) ☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

 Type: CLAY
 Depth (inches): 0-15.25
Hydric Soil Present? Yes ☐ No ☒

Remarks:

Likely seasonally ponded soil due to restrictive clay layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1) ☒ Salt Crust (B11)
☐ High Water Table (A2) ☒ Biotic Crust (B12)
☐ Saturation (A3) ☐ Aquatic Invertebrates (B13)
☐ Water Marks (B1) (Nonriverine) ☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) (Nonriverine) ☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4)
☒ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Thin Muck Surface (C7)
☐ Water-Stained Leaves (B9) ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0
 Water Table Present? Yes ☐ No ☒ Depth (inches): 0
 Saturation Present? Yes ☐ No ☒ Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Biotic crust is polygon shaped w/ characteristic upturned edges + darkened surface layer. Hard/brittle salt crust from evaporation of saline surface water. NW1 Riverine

Note:

This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-19

Project/Site: Collinsville City/County: Suisun City/Solano Sampling Date: 07-07-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-6
 Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.082528 Long: -121.838312 Datum: NAD1983
 Soil Map Unit Name: TAMPA MUCKY CLAY, MLRA 16 NWI classification: 0
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☒ SW 11/25/24
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
		<u>0</u> = Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
		<u>0</u> = Total Cover		Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>5sq.ft.</u>)				
1. <u>Rumex crispus</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
2. <u>Distichlis spicata</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Brassica nigra</u>	<u>5</u>	<u>N</u>		
4. <u>Lepidium latifolium</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
5. _____				
6. _____				
7. _____				
8. _____				
		<u>101</u> = Total Cover		Hydrophytic Vegetation Present? Yes ☒ No ☐
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
		<u>0</u> = Total Cover		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		
Remarks: <u>Distichlis spicata cover is largely dead, approximately 5% Absolute cover seems alive. The dead forms a sort of very mat going in the east direction which could be due to wind based on the other, taller plants.</u>				

W-19

SOIL

Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-6	2.5Y 3/1	99	10YR 3/3	1	C	PL	Clay	
6-15.5	10YR 4/2	93%	7.5YR 4/6	7%	C	M, PL	Cl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☒ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☒ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present? Yes ☒ No ☐
Type: <u>clay</u>	
Depth (inches): <u>0-15.5</u>	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes ☐ No ☒
Surface Water Present? Yes ☐ No ☒	Depth (inches): <u>0"</u>	B6 + B7 not strong indicators dry season
Water Table Present? Yes ☐ No ☒	Depth (inches): <u>0"</u>	
Saturation Present? (includes capillary fringe) Yes ☐ No ☒	Depth (inches): <u>0"</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Area crusty + had potential for cracks under dense vegetation but looks to be possible cow footprints causing lots of indentations + cracks + holes in the soil. Also some cow paths dried. Landscape position indicates that surface water inundation likely during RAIN season (visit is during dry season). Located on the fringe of wetland, level, + restrictive layer.

W-22

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: COLLINSVILLE City/County: SUISUN CITY / SOLANO Sampling Date: JULY 1, 2024
Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
Investigator(s): S. WELLS + C. RODRIGUEZ Section, Township, Range: 3N 1E 23
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: 38.082479 Long: -121.838864 Datum: NAD 1983
Soil Map Unit Name: TAMBA MUCKY CLAY, MLRA 16 NWI classification: FRESHWATER/EMERGENT WETLAND
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks: <u>landscape position higher than surrounding area – maybe a berm/levee.</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Sapling/Shrub Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Remarks: <u>No flowers found on Juncus spp. Potentially J. balticus or J. mexicanus based on the botanical surveys completed for the project – both are FACW.</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum (Plot size: <u>5 meter</u>)				
1. <u>Foeniculum vulgare</u>	<u>15%</u>	<u>N</u>	<u> </u>	
2. <u>Lepidium latifolium</u>	<u>2%</u>	<u>N</u>	<u>FAC</u>	
3. <u>Juncus spp. (balticus?)</u>	<u>90%</u>	<u>Y</u>	<u>FACW</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

SOIL

Sampling Point: SP-1

W-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4.5	10YR 2/1	100					loSa	
4.5-15	2.5YR 3/2	100					Sa	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Landscape position looks to be a berm/levee relative to surrounding area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)
- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
 Water Table Present? Yes _____ No X Depth (inches): _____
 Saturation Present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dense vegetation (mostly dead junco spp.) covering ground. Dug under + no signs on soils - cracks, salt crust, etc.

WETLAND DETERMINATION DATA FORM – Arid West Region

W22

Project/Site: Collinsville City/County: SUISUN CITY / SOLANO Sampling Date: 07-01-24
 Applicant/Owner: LS Pomer State: CA Sampling Point: SP-2
 Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): None Slope (%): X
 Subregion (LRR): C Lat: 38.082455 Long: -121.839133 Datum: NAD1983
 Soil Map Unit Name: TAMPA MUCKY CLAY, MLRA 16 NWI classification: FRESHWATER EMERGEN WETLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks: <u>Redox and oxidized rhizospheres along living roots, though present, were both just fairly 28 - therefore not strong indicators for both soil + hydrology.</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>53 sq ft</u>)				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Lepidium latifolium</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	
2. <u>Heliotropium curassavicum</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Schoenoplectus americanus</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
4. <u>dead sticks (maybe BRASSICACEAE)</u>	<u>7</u>	<u>N</u>	<u> </u>	
<u>112</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: <u>Heliotropium curassavicum very dense and S. americanus just starting. In this wetland area L. latifolium monoculture nearby in the larger potential area, may indicate invasion in seasonally flooded marsh + slightly higher elevation.</u>				

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	7.5YR 2.5/1	100					SACLO	ORGANIC matter visual
5-10	10YR 4/1	95	7.5YR 3/4	5	C	M	SAND	C/soft masses sandy soils reddish mottles 1987 channel

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☒ Sandy Redox (S5) <i>SAFELY 200</i>		☐ 1 cm Muck (A9) (LRR C)	
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)		☐ 2 cm Muck (A10) (LRR B)	
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)		☐ Reduced Vertic (F18)	
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)		☐ Red Parent Material (TF2)	
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)		☐ Other (Explain in Remarks)	
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)			
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)			
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)			
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)			
☐ Sandy Gleyed Matrix (S4)				

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Matrix chroma of 2 or less + 2% redox concentrations though not much more than 2% - very little redox visible. High organic matter at surface. seen visually-soil texture determination (p.29) not done due to 'CLLO' often 'inconclusive'

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one required; check all that apply)
☐ Surface Water (A1) ☐ Salt Crust (B11) ☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2) ☐ Biotic Crust (B12) ☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3) ☐ Aquatic Invertebrates (B13) ☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4) *SAFELY 200* ☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ☐ No ☒ Depth (inches): 0"
Water Table Present? Yes ☐ No ☒ Depth (inches): 0"
Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0"

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: C3 observed along living roots, but very low percentage overall

WETLAND DETERMINATION DATA FORM – Arid West Region

W-22

Project/Site: COLLINSVILLE City/County: SUISUN CITY/SOLANO Sampling Date: JULY 1 2024
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-3
 Investigator(s): S. WELLS + CY. RODRIGUEZ Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR): C Lat: 38.082382 Long: -121.83942 Datum: NAD 1983
 Soil Map Unit Name: TAMPA MUCKY CLAY, MLRA 16 NWI classification: FRESHWATER EMERGEN
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) WETLAND
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>		
Remarks: <u>strong indicators of hydrophytic vegetation + wetland hydrology. problematic hydric soil likely seasonally ponded.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>55AFT</u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Schoenoplectus acutus</u>	<u>45</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Polypogon monspeliensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Heliotropium curassavicum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>30%</u>	% Cover of Biotic Crust <u> </u>			
Remarks: <u> </u>				

SOIL

Sampling Point: 3

W-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	7.5YR 2.5/1	100					SANDY CLAY	
4-14	10YR 3/1	100					SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: SANDY CLAYDepth (inches): 0-4Hydric Soil Present? Yes ☐ No ☒

Remarks: Dominant chroma of 2 or less but lacking redox concentrations. Darker organic surface layer = sandy clay → clay could present restrictive layer.
 muck (sandy soil 1997) for seasonally ponded problematic hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☒ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface soil cracks apparent in vicinity of sampling point and similar vegetation, just more S acutus and bare ground.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-22

Project/Site: COLUMBIAVILLE City/County: SUISUN CITY/SOLANO Sampling Date: 7-9-24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-4
 Investigator(s): CY. RODRIGUEZ + S. WELLS Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.082332 Long: -121.840525 Datum: NAD 1983
 Soil Map Unit Name: TAMBA MUCKY CLAY, MURA 16 NWI classification: RIVERINE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks: <u>on the larger potential wetland area, Lepidium latifolium invasion / monoculture may be changing the hydrology & can be associated w/ slightly higher areas of elevation.</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				

Remarks: Lepidium latifolium invaded area / monoculture. Very dense and likely @ slightly higher elevation / bordering area w/ hydrology (potential wetland area).

SOIL

Sampling Point: SP-4

W-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	5Y 2.5/1						SA CL	Full of roots + plant material > 5%
3.5-15	5Y 3/1	99	2.5YR 4/8	1	C	M	SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: SANDY CLAYDepth (inches): 0-3.5Hydric Soil Present? Yes ☐ No ☒

Remarks: Potential for seasonally ponded problematic hydric soil w/ dominant chroma of 2 or less but lacking redox concentrations of 2% or higher. Clay could present restrictive layer + roots + plant material (darker organic) @ surface (1487 manual).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: On the immediate surrounding areas that lack vegetation the surface soil cracks are apparent as well as the salt crust + similar to other seasonally ponded wetlands in the area. Hydrology not observed in the vegetation plot or areas dominated by *Lepidium latifolium* 'monoculture'. NW Riverine.

W-22

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: San Juan City / SOLANO Sampling Date: 07-08-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-5
Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): NONE Slope (%): 0
Subregion (LRR): C Lat: 38.082327 Long: -121.840606 Datum: NAD1983
Soil Map Unit Name: TAMBA MUCKY CLAY, MLRA16 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u> </u>				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>532 FT</u>)				
1. <u>Distichlis spicata</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Salicornia pacifica</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Polypogon monspeliensis</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
4. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
<u>71</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>				
2. <u> </u>				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>29</u>	% Cover of Biotic Crust <u>0</u>			

Remarks: No Lepidium latifolium in immediate vicinity.
Salicornia pacifica can prefer more salinity.

W-22

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/2	100					Clay loam	
5-12.5	10YR 2/1						Silty Clay	
12.5-16.5	5Y 4/1	93	10YR 5/8	7	C	M	Clay	Redox concentrations/ mosses

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☒ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☒ Thick Dark Surface (A12) <i>Depleted layer below 12 in</i> | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) <i>redox soft mosses</i> | |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Redox concentrations as soft mosses. > 2% distinct → low chroma high value.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☒ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Crayfish Burrows (C8) |
| ☒ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) | ☐ Shallow Aquitard (D3) |
| ☐ Water-Stained Leaves (B9) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): <u>0'</u>
Water Table Present?	Yes ☐ No ☒	Depth (inches): <u>0'</u>
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches): <u>0'</u>

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface soil cracks in the immediate vicinity of the vegetation community in open bare ground. Salt crust result from saline surface water likely + hard/shrubby + Salicornia pacifica likes more saline.

W-22

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: COLLINSVILLE City/County: SAN JUAN CITY/SOLANO Sampling Date: JULY 10, 2024
Applicant/Owner: LS POWER State: CA Sampling Point: SP-6
Investigator(s): C.Y. RODRIGUEZ + J. WELLS Section, Township, Range: 3N 1E 23
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD 1983
Soil Map Unit Name: TAMPA MUCKY CLAY, MLRA 16 NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>In the larger potential wetland area, Lepidium latifolium invasion/m monoculture may be changing the hydrology & can be associated w/ slightly higher areas of elevation.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5sq.ft.</u>)	_____	_____	_____	
1. _____	_____	_____	_____	
2. <u>SALICORNIA PACIFICA</u>	<u>2</u>	_____	<u>OBL</u>	
3. <u>LEPIDUM LATIFOLIUM</u>	<u>25</u>	_____	<u>FAC</u>	
4. <u>DISTICHALIS SPICATA</u>	<u>90</u>	_____	<u>FAC</u>	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: <u>In the transition area of Lepidium latifolium invasion/m monoculture.</u>				

SOIL

Sampling Point: SP-6

W-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	2.5Y 5/2	98	5YR 5/4	2			SACL	
3.5-15	10YR 3/1	99	10YR 5/6	1	C,CS,M		SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: SACLDepth (inches): 0-3.5Hydric Soil Present? Yes ☐ No ☒

Remarks:

Removed a second core to confirm 3.5 vs. 4 ft depth for first layer being Sandy Redox Matrix. Potential for seasonally ponded problematic soil w/ Sandy clay texture. Organic/plant matter darker + visible in first layer (1987 manual)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

- Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology not apparent in areas w/ *Lepidium latifolium* transition or monoculture. Could indicate slightly higher elevation than nearby less vegetated area w/ soil cracks + *Schoenoplectus americanus*.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-23

Project/Site: COLLINSVILLE City/County: SUISUN CITY/SOLANO Sampling Date: JULY 2, 2021
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
 Investigator(s): S. WELLS + CY RODRIGUEZ Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR): C Lat: 38.082503 Long: -121.839880 Datum: NAD 1983
 Soil Map Unit Name: PIABLO - AYAR CLAYS + TMBA MUCKY CLAY NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: <u>Point next to NWI: PEM 1B freshwater emergent wetland</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>FRANKENIA SALINA</u>	<u>30%</u>	<u>Y</u>	<u>FACW</u>	
2. <u>DISTICHLIS SPICATA</u>	<u>75%</u>	<u>Y</u>	<u>FAC</u>	
3. <u>DRIED BRANCHES (NO ID)</u>	<u>21%</u>	<u>N</u>	<u> </u>	
4. <u>SCHENOPLERETUS CALIFORNICUS</u>	<u>2%</u>	<u>N</u>	<u>OBL</u>	
Woody Vine Stratum (Plot size: <u> </u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

W-23

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-1.5	5YR 3/1	100				SaCl	
1.5-8.5	10YR 4/1	100				SaCl	
8.5-17.5	Gley 5/10Y	99	10YR 4/6	1	C M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Redox (S5)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4)	☒ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)	

Indicators for Problematic Hydric Soils³:

☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ FAC-Neutral Test (D5)
☒ Salt Crust (B11)	
☐ Biotic Crust (B12)	
☐ Aquatic Invertebrates (B13)	
☐ Hydrogen Sulfide Odor (C1)	
☐ Oxidized Rhizospheres along Living Roots (C3)	
☐ Presence of Reduced Iron (C4)	
☐ Recent Iron Reduction in Tilled Soils (C6)	
☐ Thin Muck Surface (C7)	
☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): 0"
Water Table Present?	Yes ☐ No ☒	Depth (inches): 0"
Saturation Present?	Yes ☐ No ☒	Depth (inches): 0"

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Standing, ponded water ~ in 20 feet. Typha spp. + large dense stand S. californicus. Water stained leaves + salt crust ~ in 10 feet. greenby cracks.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-23

Project/Site: COLLINSVILLE City/County: Suisun City/Solano Sampling Date: JULY 2, 2021
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): CY RODRIGUEZ + S. WELLS Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): none Slope (%): 22.5
 Subregion (LRR): C Lat: 38.082501 Long: -121.839900 Datum: NAD 1983
 Soil Map Unit Name: PIABLO - AYACUAYS, 2 to 9% slope NWI classification: Q

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>/</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u>/</u>				
2. <u>/</u>				
3. <u>/</u>				
4. <u>/</u>				
Sapling/Shrub Stratum (Plot size: <u>/</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <u>/</u>				
2. <u>/</u>				
3. <u>/</u>				
4. <u>/</u>				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Dead grass</u>	<u>45</u>			
2. <u>/</u>				
3. <u>Dead sticks/twigs (no parts to ID)</u>	<u>30</u>			
4. <u>but probably Brassica</u>				
5. <u>/</u>				
6. <u>Dead Brassicaceae</u>	<u>25</u>			
7. <u>/</u>				
Woody Vine Stratum (Plot size: <u>/</u>)				Hydrophytic Vegetation Present? Yes ☐ No ☒
1. <u>/</u>				
2. <u>/</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks: All plants are dead. Brassicaceae spp. has seeds (not upland spp.) Brassica are FACU species ↳ fac u Brassica nigra? Raphanus sativus? } probably.				

W-23

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14.5	2.5Y 3/2	100					CLD	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): 0'
Water Table Present? Yes _____ No ☒ Depth (inches): 0'
Saturation Present? Yes _____ No ☒ Depth (inches): 0'
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Cleared dead veg to look at soil surface. CRUMBLY SOIL w/ CLODS + CREVICES + BURROWS but not surface soil cracks.

Note:
This sampling point did not meet the three criteria and the data sheet was revised on 11/25/24 to indicate it is not a wetland. See section 5.1 of the Aquatic Resources Delineation Report for more detail.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: COLLINSVILLE City/County: SO. AND Sampling Date: 07-02-24
Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
Investigator(s): J. WELLS, C.Y. RODRIGUEZ Section, Township, Range: 23 3N 1E
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: 38.082579 Long: -121.842914 Datum: NAD 1983
Soil Map Unit Name: Tamara Mucky Clay NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>0</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>
Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>X</u> <u>SW 11/25/24</u>		

Remarks: Sandy soils. Large, dry salt crust area to the Northwest = NWI freshwater pond & soils in water w/ NWI hydrology between. strong indicators of hydrophytic vegetation & hydric soil: likely lacking hydrology due to dry season + sandy soil.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Distichlis spicata</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>
2. <u>Heterotheca grandiflora</u>	<u>3</u>	<u>N</u>	<u> </u>
3. <u>Bromus diandrus</u>	<u>1</u>	<u>N</u>	<u> </u>
4. <u>Unknown spp. #1 (twigs)</u>	<u>10</u>	<u>N</u>	<u> </u>
5. <u>Unknown spp. #2 (grass)</u>	<u>6</u>	<u>N</u>	<u> </u>
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>70</u> = Total Cover			
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>		

Remarks: Heterotheca grandiflora likely based on skeletons (dead) plants & one partially live plant. Open ecology, disturbed areas, dry streambeds, sand.

SOIL

Sampling Point: SP-1

W-24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6.5	7.5YR 3/2	95	7.5YR 5/8	5	C	M	Sandy	coated sand grains
8.5-16	10YR 3/3	97	5YR 5/8	3	C	M	Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☒ Sandy Redox (S5) <i>common redox concentrations</i>	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: *SS based on the first soil layer where concentrations were within a matrix. In addition, a few coated sand grains were observed by hand lens.*

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): <u>0'</u>	Wetland Hydrology Present? Yes ☐ No ☒
Water Table Present?	Yes ☐ No ☒	Depth (inches): <u>0'</u>	
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches): <u>0'</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *300 feet to the northwest is a large, unvegetated area of salt crust. Likely wetland 'periodically lacking indicators of wetland hydrology' due to dry season.*

WETLAND DETERMINATION DATA FORM – Arid West Region

W-24

Project/Site: COLLINSVILLE City/County: SOVANO Sampling Date: JULY 2, 2024
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): S. WELLS + C.Y. RODRIGUEZ Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): Slight Hillslope Local relief (concave, convex, none): none Slope (%): 20
 Subregion (LRR): C Lat: 38.082549 Long: -121.842681 Datum: NAD 1983
 Soil Map Unit Name: Tamla muddy clay, MLRA 16 NWI classification: Ø

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>Ø</u>	
Wetland Hydrology Present?	Yes _____ No <u>Ø</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>Ø</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>Ø%</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
<u>Ø</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
<u>Ø</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>X</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____																		
<u>Ø</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>) 1. <u>Dead Annual grass (Avena sp.)</u> <u>10</u> <u>N</u> 2. <u>DISTICHLIS SPICATA</u> <u>5</u> <u>N</u> <u>FAC</u> 3. <u>BRASSICA SP.</u> <u>40</u> <u>Y</u> 4. <u>Dead STICKS + BRANCHES</u> <u>30</u> <u>Y</u> 5. _____ 6. _____ 7. _____ 8. _____																		
<u>85</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>X</u>) 1. _____ 2. _____																		
<u>Ø</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust <u>Ø</u>																		
Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)																		
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																		
Remarks:																		

Sampling Point: SP-2

W-24
SP-2

[illegible]

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No ☒

Remarks:

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? Yes ☐ No ☒ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes No **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-25

Project/Site: Cadinsville City/County: Solano Sampling Date: 07-03-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): SWells, C Rodriguez Section, Township, Range: 23 3N 1E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.082470 Long: -121.841899 Datum: NAD1983
 Soil Map Unit Name: TAMBA MUCKY CLAY, MLRA 16 NWI classification: 0

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
2. <u>Distichlis spicata</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Bulboschoenus maritimus</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks: <u>Vegetation in plot is very dry and degraded; vegetation ID'd based on remaining plant characteristics.</u>				

W-25

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-8.5	10YR 3/4	99	10YR 5/8	1	C	M	Sand	
8.5-16	7.5YR 2.5/2	96	5YR 4/6	4	C, CS	M	Sand	has covered sand grains, paste-like

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): 0
Water Table Present? Yes _____ No ☒ Depth (inches): 0
Saturation Present? Yes _____ No ☒ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: oxidized rhizospheres present; however, not more than 2%.

W-26

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: COLLINSVILLE City/County: BROS LANDING/SOLANO Sampling Date: 7/3/2024
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
 Investigator(s): CY RODRIGUEZ + S. WELLS Section, Township, Range: 3N 1E 22
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.082423 Long: -121.844126 Datum: NAD1983
 Soil Map Unit Name: DIABLO - AYAN CLAYS, 2 to 9 m deep NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u>X</u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>S</u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>DISTICHILIS SPICATA</u>	<u>75</u>	<u>X</u>	<u>FAC</u>	
2. <u>HETEROTHECA GRANDIFLORA</u>	<u>2%</u>	<u> </u>	<u> </u>	
3. <u>dead grass (Festuca perennis)?</u>	<u>3%</u>	<u> </u>	<u> </u>	
4. <u>dead branches</u>	<u>5%</u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>X</u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>15</u>	% Cover of Biotic Crust <u>0</u>			
Remarks:				

SOIL

Sampling Point: SP1

/W-26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 2/1						Sand	
3-12.5	2.5Y 3/2		7.5YR 5/4	1	C	M	Sand	hard to find, low m
12.5-14	7.5YR 3/2						loamy sand	
SECOND CORE								
3IN			2.5YR 4/6	2	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sandy. Redox is not 2as
took second core to look at bottom layer 3in very red compared to middle layer

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Crayfish Burrows (C8) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) | ☐ Shallow Aquitard (D3) |
| ☐ Water-Stained Leaves (B9) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____
 Water Table Present? Yes _____ No _____ Depth (inches): _____
 Saturation Present? Yes _____ No _____ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Elevational changes are subtle but seem to indicate drainage patterns including one channel/stream where the Distichlis is less green & is close to NW1 line. Approximately 1,000 feet from a 'downstream' dried salt crust in NW1 freshwater pond. Salt crust visible from pit location.

US Army Corps of Engineers Swale-like valleys sloping down to the south.

W-26

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano Sampling Date: 07-03-24
Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
Investigator(s): S. Wells, C.Y. Rodriguez Section, Township, Range: _____
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD1983
Soil Map Unit Name: PIADLO - AYAR CLAYS, 2 to 9 1/2 slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (Plot size: _____)			
1. <u>Distichlis spicata</u>	<u>75</u>	<u>Y</u>	<u>FAC</u>
2. <u>Rumex crispus</u>	<u>15</u>	<u>N</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
_____ = Total Cover			
Woody Vine Stratum (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
_____ = Total Cover			
% Bare Ground in Herb Stratum <u>4</u>	% Cover of Biotic Crust <u>0</u>		
Remarks:			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
☒ Dominance Test is >50%
____ Prevalence Index is ≤3.0¹
____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No _____

W-26

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			
0-8.5	10YR 2/1	100				SAND		
8.5-15.5	10YR 3/2	98	7.5YR 5/8	2	C M,CS	SAND		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No ☒
--	---

Remarks: Sandy soils

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): 0' Water Table Present? Yes _____ No ☒ Depth (inches): 0' Saturation Present? Yes _____ No ☒ Depth (inches): 0' (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No ☒
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pit was dug in the channel of what appears to be a swale. Pit is nearby a "freshwater pond" on NWI map, approximately 300ft upstream.

Note:
This sampling point did not meet the three criteria and
the data sheet was revised on 11/25/24 to indicate it
is not a wetland. See section 5.1 of the Aquatic
Resources Delineation Report for more detail.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-27

Project/Site: COLLINSVILLE City/County: BIRDS LANDING / SOLANO Sampling Date: 7/13/2024
Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
Investigator(s): S. WELLS + C.Y. RODRIGUEZ Section, Township, Range: 3N 1E 22
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR): C Lat: 38.081822 Long: -121.846953 Datum: NAD 1983
Soil Map Unit Name: DIABLO-Ayar CLAYS 2 to 9 m slopes NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>X</u> SW 11/25/24
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks: <u>Strong indicators of hydrophytic vegetation + hydric soil, likely lacking indicators of hydrology due to dry season survey. Below a NW flowline stream / + above NW freshwater emergent wetland.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>DISTICHLIS SPICATA</u>	<u>75%</u>	<u>X</u>	<u>FAC</u>
2. <u>LEPIDIUM LATIFOLIUM</u>	<u>50%</u>	<u>N</u>	<u>FAC</u>
3. <u>Dead Sticks (Rumex crispus)</u>	<u>20%</u>	<u>N</u>	<u>FAC</u>
4. <u>Dead Sticks (CENTAUREA SOLSTITIALIS)</u>	<u>5%</u>	<u>N</u>	<u>Q</u>
5. <u>LEPIDIUM LATIFOLIUM (dead sticks)</u>	<u> </u>	<u> </u>	<u> </u>
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>87</u> = Total Cover			
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
% Bare Ground in Herb Stratum <u>13</u>		% Cover of Biotic Crust <u>0</u>	
Remarks: <u>Best guesses on species for the 'dead sticks'. Seems to have Lepidium latifolium + C. solstitialis could indicate the boundary. Vegetation of nearby uplands used for delineation if wetland.</u>			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	% ¹	Type ¹	Loc ²	Texture	Remarks
0-3.5	10YR 2/2						SANDY LOAM	
3.5-12	10YR 3/2	90	2.5Y 4/4	10	C	M	SAND	
12-14	10YR 2/2	93	10YR 4/4	7	C	M	SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☒ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐Remarks: Sandy soil → low chroma (≤ 2) + Redox $> 2\%$

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): 0'
 Water Table Present? Yes _____ No ☒ Depth (inches): 0'
 Saturation Present? Yes _____ No ☒ Depth (inches): 0'
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No obvious Salt crust nearby / look to the South E → NW1 freshwater Emergent Wetlands. Likely a wetland periodically lacking indicators of wetland hydrology due to dry season summer.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-28

Project/Site: Collinsville City/County: Solano Sampling Date: 07-08-24
 Applicant/Owner: LS Power State: CA Sampling Point: SP-1
 Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 22
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.081714 Long: -121.848830 Datum: NAD 1983
 Soil Map Unit Name: DIMBL - AMARCLAYS 2 to 9% slopes NWI classification: 0
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x 1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x 2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x 3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x 4 = <u> </u>
<u>0</u> = Total Cover				UPL species <u> </u> x 5 = <u> </u>
				Column Totals: <u> </u> (A) <u> </u> (B)
				Prevalence Index = B/A = <u> </u>
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Conium maculatum</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Artemisia douglasiana</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	<u> </u> Prevalence Index is ≤3.0 ¹
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>50</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP-1

W-28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	7.5YR 3/2	100					SaLoam	
4-11.5	10YR 2 1/2	70	2.5YR 4/6	30	C	PL/M	SiClay	
11.5-15.5	10YR 2/1	96	5YR 3/4	4	C	PL/M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil pit was offset from location of vegetation plot due to health concerns from poisonous plants (*Conium maculatum*).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☒ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☒ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0"
 Water Table Present? Yes ☐ No ☒ Depth (inches): 0"
 Saturation Present? Yes ☐ No ☒ Depth (inches): 0"
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Approximately 30 feet to the SE of pit an area was observed where water had washed through & been sitting & evaporating. Soil cracks and salt crust observed there & within a Conium.

W-28

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Collinsville City/County: Solano Sampling Date: 07-08-24
Applicant/Owner: LS Power State: CA Sampling Point: SP-2
Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 22
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: 38.081743 Long: -121.848972 Datum: NAD1983
Soil Map Unit Name: DIABLO-AYAR CLAYS, 2 to 9 m NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u> </u>				
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>BRASSICA sp?</u>	<u>30</u>	<u>✓</u>	<u>X</u>	
2. <u>ARTEMESIA DOUGLASIANA</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	
3. <u>CENTAUREA SOLSTITIALIS (dead)</u>	<u>40</u>	<u>✓</u>	<u>X</u>	
4. <u>SALSOLA SODA? (dead, skeleton)</u>	<u>3</u>	<u>X</u>	<u>FACU</u>	
5. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
<u>78</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>				
2. <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>22</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: <u>Skeleton looked similar to Salsola soda skeleton but based on floristic survey that species was not observed.</u>				

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	2.5Y 3/2						LOAMY SAND	
4-16.5	2.5Y 3/6						SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| ☐ 1 cm Muck (A9) (LRR C) |
| ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Reduced Vertic (F18) |
| ☐ Red Parent Material (TF2) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- | |
|--|
| ☐ Water Marks (B1) (Riverine) |
| ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Drift Deposits (B3) (Riverine) |
| ☐ Drainage Patterns (B10) |
| ☐ Dry-Season Water Table (C2) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Shallow Aquitard (D3) |
| ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

W-29

Project/Site: COLLINSVILLE City/County: SUBUNCITY/SOLANO Sampling Date: 7/8/24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
 Investigator(s): CY. RODRIGUEZ + S. WELLS Section, Township, Range: 00 3N 1E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.081801 Long: -121.846584 Datum: NAD 1983
 Soil Map Unit Name: DIABLO - AMAR CLAYS, 2 to 9% NWI classification: 0

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>65</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: W-29
SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	5YR 2.5/1	99	5YR 4/6	1	C	M	loamy sand	
4-16	2.5Y 3/2	65	10YR 3/6	35	C+CS	PL+M	sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☒ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

- Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: COLLINSVILLE City/County: SUWAN CITY/SOLANO Sampling Date: 7/8/24
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): CY. RODRIGUEZ - S. WELLS Section, Township, Range: 00 3N 1E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.081740 Long: -121.846810 Datum: NAD 1983
 Soil Map Unit Name: DIABLO-AYAR CLAYS, 2 to 9 in NWI classification: 0
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> </u> (A) Total Number of Dominant Species Across All Strata: <u> </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> </u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>5m x 4m</u>)				Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>CENTAUREA SOLSTITIALIS</u>	<u>35</u>	<u>Y</u>	<u>X</u>	
2. <u>LEPIDIUM LATIFOLIUM</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>55</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>45</u>	% Cover of Biotic Crust <u> </u>			

Remarks:

W-29
t: SP-2

$$SP = 2$$
[illegible]

Indicators for Problematic Hydric Soils³:

☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes _____ No ☒

Secondary Indicators (2 or more required)

Wetland Hydrology Present? Yes No ☒

Arid West – Version 2.0

Note:
This sampling point did not meet the three criteria and
the data sheet was revised on 11/25/24 to indicate it
is not a wetland. See section 5.1 of the Aquatic
Resources Delineation Report for more detail.

WETLAND DETERMINATION DATA FORM – Arid West Region

W-30

Project/Site: COLUMSVILLE City/County: ARIZONA CITY / SOLANO Sampling Date: 7/18/24
Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
Investigator(s): CH RODRIGUEZ S. WELLS Section, Township, Range: 3N 1 E 22
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): C Lat: 38.082298 Long: -121.844150 Datum: NAD 1983
Soil Map Unit Name: DIABLO - AMAR CLAYS 2 to 9 percent slope NWI classification: 0
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>
Remarks: <u>Strong indicators of hydrophytic vegetation + hydric soil, landscape position. Periodically lacking wetland hydrology likely due to dry season survey.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>DISTICHILIS SPICATA</u>	<u>75</u>	<u>Y</u>	<u>FAC</u>
2. <u>CENTAUREA SOLSTITIALIS</u>	<u>10</u>	<u> </u>	<u>X</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>85</u> = Total Cover			
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0</u> = Total Cover			
% Bare Ground in Herb Stratum <u>25</u>	% Cover of Biotic Crust <u>0</u>		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: W-30 Sip 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	10YR 4/2	100					LOAMY SAND	
3-14.5	10YR 3/1	98	5YR 4/6	2	C	M	SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☒ Sandy Redox (S5)	☐ 1 cm Muck (A9) (LRR C)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ 2 cm Muck (A10) (LRR B)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1)	☐ Reduced Vertic (F18)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Red Parent Material (TF2)
☐ Stratified Layers (A5) (LRR C)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ 1 cm Muck (A9) (LRR D)	☐ Redox Dark Surface (F6)	
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (Inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ FAC-Neutral Test (D5)
☐ Salt Crust (B11)	
☐ Biotic Crust (B12)	
☐ Aquatic Invertebrates (B13)	
☐ Hydrogen Sulfide Odor (C1)	
☐ Oxidized Rhizospheres along Living Roots (C3)	
☐ Presence of Reduced Iron (C4)	
☐ Recent Iron Reduction in Tilled Soils (C6)	
☐ Thin Muck Surface (C7)	
☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Periodically lacking wetland hydrology likely due to dry season. Near NW1 ridge & above a freshwater emergent wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

W-30

Project/Site: COLLINSVILLE City/County: SUISUN CITY / SOLANO Sampling Date: JULY 9 2024
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-2
 Investigator(s): E.Y. RODRIGUEZ + S. WELLS Section, Township, Range: 3N 1E 22
 Landform (hillslope, terrace, etc.): on top of a slight hill Local relief (concave, convex, none): none Slope (%): 15
 Subregion (LRR): C Lat: 38.082463 Long: -121.843560 Datum: NAD 1983
 Soil Map Unit Name: DIABLO AMAR CAY, 2 to 4 no slope NWI classification: Ø

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>Ø</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>Ø</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>BRASSICA skeletons (specis?)</u>	<u>1</u>	<u> </u>	<u> </u>	
3. <u>Dead grass (Annual?)</u>	<u>75</u>	<u>✓</u>	<u> </u>	
4. <u>Frankenia salina</u>	<u>4</u>	<u> </u>	<u> </u>	
5. <u>Distichlis spicata (dead)</u>	<u>3</u>	<u> </u>	<u> </u>	
6. <u>Centaurea solstitialis</u>	<u>1</u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>84</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>Ø</u> = Total Cover				
% Bare Ground in Herb Stratum <u>16</u>	% Cover of Biotic Crust <u>Ø</u>			

Remarks: Collected specimens of the dead grass but could not make a determination on species (two that had some structure left). Maybe a Hordeum?

SOIL

Sampling Point: SP-2

W-30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4.5	10YR 4/2	97	10YR 4/6	3	C	M	CLAY	
4.5-13	10YR 3/2	100					CLAY	
13-15.5	10YR 6/6	100					SI CL	
STRIPE	10YR 3/1							Stripes in Matrix darker color

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Soil core top layer came out in hard clods. Measurements are estimates taking the spaces out between the clods. Hole depth where the core came from is 15.5 feet.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Cracks in the soil but not from water sitting in the area

WETLAND DETERMINATION DATA FORM – Arid West Region

W-31

Project/Site: Collinsville City/County: Solano Sampling Date: July 7, 2024
 Applicant/Owner: LS POWER State: CA Sampling Point: SP-1
 Investigator(s): Sidney Wells, Christina Rodriguez Section, Township, Range: 3N 1E 23
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.082410 Long: -121.842498 Datum: NAD1983
 Soil Map Unit Name: TAMBA MUCKY CLAY, MURA 16 NWI classification: 0
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum (Plot size: <u>5 m²</u>)				
1. <u>Frankenia salina</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
2. <u>Centaurea solstitialis</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
3. <u>Distichlis spicata</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
% Bare Ground in Herb Stratum <u>35</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Indicators: <u>2</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks:				

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5.5	7.5 YR 3/2	99	10 YR 4/6	1	C	M	LO SA	
5.5-16	10 YR 3/3	95	10 YR 4/6	5	C	M	SA	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____
 Water Table Present? Yes _____ No ☒ Depth (inches): _____
 Saturation Present? Yes _____ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

There is a wetland with green vegetation south of the soil pit. No hydrology indicators in the immediate area. The wetland is approximately 100 feet away. (brown & freshwater emergent - NW)

**ATTACHMENT C: COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT BOTANICAL
SURVEY REPORT**

**LS POWER GRID CALIFORNIA, LLC
COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT
BOTANICAL SURVEY REPORT**

OCTOBER 2023

PREPARED FOR:



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1 – INTRODUCTION

LS Power Grid California, LLC (LSPGC) retained Insignia Environmental (Insignia) to conduct fully floristic botanical surveys for the Collinsville 500/230 Kilovolt (kV) Substation Project (Proposed Project). As depicted in Figure 1: Project Components, the Proposed Project proposes the construction of a new 500/230 kV substation (Collinsville Substation), the construction of two new 500 kV single-circuit transmission line segments that will interconnect Pacific Gas and Electric Company's (PG&E's) existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed Collinsville Substation, and the construction of one new 230 kV double-circuit transmission line that will connect the proposed Collinsville Substation to PG&E's existing Pittsburg Substation. The Proposed Project has been designed to address overloads on the existing Contra Costa-Newark 230 kV corridor and provide an additional supply into the northern greater San Francisco Bay Area to increase reliability to the area and advance additional renewable generation.

This Botanical Survey Report was prepared to identify any special-status plant species that may be present within or adjacent to the Proposed Project's terrestrial survey area.¹

2 – PROJECT DESCRIPTION

2.0 PROJECT LOCATION

As depicted in Figure 2: Project Overview Map, the Collinsville Substation will be near the unincorporated community of Collinsville, which is located in the southwestern portion of Solano County. The terrestrial survey area is bordered on the south and southwest by the Sacramento River where it debouches into the Suisun Bay; on the west by the Montezuma Hills and Suisun Marsh; and to the north and east by agricultural lands. The Proposed Project will create a connection to the existing Pittsburg Substation, which is located in the city of Pittsburg in the northern portion of Contra Costa County.

2.1 PROJECT OVERVIEW

The four main components of the Proposed Project comprise the following:

- The approximately 20-acre Collinsville Substation;
- Two approximately 1.5-mile-long single-circuit 500 kV transmission line segments that will interconnect PG&E's existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed Collinsville Substation; and

¹ The survey area consists of all terrestrial areas of the Proposed Project area north of the Carquinez Strait. This includes the Collinsville Substation, the entire 500 kV alignment, and the entire 230 kV overhead alignment, plus an approximately 10-acre buffer.

- One approximately 6-mile-long double-circuit 230 kV transmission line connecting the proposed Collinsville Substation to PG&E's existing Pittsburg Substation, including:
 - A 1- to 2-mile-long overhead transmission segment,
 - Four to six steel in-river monopole structures to transition the overhead conductors to submarine cables on the northern edge of the Sacramento River,
 - Four to six approximately 4.5-mile-long submarine cables running in a northeast to southwest direction installed 6 to 15 feet below the sediment surface, and
 - Four to six utility vault structures near PG&E's existing Pittsburg Substation to connect the submarine cables to underground cables that will terminate at PG&E's existing Pittsburg Substation.

PG&E will be responsible for the final configuration of the new circuits into the Pittsburg Substation and the northern connection from the existing Vaca Dixon-Tesla 500 kV Transmission Line to the proposed Collinsville Substation. Construction is anticipated to begin in early 2026, after all required approvals have been received, and will take 24 to 30 months to complete. Energization of the Proposed Project facilities is required by June 1, 2028. The in-water construction and installation of the submarine cables is anticipated to take approximately 7 months to complete.

3 – METHODS

3.0 DEFINITIONS

The following definitions were used to define special-status resources within the survey area.

3.0.0 Special-Status Plants

Plant species were considered special-status if they met one or more of the following criteria:

- Species listed or candidates for listing as threatened or endangered under the federal Endangered Species Act;
- Species listed or candidates for listing as threatened or endangered under the California Endangered Species Act;
- Species meeting the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 California Code of Regulations Section 15380), which may include species not found on the federal or state endangered species lists; or

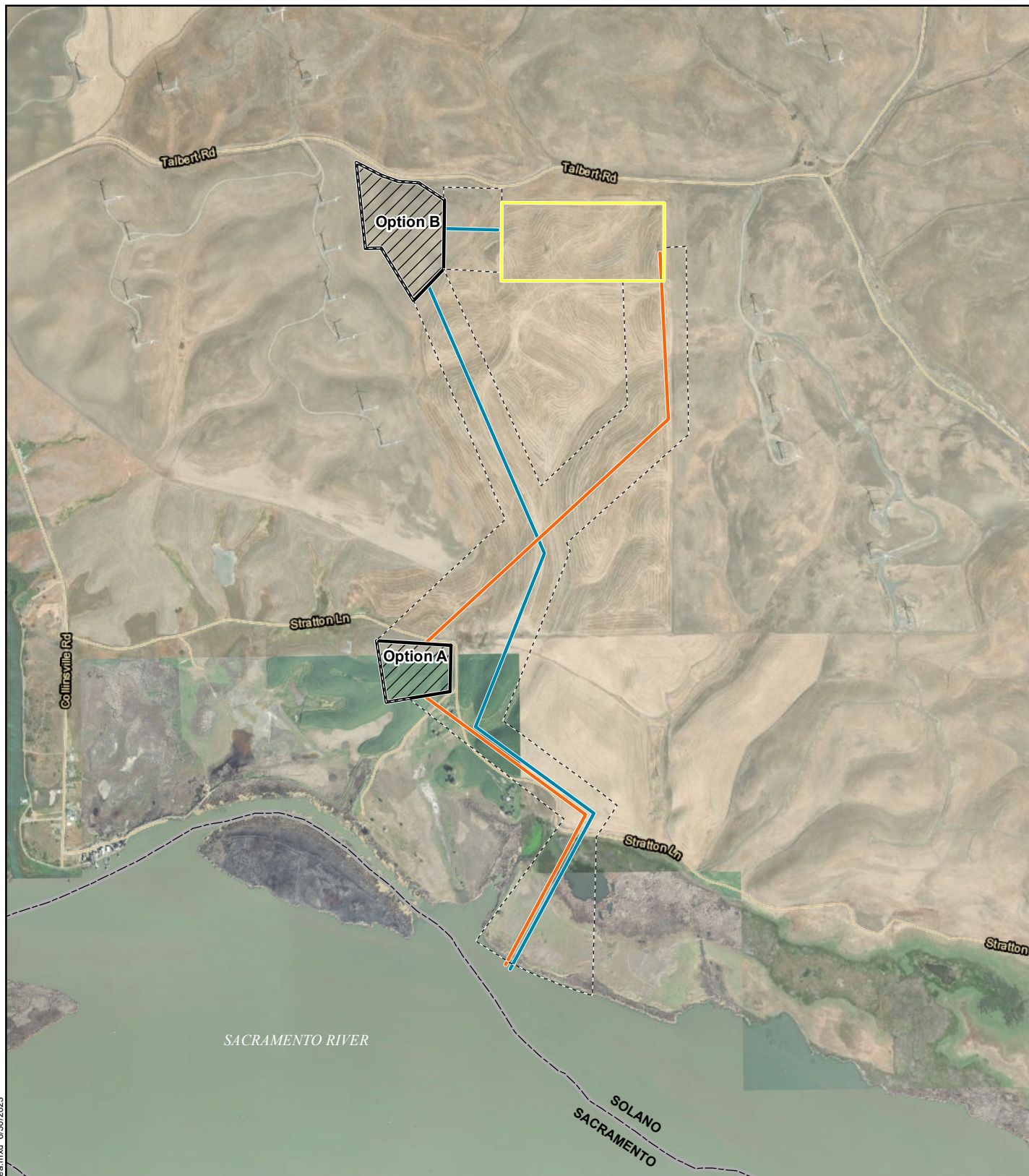
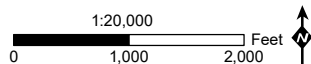


Figure 1: Project Components

Collinsville 500/230 Kilovolt Substation Project

- Project/Survey Area
- PG&E Parcel
- Potential Substation Sites
- Option A Overhead Alignment
- Option B Overhead Alignment



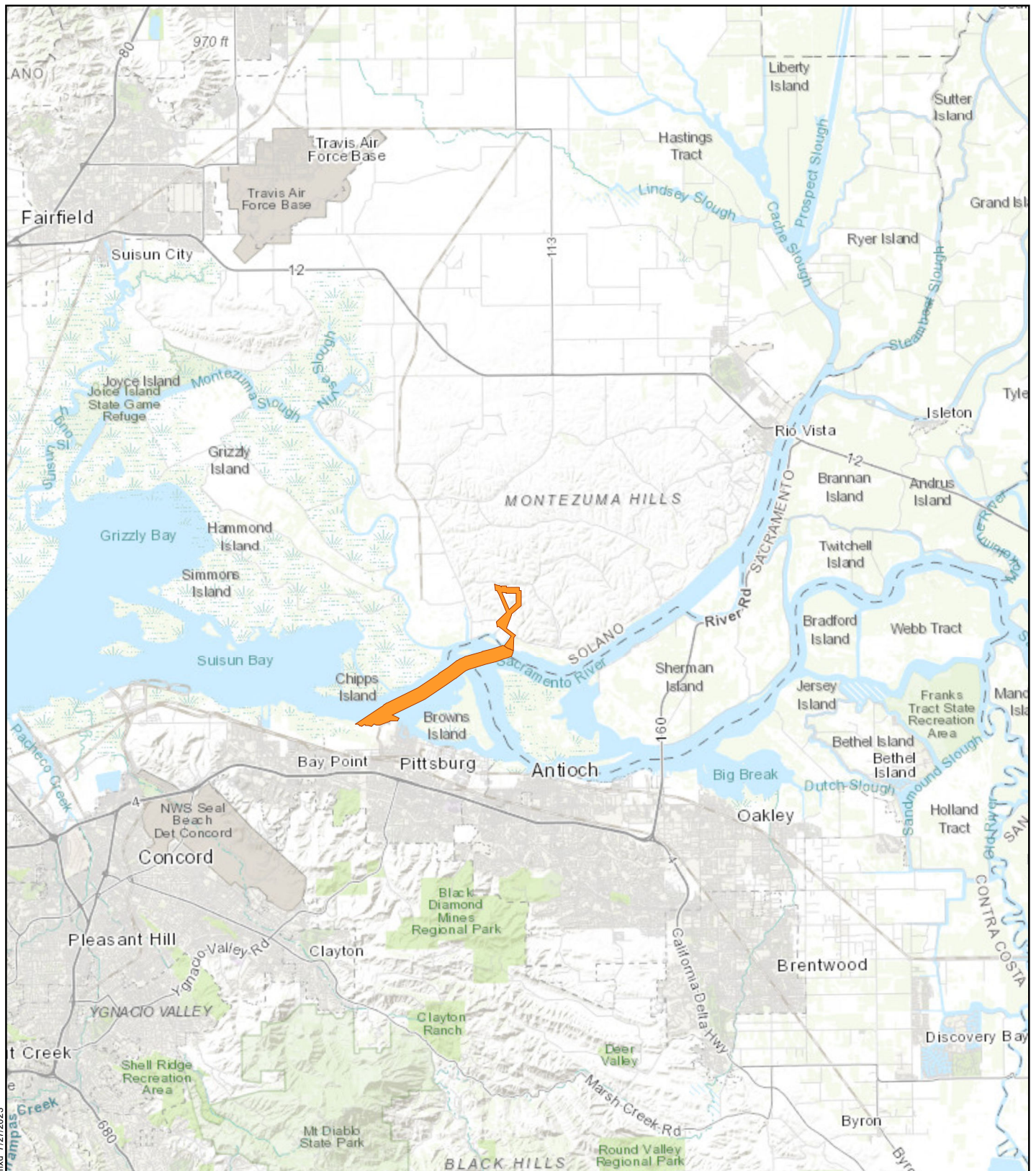


Figure 2: Project Overview Map

Collinsville 500/230 Kilovolt Substation Project

 Project/Survey Area

1:250,000
0 2 4 Miles



LSPower **GRID** **INSIGNIA**
CALIFORNIA ENVIRONMENTAL

- Species considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California (i.e., California Rare Plant Ranks [CRPRs] 1A, 1B, 2A, 2B, and 3).²

3.0.1 Sensitive Natural Communities and Habitats

Natural communities were considered sensitive if they met one or more of the following criteria:

- Sensitive vegetation communities/habitats identified in local or regional plans, policies, or regulations, or designated as sensitive by the California Department of Fish and Wildlife (CDFW) or United States (U.S.) Fish and Wildlife Service (USFWS) (including communities assigned a State Rarity Rank of S1-S3 under the CDFW Vegetation Classification and Mapping Program);
- Areas that provide habitat for locally unique biotic species/communities (e.g., oak woodlands, grasslands, and forests);
- Habitat that contains or supports rare, endangered, or threatened wildlife or plant species as defined by the CDFW and USFWS;
- Habitat that supports one or more CDFW Species of Special Concern;
- Areas that provide habitat for rare or endangered species and that meet the definition in CEQA Guidelines Section 15380;
- Existing game and wildlife refuges and reserves;
- Lakes, wetlands, estuaries, lagoons, streams, and rivers; or
- Riparian corridors.

3.1 RECORDS SEARCH

A literature and database review, including a geographic information system review of records from the California Natural Diversity Database (CNDDDB) (CDFW 2023), was conducted of the

² The following keys describe the CRPR system:

- 1A = Presumed extirpated in California, and rare or extinct elsewhere
- 1B = Rare, Threatened, or Endangered in California and elsewhere
- 2A = Presumed extirpated in California, but common elsewhere
- 2B = Rare, Threatened, or Endangered in California, but more common elsewhere
- 3 = Need more information (Review List)
- 4 = Limited Distribution (Watch List)

The CRPR system can be extended using the following threat codes:

- .1 = Seriously endangered in California (more than 80 percent of occurrences threatened/high degree and immediacy of threat)
- .2 = Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat)
- .3 = Not very endangered in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat)

U.S. Geological Survey 7.5-minute quadrangles within and adjacent to the survey area. Records for all known special-status species within 0.25 mile, 1 mile, and 5 miles of the Proposed Project were compiled and reviewed. The CNPS Inventory of Rare and Endangered Plants of California (CNPS 2023a) was reviewed to obtain additional information regarding special-status plant species. The survey area overlaps significantly with the Sacramento Municipal Utility District's Solano 4 Wind Project, for which a final Environmental Impact Report is available (Sacramento Municipal Utility District 2021); this document was also referenced during preliminary records searches. Attachment B: Special-Status Species with the Potential to Occur contains a list of rare plants and fungi with the potential to occur in the survey area.

3.2 REFERENCE POPULATION SEARCH

Reference population checks were conducted in accordance with the CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities guidelines (2009). Known occurrences and populations of special-status plants within 5 miles of the survey area were investigated prior to conducting surveys to confirm blooming status and obtain a visual image of occurring special-status species. Further, local botanists working in areas adjacent to the Proposed Project were consulted to determine if special-status plants were observed blooming prior to field surveys.

3.3 FIELD SURVEY

The geographical boundaries of the terrestrial survey, which are depicted in Attachment A: Biological Resources Map, included land-based portions of the proposed substation site, as well as proposed transmission line routes. While the existing PG&E Pittsburg Substation, located at the southern terminus of the Proposed Project in Contra Costa County, is situated adjacent to marsh habitat suitable for marsh-dependent plant species, the facility is within fully developed land cover (e.g., graveled or paved) and rip-rap is present along much of the shoreline. Because Proposed Project activities at the Pittsburg Substation site are not anticipated to overlap with or result in direct impacts to sensitive habitats or special-status plant species, the Pittsburg Substation site was excluded from field surveys.

Insignia biologists conducted special-status plant surveys of 100 percent of the survey area. Transect spacing between surveyors was less than or equal to 10 meters. The surveys were conducted in accordance with guidelines published by the CNPS (2001), the CDFW (2009), and the USFWS (2000), which state the following:

- Surveys should be conducted at the proper time of year when locally significant plants are both evident and identifiable.
- Surveys must be floristic in nature, and the species, subspecies, or variety must be identified for every observed plant to determine the rarity status.
- Surveys must be conducted in a manner that is consistent with conservation ethics and accepted plant collection and documentation techniques.

Field surveys were conducted within the bloom period for all but four special-status plant species with the potential to occur within the survey area; these special-status species are discussed further in Section 5 – Discussion and Summary. Although surveys were conducted outside of the

typical bloom period, two of these species are perennial and observable year-round. The other two are annual species that have bloom periods that extend into April. The unusually protracted rainy season, cooler temperatures of the preceding winter, and other observations in the Proposed Project area support an extended bloom period of approximately 1 month for these species this season (Moore and Laurenroth 2017). As a result, all special-status plant species with potential to occur would have been identifiable during the surveys.

4 – RESULTS

4.0 GEOGRAPHY, CLIMATE, AND HYDROLOGY

The Proposed Project area receives an average of 23 inches of rainfall per year, with the majority of precipitation falling between November and March. Average annual temperatures range from 48 to 73 degrees Fahrenheit (National Oceanic and Atmospheric Administration [NOAA] 2023). The elevation of the Proposed Project area ranges from 3 to 250 feet above sea level.

4.1 RECORDS SEARCH

Results of the initial desktop analysis indicated that the upland areas around the proposed Collinsville Substation site and transmission line route are mainly grassland habitat and agricultural areas. Grassland habitats, in general, may provide suitable habitat for special-status plants. The southern edge of the survey area along the Sacramento River supports native riparian habitat areas and freshwater wetlands. The Pittsburg Substation site in Contra Costa County may have some fringe marsh habitat near the shoreline outside of the survey area, but the majority of the facility is developed (e.g., graveled or paved) and rip-rap is present along much of the survey area shoreline.

Insignia compiled a list of 28 special-status plant species that have the potential to occur within 5 miles of the survey area, as shown in Attachment B: Special-Status Species with the Potential to Occur. Attachment C: CNDDB Plant Occurrences Map depicts all rare plant occurrences identified from the literature search within 5 miles of the survey area. No USFWS-designated critical habitat for federally listed plants is found within or adjacent to the survey area.

4.2 REFERENCE POPULATION SEARCH

Reference checks were attempted for recorded populations of special-status plant species. Eight reference sites were visited by the botanical survey team prior to initiation of the fully floristic botanical surveys within the survey area. Many locations with historically documented occurrences of special-status plants have been converted to active agriculture use; this cover type is extensive and is the primary land use within 5 miles of the survey area. Further, reference populations for many special-status plant species were located on private property that was inaccessible to the survey team.

To supplement field reference checks, local botanists working in areas adjacent to the Proposed Project were consulted. The following four special-status plant species were confirmed to be

blooming in habitats adjacent to the Proposed Project before or during the May and July survey periods (Bartosh 2023):

- Chaparral ragwort (*Senecio aphanactis*),
- Fragrant fritillary (*Fritillaria liliacea*),
- Diablo helianthella (*Helianthella castanea*), and
- Papoose tarplant (*Centromadia parryi* ssp. *parryi*).

4.3 FIELD SURVEY

On May 23 to 26, May 30, May 31, and July 10 to 12, 2023, Insignia biologists conducted fully floristic botanical surveys within the survey area to identify occurrences of special-status plants and characterize the vegetation communities within the survey area. Approximately 325 acres of terrestrial habitat and land cover were surveyed. All sensitive natural resources observed were photographed and recorded using a submeter-accurate Global Positioning System unit. The subsections that follow describe the results of the field survey.

4.3.0 Vegetation Communities

Eleven vegetation community alliances and land cover types were identified in the survey area, as presented in Table 1: Vegetation Community Alliances and Land Cover Types. The vegetation community and land cover locations are documented in Attachment A: Biological Resources Map. Four of the nine natural communities observed are considered sensitive. The following subsections describe each vegetation community identified within the survey area.

Table 1: Vegetation Community Alliances and Land Cover Types

Vegetation Community Alliance or Land Cover Type	Approximate Size in Survey Area (acres)
<i>Brassica nigra</i> - <i>Centaurea (solstitialis, melitensis)</i> Herbaceous Semi-Natural Alliance	16.7
<i>Distichlis spicata</i> Herbaceous Alliance	1.6
<i>Frankenia salina</i> Herbaceous Alliance*	2.2
<i>Juncus arcticus</i> (var. <i>balticus, mexicanus</i>) Herbaceous Alliance	1.2
<i>Lolium perenne</i> Herbaceous Semi-Natural Alliance	281.0
Open Water	0.4
Road	1.9
<i>Rosa californica</i> Shrubland Alliance*	0.9
<i>Salix exigua</i> Shrubland Alliance	2.6
<i>Schoenoplectus (acutus, californicus)</i> Herbaceous Alliance*	14.1
<i>Schoenoplectus acutus</i> / <i>Rosa californica</i> Association*	2.1
Total	324.7

*CDFW-designated sensitive natural community (State Rarity Rank S1-S3)

***Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance**

This community is typically associated with disturbed areas where black mustard (*Brassica nigra*) and short-pod mustard (*Hirshfeldia incana*) achieve 80 percent relative cover in the herbaceous layer. Similar ruderal forbs, such as tocolote (*Centaurea melitensis*) and yellow star thistle (*Centaurea solstitialis*), may achieve dominance or co-dominance. Within the survey area, this community was generally observed in dense colonies between stands of non-native grassland in areas where heavy cattle grazing historically occurred.

***Distichlis spicata* Herbaceous Alliance**

The *Distichlis spicata* Herbaceous Alliance is commonly found in alkaline or saline ecosystems adjacent to estuarine marshes or other wetland habitats that may be tidally influenced. Salt grass (*Distichlis spicata*) typically contains greater than 30 percent relative cover in the herbaceous layer; however, it can be co-dominant with other halophytes, including spear-leaved orache (*Atriplex prostrata*) and alkali heath (*Frankenia salina*). The herbaceous layer is continuous and typically leaves an undeveloped or sparse shrub layer. This community was generally observed in the southern portion of the survey area within standing water in tidally influenced brackish areas.

***Frankenia salina* Herbaceous Alliance**

The *Frankenia salina* Herbaceous Alliance is commonly found adjacent to coastal salt marshes or brackish marshes. Typically, alkali heath contains greater than 30 percent relative cover in the herbaceous layer and stands are often found in the high marsh where soils are intermittently or seasonally flooded. Pickleweed (*Salicornia pacifica*) is often found among this community in lower percentages of 5 to 10 percent. This community was observed in the southern portion of the survey area at the highest point of the marsh and adjacent to water that seasonally and tidally inundates this community.

***Juncus arcticus* (var. *balticus, mexicanus*) Herbaceous Alliance**

The *Juncus arcticus* (var. *balticus, mexicanus*) Herbaceous Alliance varies widely in species composition based on the geographic location, but it typically includes greater than 30 percent relative cover in the shrub layer of arctic rush (*Juncus arcticus*) or Baltic rush (*Juncus balticus*). This community generally occurs in wet meadows with poor draining soils between estuarine marshes and sloughs. This community was observed in the southern portion of the survey area adjacent to the coastline and in upland areas of the marsh between sloughs.

***Lolium perenne* Herbaceous Semi-Natural Alliance**

This community contains Italian rye grass (*Festuca perennis*) that is dominant or co-dominant with other non-natives in the herbaceous layer, including rip-gut brome (*Bromus diandrus*), sea barley (*Hordeum marinum*), and wild oat (*Avena fatua*). Typically, the herbaceous layer is continuous and often forms monocultures, which contributes to a poorly developed shrub layer. Within the survey area, this community is the most widespread and is found in upland areas that lack native species and have low species diversity. Additionally, this community shows evidence of heavy grazing, landowner maintenance, and agricultural use.

***Rosa californica* Shrubland Alliance**

The *Rosa californica* Shrubland Alliance is commonly found in creek bottoms, stream terraces, and bordering sloughs and channels. California wild rose (*Rosa californica*) typically contains greater than 50 percent relative cover in the shrub canopy and may be co-dominant with Himalayan blackberry (*Rubus armeniacus*). The shrub layer is thick and continuous while the herbaceous layer is open. Emergent trees, including willows (*Salix* spp.), may be present in low quantities. This community is found in the southern portion of the survey area adjacent to intertidal sloughs. Himalayan blackberry was commonly observed, and in some cases co-dominant, among thick patches of California wild rose. Isolated red willows (*Salix laevigata*) were observed scattered throughout this community.

***Salix exigua* Shrubland Alliance**

The *Salix exigua* Shrubland Alliance is widespread in California and contains significant variation when determining habitat and shrub composition. Often the shrub layer is intermittent to continuous dominated by sandbar willow (*Salix exigua*) and contains greater than 20 percent absolute cover in the shrub layer. In a high-quality habitat, sandbar willow may be co-dominant with other willow species and emergent riparian trees may be present at a low cover. Within the survey area, this community was observed between tidally influenced sloughs and estuarine marshes containing sandy soil. Heavy cattle grazing was observed to have a direct impact on this community, leading to a sparse shrub layer dominated by sandbar willows that are in the process of re-growing.

***Schoenoplectus (acutus, californicus)* Herbaceous Alliance**

This community is found in a variety of wetland habitats, including brackish marshes, freshwater ponds, sloughs, swamps, and roadside ditches. The shrub layer is intermittent to continuous, forming thick stands that often result in a poorly developed herbaceous layer. Hardstem bulrush (*Schoenoplectus acutus*) or giant bulrush (*Schoenoplectus californicus*) typically contain greater than 50 percent relative cover in the herbaceous layer. Within the survey area, this community was observed adjacent to the coastline, within sloughs, and in tidally influenced areas that are semi-brackish. Species composition varied depending on the salinity of the water and proximity to the coastline, as hardstem bulrush is generally less tolerant of brackish conditions.

***Schoenoplectus acutus/Rosa californica* Association**

Schoenoplectus acutus/Rosa Californica Association occurs on tidal sloughs that are seasonally or tidally inundated with brackish or semi-brackish water. This association contains greater than 50 percent relative cover of hardstem bulrush and giant bulrush with as low as 5 percent absolute cover of California wild rose. Within the survey area, this habitat occurred primarily on man-made earthen levees bordering sloughs adjacent to the coastline. California wild rose was observed in high quantities growing among stands of bulrush (*Schoenoplectus* spp.), sometimes achieving 20 to 30 percent relative percent cover.

4.3.1 Special-Status Plants

Insignia biologists identified 152 plant species during botanical surveys. Of these, three special-status plant species were identified within the survey area. All plants observed within the survey area during the 2023 surveys are listed in Attachment D: Plant Species Observed. Photographs of

all three species of the special-status plants observed are provided in Attachment E: Special-Status Plant Photographs. The locations of special-status plant individuals/populations are depicted in Attachment A: Biological Resources Map. A summary of each special-status plant species observed during botanical surveys is provided in the subsequent subsections.

Delta Tule Pea

Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) is a perennial herb endemic to California with a CRPR of 1B.2. Extensive populations of this species were observed along the southern edge of the survey area immediately adjacent to intertidal vegetation communities including *Rosa californica* Shrubland Alliance and *Schoenoplectus acutus*/*Rosa Californica* Association. Attachment E: Special-Status Plant Photographs provides photographs of select populations of Delta tule pea. CNDDDB forms for the Delta tule pea populations identified in the survey area have been completed and are provided in Attachment F: CNDDDB Submittal Forms.

Mason's Lilaepsis

Mason's lilaepsis (*Lilaepsis masonii*) is a perennial herb endemic to California with a CRPR of 1B.1. Extensive populations of this species were observed along the southern edge of the survey area within intertidal vegetation communities including *Schoenoplectus acutus* Herbaceous Alliance and *Juncus arcticus* (var. *balticus*, *mexicanus*) Herbaceous Alliance. Attachment E: Special-Status Plant Photographs provides photographs of select populations of Mason's lilaepsis. CNDDDB forms for the Mason's lilaepsis populations have been completed and are provided in Attachment F: CNDDDB Submittal Forms.

Welsh Mudwort

Welsh mudwort (*Limosella australis*) is a perennial herb native to California with a CRPR of 2B.1. The species was observed within the intertidal zone at the southern edge of the survey area and within the *Schoenoplectus acutus* Herbaceous Alliance. Attachment E: Special-Status Plant Photographs provides photographs of select populations of Welsh mudwort. CNDDDB forms for the Welsh mudwort populations have been completed and are provided in Attachment F: CNDDDB Submittal Forms.

5 – DISCUSSION AND SUMMARY

During the botanical surveys conducted in May and July 2023, three rare plant species were observed: Delta tule pea, Mason's lilaepsis, and Welsh mudwort. As shown in Attachment A: Biological Resources Map, all occurrences of these species were observed in the southern-most portions of the survey area immediately adjacent to the estuarine/wetland habitat. The vast majority of the upland habitats within the northern portion of the survey area are dominated by non-native and invasive plant species; these areas do not likely provide habitat for special-status plants.

A supplemental survey is recommended in 2024 during the bloom period for diamond-petaled California poppy.

6 – REFERENCES

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- USFWS. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. <http://www.fws.gov/ventura/docs/species/protocols/botanicalinventories.pdf>. Site visited May 1, 2023.

ATTACHMENT A: BIOLOGICAL RESOURCES MAP

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**Attachment A:
Biological Resources Map
Map 1 of 8**

**Collinsville 500/230 Kilovolt
Substation Project**

 Survey Area

Rare Plants

Individual Plant

 Delta tule pea

 Mason's lilaeopsis

 Welsh mudwort

Plant Population

 Delta tule pea

 Mason's lilaeopsis

 Welsh mudwort

Vegetation Community

 *Distichlis spicata* Herbaceous Alliance

 *Frankenia salina* Herbaceous Alliance

 *Juncus arcticus* (var. *balticus*,
mexicanus) Herbaceous Alliance

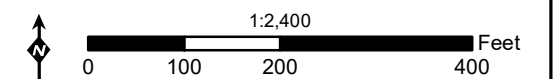
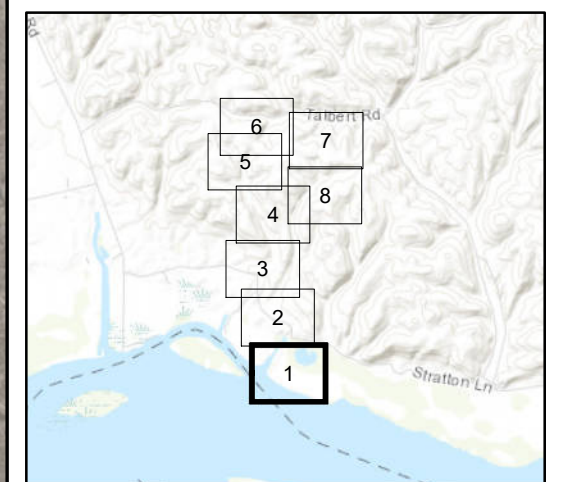
 *Lolium perenne* Herbaceous Semi-
Natural Alliance

 *Rosa californica* Shrubland Alliance

 *Salix exigua* Shrubland Alliance

 *Schoenoplectus (acutus, californicus)*
Herbaceous Alliance

 *Schoenoplectus acutus/rosa californica*
Association





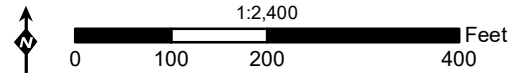
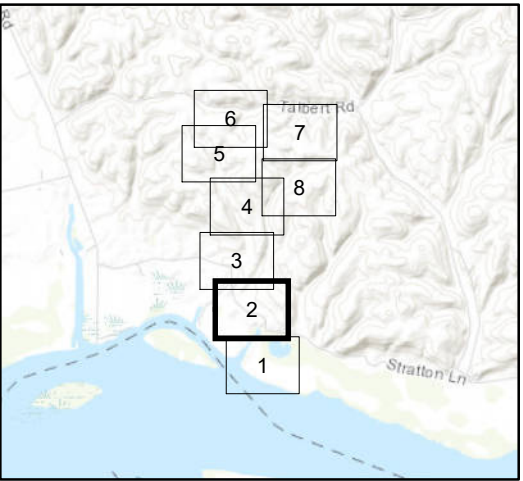
**Attachment A:
Biological Resources Map
Map 2 of 8**

**Collinsville 500/230 Kilovolt
Substation Project**

- Survey Area
--- Potential Substation Site

Vegetation Community

- *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
--- *Distichlis spicata* Herbaceous Alliance
--- *Frankenia salina* Herbaceous Alliance
--- *Lolium perenne* Herbaceous Semi-Natural Alliance
--- *Rosa californica* Shrubland Alliance
--- *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
--- Road



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**Attachment A:
Biological Resources Map
Map 3 of 8**

**Collinsville 500/230 Kilovolt
Substation Project**

 Survey Area

 Potential Substation Site

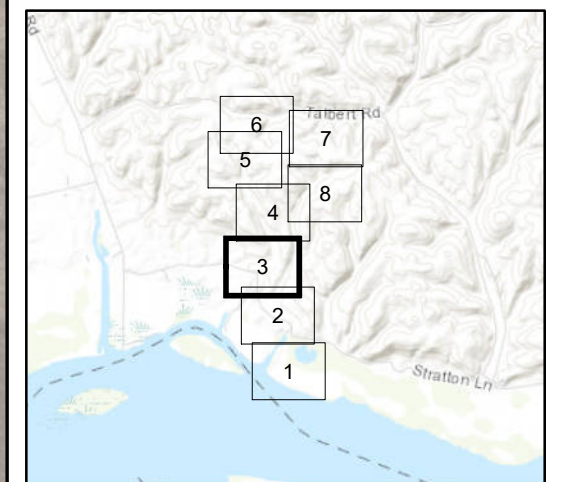
Vegetation Community

 *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

 *Lolium perenne* Herbaceous Semi-Natural Alliance

 Road

Option A



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LSPower GRID
CALIFORNIA

INSIGNIA
ENVIRONMENTAL

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**Attachment A:
Biological Resources Map
Map 4 of 8**

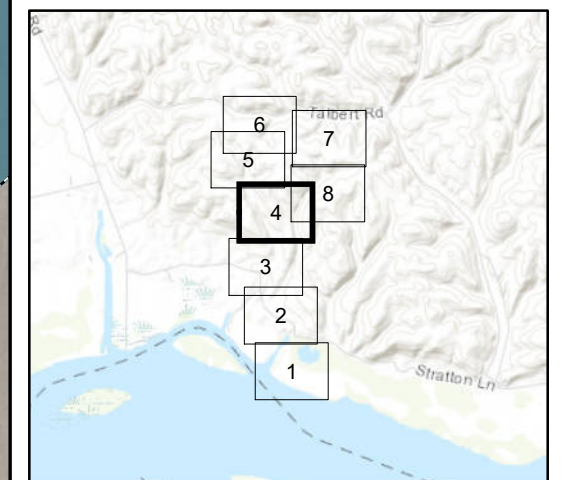
**Collinsville 500/230 Kilovolt
Substation Project**

 Survey Area

Vegetation Community

 *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

 *Lolium perenne* Herbaceous Semi-Natural Alliance

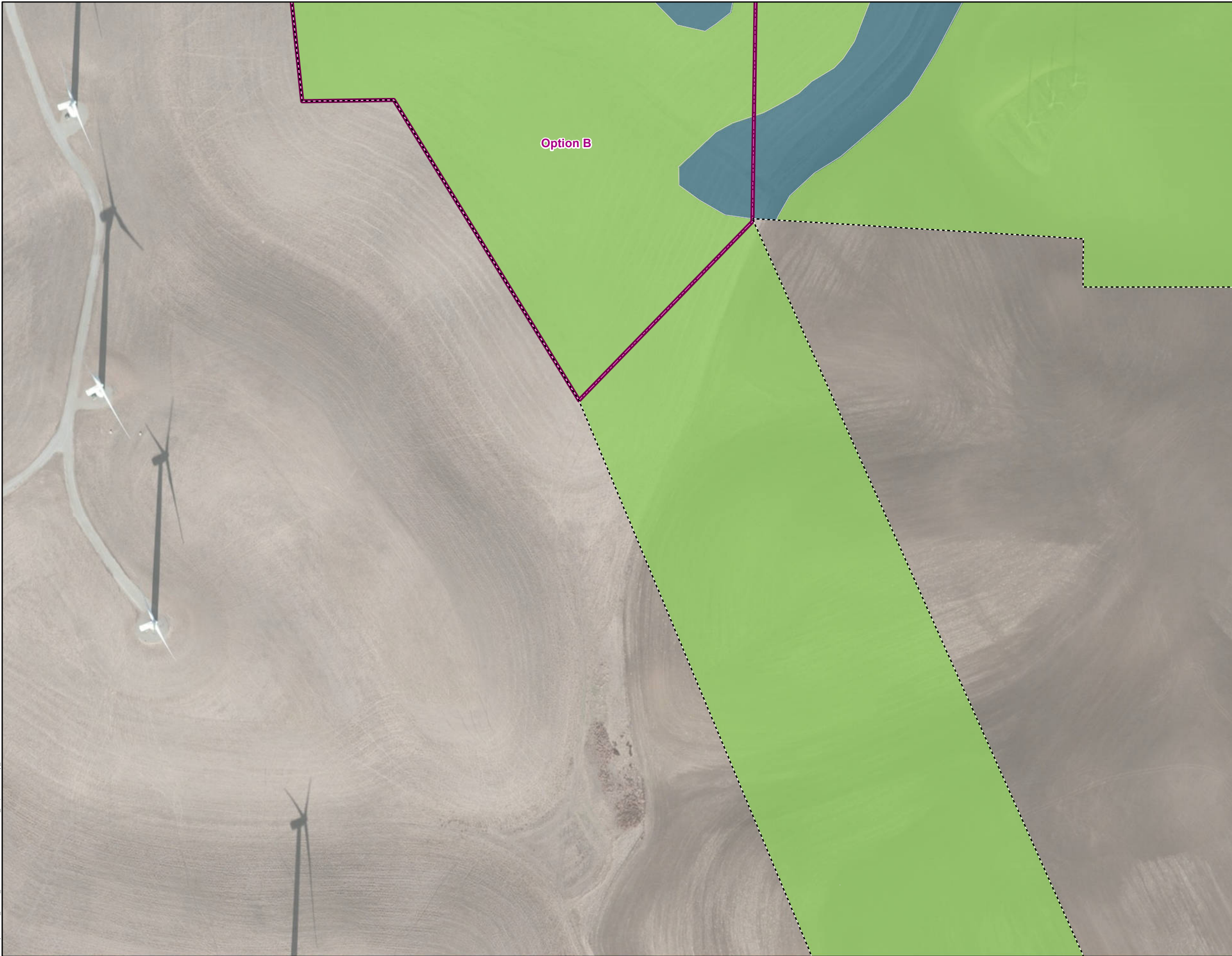


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**Attachment A:
Biological Resources Map
Map 5 of 8**

**Collinsville 500/230 Kilovolt
Substation Project**

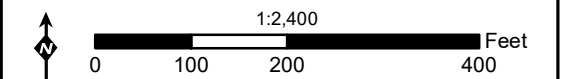
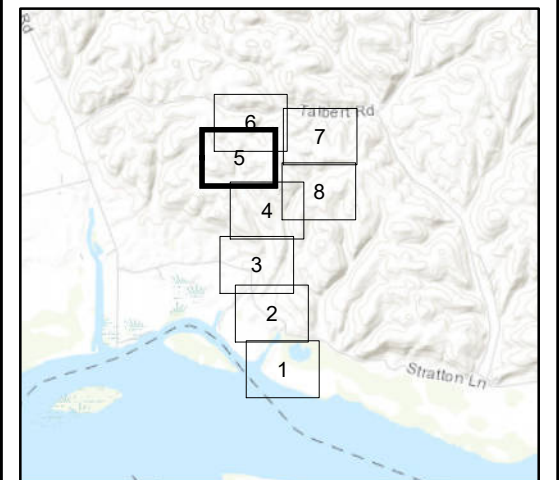
Survey Area

Potential Substation Site

Vegetation Community

Brassica nigra - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

Lolium perenne Herbaceous Semi-Natural Alliance



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Attachment A:
Biological Resources Map
Map 6 of 8

Collinsville 500/230 Kilovolt
Substation Project

Survey Area

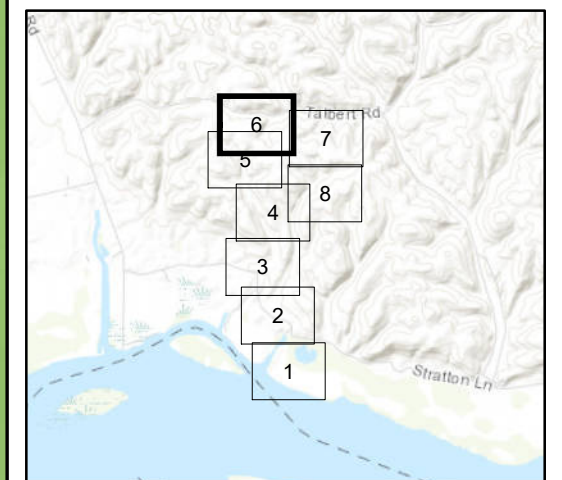
Potential Substation Site

Vegetation Community

Brassica nigra - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

Lolium perenne Herbaceous Semi-Natural Alliance

Option B

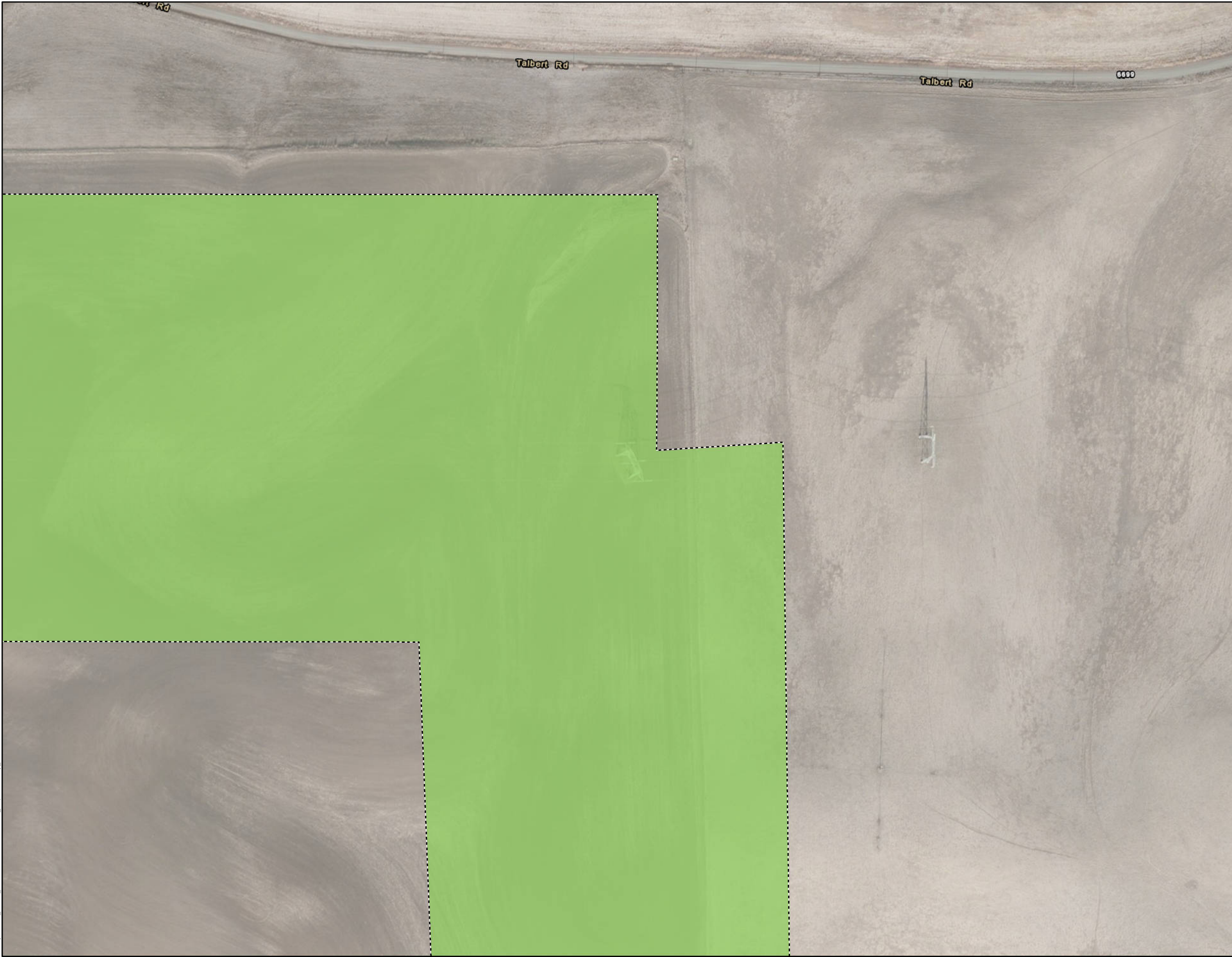


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ENVIRONMENTAL

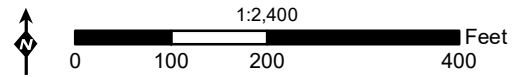
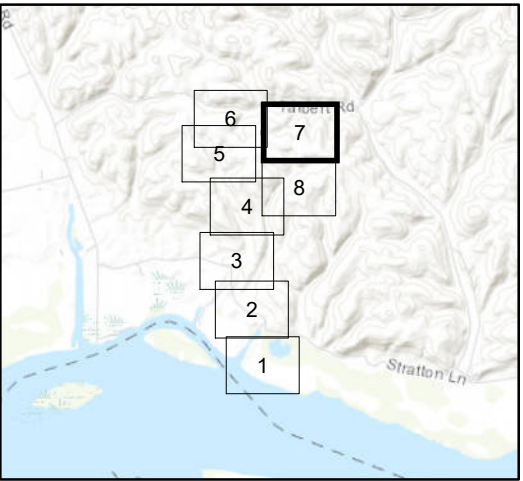
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**Attachment A:
Biological Resources Map
Map 7 of 8**

**Collinsville 500/230 Kilovolt
Substation Project**

- Survey Area
- Vegetation Community**
- Lolium perenne* Herbaceous Semi-Natural Alliance



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**Attachment A:
Biological Resources Map
Map 8 of 8**

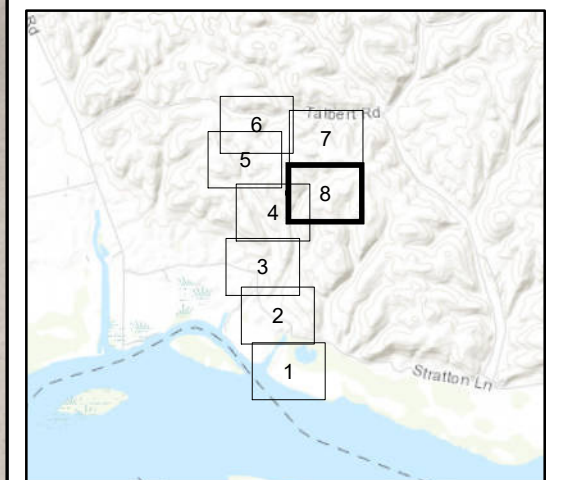
**Collinsville 500/230 Kilovolt
Substation Project**

 Survey Area

Vegetation Community

 *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance

 *Lolium perenne* Herbaceous Semi-Natural Alliance



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LSPower GRID
CALIFORNIA

INSIGNIA
ENVIRONMENTAL

ATTACHMENT B: SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR

ATTACHMENT B: SPECIAL-STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR

Common Name	Scientific Name	Listing Status ¹	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Alkali Milkvetch	<i>Astragalus tener</i> var. <i>tener</i>	1B.2	This species occurs in alkali playa, valley and foothill grassland, vernal pool, and wetland habitats at elevations between 5 and 195 feet.	March to June	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Antioch Dunes Buckwheat	<i>Eriogonum nudum</i> var. <i>psychicola</i>	1B.1	This species occurs in interior dune habitats at elevations up to 65 feet.	July to October	Perennial herb	Suitable habitat and conditions for this species are not present within the survey area, and no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. No Potential
Antioch Dunes Evening-primrose	<i>Oenothera deltoides</i> ssp. <i>howellii</i>	FE, SE, 1B.1	This species occurs in interior dunes habitats at elevations up to 100 feet.	March to September	Perennial herb	Suitable habitat and conditions for this species are not present within the survey area, and no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 1 mile of the survey area. Low Potential
Bearded Popcornflower	<i>Plagiobothrys hystriculus</i>	1B.1	This species occurs in valley and foothill grassland, vernal pool, and wetland habitats at elevations up to 900 feet.	April to May	Annual herb	Suitable habitat and conditions for this species are present within the survey area, and but observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Big Tarplant	<i>Blepharizonia plumosa</i>	1B.1	This species occurs in valley and foothill grassland habitats at elevations between 100 and 1,655 feet.	July to October	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area Low Potential
Bolander's Water-hemlock	<i>Cicuta maculata</i> var. <i>bolanderi</i>	2B.1	This species occurs in marsh and swamp, salt marsh, and wetland habitats at elevations up to 655 feet.	July to September	Perennial herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 0.25 mile of the survey area. High Potential
Brittlescale	<i>Atriplex depressa</i>	1B.2	This species occurs in alkali playa, chenopod scrub, meadow and seep, valley and foothill grassland, vernal pool, and wetland habitats at elevations between 5 and 1,050 feet.	April to October	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential

¹ Explanation of federal and state listing codes:

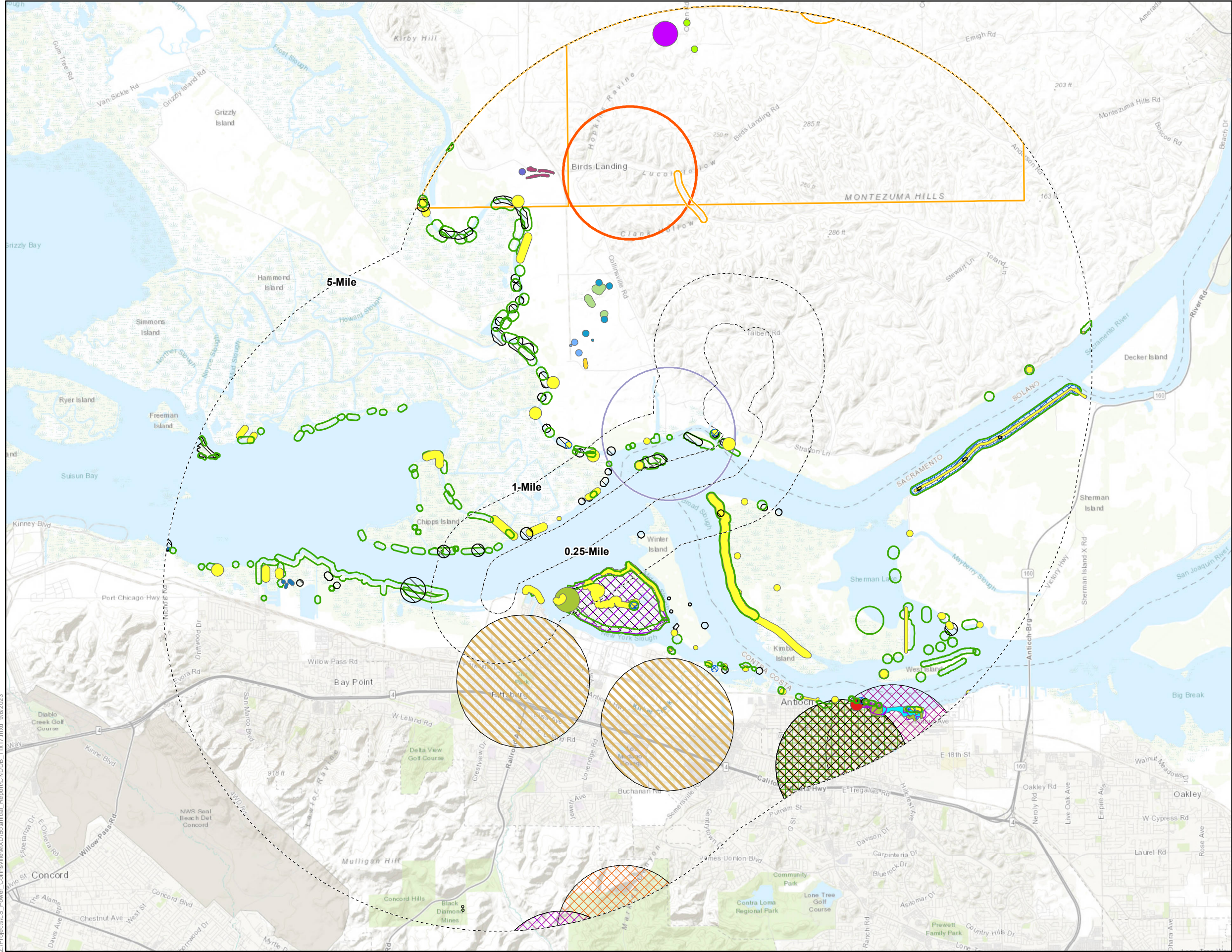
Federal listing code: -FE: Federally listed as endangered	California Native Plant Society California Rare Plant Ranks (CRPRs): -1A: Presumed Extinct -1B: Rare or endangered in California and elsewhere -2B: Rare, threatened, or endangered in California, but more common elsewhere	CRPR Threat Code: -0.1: Seriously threatened in California (over 80 percent of occurrences threatened, high degree and immediacy of threat) -0.2: Moderately threatened in California (20 to 80 percent of occurrences threatened, moderate degree and immediacy of threat) -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)
State listing code: -SE: State-listed as endangered		

Common Name	Scientific Name	Listing Status ¹	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Carquinez Goldenbush	<i>Isocoma arguta</i>	1B.1	This species occurs in valley and foothill grassland habitats at elevations between 5 and 65 feet.	August to December	Perennial shrub	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. Surveys occurred outside of the bloom period for this species. This species has been documented within 5 miles of the survey area. Low Potential
Chaparral Ragwort	<i>Senecio aphanactis</i>	2B.2	This species occurs in chaparral, cismontane woodland, and coastal scrub habitats at elevations between 50 and 2,625 feet.	January to April	Annual herb	Suitable habitat and conditions for this species are not present within the survey area, and no observations were recorded during fully floristic field surveys in May and July 2023. Surveys occurred outside of the bloom period for this species. This species has been documented within 5 miles of the survey area. No Potential
Contra Costa Goldfields	<i>Lasthenia conjugens</i>	FE, 1B.1	This species occurs in alkali playa, cismontane woodland, valley and foothill grassland, vernal pool, and wetland habitats at elevations up to 1,540 feet.	March to June	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Contra Costa Wallflower	<i>Erysimum capitatum</i> var. <i>angustatum</i>	FE, SE, 1B.1	This species occurs in interior dunes habitats at elevations between 10 and 65 feet.	March to July	Perennial herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Welsh Mudwort	<i>Limosella australis</i>	2B.1	This species occurs in brackish marsh, freshwater marsh, marsh and swamp, riparian scrub, and wetland habitats at elevations up to 10 feet.	May to August	Perennial stoloniferous herb	Suitable habitat is present within the survey area. Multiple observations of this species were made during fully floristic field surveys. Present
Delta Tule Pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	1B.2	This species occurs in freshwater marsh, marsh and swamp, and wetland habitats at elevations up to 15 feet.	May to July	Perennial herb	Suitable habitat is present within the survey area. Multiple observations of this species were made during fully floristic field surveys. Present
Diablo Helianthella	<i>Helianthella castanea</i>	1B.2	This species occurs in broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats at elevations between 195 and 4,265 feet.	March to June	Perennial herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Diamond-petaled California Poppy	<i>Eschscholzia rhombipetala</i>	1B.1	This species occurs in valley and foothill grassland habitats at elevations up to 3,200 feet.	March to April	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. Surveys occurred outside of the bloom period for this species. This species has been documented within 5 miles of the survey area. Low Potential
Dwarf Downingia	<i>Downingia pusilla</i>	2B.2	This species occurs in valley and foothill grassland, vernal pool, and wetland habitats at elevations between 5 and 1,460 feet.	March to May	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential

Common Name	Scientific Name	Listing Status ¹	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Fragrant Fritillary	<i>Fritillaria liliacea</i>	1B.2	This species occurs in cismontane woodland, coastal prairie, coastal scrub, ultramafic, and valley and foothill grassland habitats at elevations between 10 and 1,345 feet.	February to April	Perennial bulbiferous herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. Surveys occurred outside of the bloom period for this species. This species has been documented within 5 miles of the survey area. Low Potential
Hall's Bush-mallow	<i>Malacothamnus hallii</i>	1B.2	This species occurs in chaparral, coastal scrub, and ultramafic habitats at elevations between 35 and 2,495 feet.	May to September	Perennial deciduous shrub	Suitable habitat and conditions for this species are not present within the survey area, and no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. No Potential
Heartscale	<i>Atriplex cordulata</i> var. <i>cordulata</i>	1B.2	This species occurs in chenopod scrub, meadow and seep, and valley and foothill grassland habitats at elevations up to 1,835 feet.	April to October	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Hoover's Cryptantha	<i>Cryptantha hooveri</i>	1A	This species occurs in interior dunes and valley and foothill grassland habitats at elevations between 30 to 490 feet.	April to May	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Keck's Checkerbloom	<i>Sidalcea keckii</i>	FE, 1B.1	This species occurs in cismontane woodland, ultramafic, and valley and foothill grassland habitats at elevations between 245 and 2,135 feet.	April to June	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Mason's Lilaeopsis	<i>Lilaeopsis masonii</i>	1B.1	This species occurs in freshwater marsh, marsh and swamp, riparian scrub, and wetland habitats at elevations up to 35 feet.	April to November	Perennial rhizomatous herb	Suitable habitat is present within the Project area. Multiple observations of this species were made during fully floristic field surveys. Present
Mt. Diablo Buckwheat	<i>Eriogonum truncatum</i>	1B.1	This species occurs in chaparral, coastal scrub, and valley and foothill grassland habitats at elevations between 10 and 1,150 feet.	April to September	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Papoose Tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	1B.2	This species occurs in chaparral, coastal prairie, meadow and seep, marsh and swamp, and alley and foothill grassland habitats at elevations up to 1,380 feet.	May to November	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
San Joaquin Spearscale	<i>Extriplex joaquinana</i>	1B.2	This species occurs in alkali playa, chenopod scrub, meadow and seep, and valley and foothill grassland habitats at elevations between 5 and 2,740 feet.	April to October	Annual herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Showy Golden Madia	<i>Madia radiata</i>	1B.1	This species occurs in cismontane woodland and valley and foothill grassland habitats at elevations between 80 and 3,985 feet.	March to May	Annual herb	Suitable habitat and conditions for this species are present within the survey area, and no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential

Common Name	Scientific Name	Listing Status ¹	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Life Form	Potential to Occur in the Survey Area
Soft Salty Bird's-beak	<i>Chloropyron molle</i> ssp. <i>molle</i>	FE, 1B.2	This species occurs in marsh and swamp, salt marsh, and wetland habitats at elevations up to 10 feet.	June to November	Annual herb (hemiparasitic)	Suitable habitat and conditions for this species are not present within the survey area, and no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 5 miles of the survey area. Low Potential
Suisun Marsh Aster	<i>Symphyotrichum lentum</i>	1B.2	This species occurs in brackish marsh, freshwater marsh, marsh and swamp, and wetland habitats at elevations up to 10 feet.	April to November	Perennial rhizomatous herb	Suitable habitat and conditions for this species are present within the survey area, but no observations were recorded during fully floristic field surveys in May and July 2023. This species has been documented within 0.25 mile of the survey area. High Potential

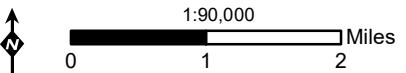
ATTACHMENT C: CNDDB PLANT OCCURRENCES MAP



**Attachment C:
CNDDB Plant Occurrences Map**

**Collinsville 500/230 Kilovolt
Substation Project**

- Project Buffers
- Special Status Plant Species
- Alkali milk-vetch
 - Antioch Dunes buckwheat
 - Antioch Dunes evening-primrose (within 1 mile)
 - Bearded popcornflower
 - Big tarplant (within 1 mile)
 - Bolander's water-hemlock (within 1 mile)
 - Brittlescale
 - Carquinez goldenbush
 - Chaparral ragwort
 - Contra Costa goldfields
 - Contra Costa wallflower (within 1 mile)
 - Delta mudwort (within 1 mile)
 - Delta tule pea (within 1 mile)
 - Diablo helianthella
 - Diamond-petaled California poppy
 - Dwarf downingia
 - Fragrant fritillary
 - Hall's bush-mallow
 - Heartscale
 - Hoover's cryptantha
 - Keck's checkerbloom
 - Mason's lilaepsis (within 1 mile)
 - Mt. Diablo buckwheat
 - Pappose tarplant
 - San Joaquin spearscale
 - Showy golden madia
 - Suisun Marsh aster (within 1 mile)
 - Soft salty bird's-beak



ATTACHMENT D: PLANT SPECIES OBSERVED

ATTACHMENT D: PLANT SPECIES OBSERVED

Family	Scientific Name	Common Name
Aizoaceae	<i>Sesuvium verrucosum</i>	Smooth Sea-Purslane
Alismataceae	<i>Alisma gramineum</i>	Slender Water Plantain
Alismataceae	<i>Alisma triviale</i>	Northern Water Plantain
Amaranthaceae	<i>Atriplex prostrata</i>	Spreading Saltbush
Amaranthaceae	<i>Atriplex semibaccata</i>	Australian Saltbush
Amaranthaceae	<i>Atriplex suberecta</i>	Desert Holly
Amaranthaceae	<i>Chenopodium murale</i>	Nettle-leaved Goosefoot
Amaranthaceae	<i>Chenopodium vulvaria</i>	Stinking Goosefoot
Amaranthaceae	<i>Salicornia pacifica</i>	Pacific Glasswort
Amaranthaceae	<i>Salsola tragus</i>	Russian Thistle
Anacardiaceae	<i>Schinus molle</i>	California Pepper Tree
Apiaceae	<i>Apium graveolens</i>	Wild Celery
Apiaceae	<i>Conium maculatum</i>	Poison Hemlock
Apiaceae	<i>Foeniculum vulgare</i>	Sweet Fennel
Apiaceae	<i>Lilaeopsis masonii</i>	Mason's Lilaeopsis
Apiaceae	<i>Oenanthe sarmentosa</i>	Water Parsley
Apiaceae	<i>Sanolus parviflorus</i>	Small-flowered Sanolus
Apocynaceae	<i>Asclepias fascicularis</i>	Narrow-leaved Milkweed
Araliaceae	<i>Hydrocotyle verticillata</i>	Whorled Pennywort
Asparagaceae	<i>Asparagus officinalis</i>	Wild Asparagus
Asteraceae	<i>Achyrachaena mollis</i>	Soft Blow Wives
Asteraceae	<i>Ambrosia psilostachya</i>	Western Ragweed
Asteraceae	<i>Anthemis cotula</i>	Mayweed
Asteraceae	<i>Artemisia douglasiana</i>	Mugwort
Asteraceae	<i>Baccharis glutinosa</i>	Sticky Baccharis
Asteraceae	<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	Coyote Brush
Asteraceae	<i>Baccharis salicifolia</i>	Mule Fat
Asteraceae	<i>Carduus pycnocephalus</i>	Italian Thistle
Asteraceae	<i>Centaurea solstitialis</i>	Yellow Starthistle
Asteraceae	<i>Centromadia parryi</i>	Pappose Tarweed
Asteraceae	<i>Chondrilla juncea</i>	Rush Skeletonweed

Family	Scientific Name	Common Name
Asteraceae	<i>Cirsium vulgare</i>	Bull Thistle
Asteraceae	<i>Cotula cornopilfoila</i>	Brass Buttons
Asteraceae	<i>Erigeron philadelphicus</i>	Philadelphia Fleabane
Asteraceae	<i>Euthamia occidentalis</i>	Western Goldenrod
Asteraceae	<i>Grindelia stricta</i>	Gumplant
Asteraceae	<i>Helminthotheca echioides</i>	Bristly Oxtongue
Asteraceae	<i>Heterotheca grandiflora</i>	Telegraph Weed
Asteraceae	<i>Hoita macrostachya</i>	Showy Goldeneye
Asteraceae	<i>Hypochoeris glabra</i>	Smooth Cat's Ear
Asteraceae	<i>Iva axillaris</i>	Poverty Weed
Asteraceae	<i>Lactuca serriola</i>	Prickly Lettuce
Asteraceae	<i>Madia gracilis</i>	Graceful Tarweed
Asteraceae	<i>Matricaria occidentalis</i>	Valley mayweed
Asteraceae	<i>Senecio hydrophilus</i>	Marsh Ragwort
Asteraceae	<i>Senecio vulgaris</i>	Common Groundsel
Asteraceae	<i>Silybum marianum</i>	Milk Thistle
Asteraceae	<i>Sonchus asper</i>	Prickly Sowthistle
Asteraceae	<i>Xanthium spinosum</i>	Spiny Cocklebur
Asteraceae	<i>Xanthium strumarium</i>	Common Cocklebur
Boraginaceae	<i>Amsinckia intermedia</i>	Common Fiddleneck
Boraginaceae	<i>Eriodictyon crassifolium</i>	Thick-leaved Yerba Santa
Boraginaceae	<i>Heliotropium curassavicum</i>	Salt Heliotrope
Brassicaceae	<i>Brassica nigra</i>	Black Mustard
Brassicaceae	<i>Lepidium latifolium</i>	Broadleaf Pepperweed
Brassicaceae	<i>Raphanus sativus</i>	Radish
Caryophyllaceae	<i>Spergula marina</i>	Salt Sandspurry
Caryophyllaceae	<i>Spergularia arvensis</i>	Corn Spurry
Convolvulaceae	<i>Calystegia silvatica</i>	Chaparral Dodder
Convolvulaceae	<i>Convolvulus arvensis</i>	Field Bindweed
Convolvulaceae	<i>Cressa truxillensis</i>	Alkaliweed
Cucurbitaceae	<i>Marah fabacea</i>	Wild Cucumber
Cyperaceae	<i>Bolboschoenus robustus</i>	California Bulrush

Family	Scientific Name	Common Name
Cyperaceae	<i>Carex barbarae</i>	Santa Barbara Sedge
Cyperaceae	<i>Eleocharis acicularis</i> var. <i>acicularis</i>	Needle Spikerush
Cyperaceae	<i>Eleocharis macrostachya</i>	Tall Spike-rush
Cyperaceae	<i>Isolepis cernua</i>	Nodding Centaury
Cyperaceae	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Common Tule
Cyperaceae	<i>Schoenoplectus americanus</i>	Three Square Bulrush
Cyperaceae	<i>Schoenoplectus californicus</i>	California Bulrush
Cyperaceae	<i>Schoenoplectus pungens</i>	Common Threesquare
Equisetaceae	<i>Equisetum hyemale</i> ssp. <i>affine</i>	Scouring Rush
Euphorbiaceae	<i>Croton setiger</i>	Dove Weed
Fabaceae	<i>Acmispon americanus</i> var. <i>americanus</i>	American Bird's-foot
Fabaceae	<i>Acmispon glaber</i> var. <i>glaber</i>	Deerweed
Fabaceae	<i>Acmispon strigosus</i>	Strigose Bird's-foot Trefoil
Fabaceae	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta Tule Pea
Fabaceae	<i>Lotus corniculatus</i>	Bird's-foot Trefoil
Fabaceae	<i>Lotus tenuis</i>	Slender Lotus
Fabaceae	<i>Lupinus bicolor</i>	Miniature Lupine
Fabaceae	<i>Lupinus succulentus</i>	Arroyo Lupine
Fabaceae	<i>Medicago polymorpha</i>	California Burr Medic
Fabaceae	<i>Melilotus indicus</i>	Annual Yellow Sweetclover
Fabaceae	<i>Sesbania punicea</i>	Red Sesbania
Fabaceae	<i>Trifolium hirtum</i>	Rose Clover
Fabaceae	<i>Trifolium hybridum</i>	Alsike Clover
Fabaceae	<i>Trifolium wormskioldii</i>	Cow Clover
Fabaceae	<i>Vicia sativa</i>	Common Vetch
Fabaceae	<i>Vicia villosa</i>	Hairy Vetch
Frankeniaceae	<i>Frankenia salina</i>	Alkali Heath
Geraniaceae	<i>Erodium botrys</i>	Long-beaked Filaree
Geraniaceae	<i>Erodium cicutarium</i>	Redstem Filaree
Geraniaceae	<i>Geranium dissectum</i>	Cutleaf Geranium
Iridaceae	<i>Iris pseudacorus</i>	Yellow Flag Iris
Juncaceae	<i>Juncus balticus</i>	Baltic Rush

Family	Scientific Name	Common Name
Juncaceae	<i>Juncus bufonius</i>	Toad Rush
Juncaceae	<i>Juncus gerardii</i> ssp. <i>gerardii</i>	Salt Marsh Rush
Juncaceae	<i>Juncus mexicanus</i>	Mexican Rush
Lamiaceae	<i>Marrubium vulgare</i>	White Horehound
Lamiaceae	<i>Mentha spicata</i>	Spearmint
Lamiaceae	<i>Pterostegia drymariodes</i>	Fairy Mist
Lythraceae	<i>Lythrum hyssopifolia</i>	Hyssop Loosestrife
Malvaceae	<i>Malva parviflora</i>	Small-flowered Mallow
Malvaceae	<i>Malvella leprosa</i>	Round-leaved Mallow
Montiaceae	<i>Claytonia perfoliata</i>	Miner's Lettuce
Onagraceae	<i>Epilobium ciliatum</i>	Fringed Willowherb
Orobanchaceae	<i>Castilleja exserta</i> ssp. <i>exserta</i>	Purple Owl's Clover
Orobanchaceae	<i>Bellardia trixago</i>	Mediterranean Lineseed
Plantaginaceae	<i>Plantago coronopus</i>	Buckshorn Plantain
Plantaginaceae	<i>Plantago lanceolata</i>	English Plantain
Poaceae	<i>Agrostis stolonifera</i>	Creeping Bentgrass
Poaceae	<i>Arundo donax</i>	Giant Reed
Poaceae	<i>Avena fatua</i>	Wild Oat
Poaceae	<i>Bromus berterioanus</i>	Chilean Brome
Poaceae	<i>Bromus diandrus</i>	Ripgut Brome
Poaceae	<i>Bromus hordeaceus</i>	Soft Brome
Poaceae	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red Brome
Poaceae	<i>Bromus tectorum</i>	Cheatgrass
Poaceae	<i>Cortaderia jubata</i>	Purple Pampas Grass
Poaceae	<i>Cynodon dactylon</i>	Bermuda Grass
Poaceae	<i>Cynosurus echinatus</i>	Coast Bur Grass
Poaceae	<i>Distichlis spicata</i>	Saltgrass
Poaceae	<i>Elymus triticoides</i>	Beardless Wildrye
Poaceae	<i>Festuca bromoides</i>	Red Fescue
Poaceae	<i>Festuca perennis</i>	Meadow Fescue
Poaceae	<i>Hordeum jubatum</i>	Foxtail Barley
Poaceae	<i>Hordeum murinum</i>	Wall Barley

Family	Scientific Name	Common Name
Poaceae	<i>Hordeum vulgare</i>	Common Barley
Poaceae	<i>Phalaris canariensis</i>	Canary Grass
Poaceae	<i>Phalaris paradoxa</i>	Hairy Canarygrass
Poaceae	<i>Phragmites australis</i>	Common Reed
Polygonaceae	<i>Persicaria</i> spp.	Smartweeds
Polygonaceae	<i>Polygonum argyrocoleon</i>	Silverweed Knotweed
Polygonaceae	<i>Polygonum aviculare</i>	Prostrate Knotweed
Polygonaceae	<i>Rumex acetosella</i>	Sheep Sorrel
Polygonaceae	<i>Rumex californicus</i>	California Dock
Polygonaceae	<i>Rumex crispus</i>	Curly Dock
Ranunculaceae	<i>Ranunculus sceleratus</i>	Cursed Buttercup
Rosaceae	<i>Potentilla anseriana</i> ssp. <i>pacifica</i>	Silverweed
Rosaceae	<i>Rosa californica</i>	California Wild Rose
Rosaceae	<i>Rubus armeniacus</i>	Himalayan Blackberry
Salicaceae	<i>Salix exigua</i>	Narrowleaf Willow
Salicaceae	<i>Salix exigua</i> var. <i>hindsiana</i>	Sandbar Willow
Salicaceae	<i>Salix gooddingii</i>	Goodding's Willow
Salicaceae	<i>Salix laevigata</i>	Red Willow
Salviniaceae	<i>Azolla filiculoides</i>	Water Fern
Scrophulariaceae	<i>Limosella australis</i>	Delta Mudwort
Scrophulariaceae	<i>Zeltnera muehlenbergii</i>	Little Redstem
Solanaceae	<i>Solanum americanum</i>	American Nightshade
Themidaceae	<i>Brodiaea elegans</i> ssp. <i>elegans</i>	Elegant Brodiaea
Typhaceae	<i>Typha latifolia</i>	Common Cattail
Verbenaceae	<i>Phyla nodiflora</i>	Turkey Tangle Fogfruit

ATTACHMENT E: SPECIAL-STATUS PLANT PHOTOGRAPHS

ATTACHMENT E: SPECIAL-STATUS PLANT PHOTOGRAPHS



Photograph 1:
Delta tule pea
(*Lathyrus*
jepsonii var.
jepsonii).



Photograph 2:
Mason's
lilaeopsis
(*Lilaeopsis*
masonii).



Photograph 3:
Welsh mudwort
(*Limosella*
australis).

ATTACHMENT F: CNDDDB SUBMITTAL FORMS

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/



Source code CRO23F0003
Quad code 3812117
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Limosella australis*

Common name: Delta mudwort

Date of field work (mm-dd-yyyy): 05-24-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Brian Cropper

Affiliation: Insignia Environmental

Address: 3028 Juniper St Apt 3

Email: bcropper@insigniaenv.com

Phone: (920) 544-7989

Other observers: Deanna Giuliano

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in: Jepson Herbarium, Calflora

By another person: Deanna Giuliano

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes If not found, why not?

Level of survey effort: Fully botanical survey

Total number of individuals: 150-250

Collection? No

Collection number:

Museum/Herbarium:

PLANT INFORMATION

Phenology:	90 %	10 %	0 %
	vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: Species were found in tidally influenced saturated soils directly adjacent to riprap along the coastline. Associated species included predominantly Juncus.

Slope: 1-2 percent

Land owner/manager:

Aspect:

Site condition + population viability:

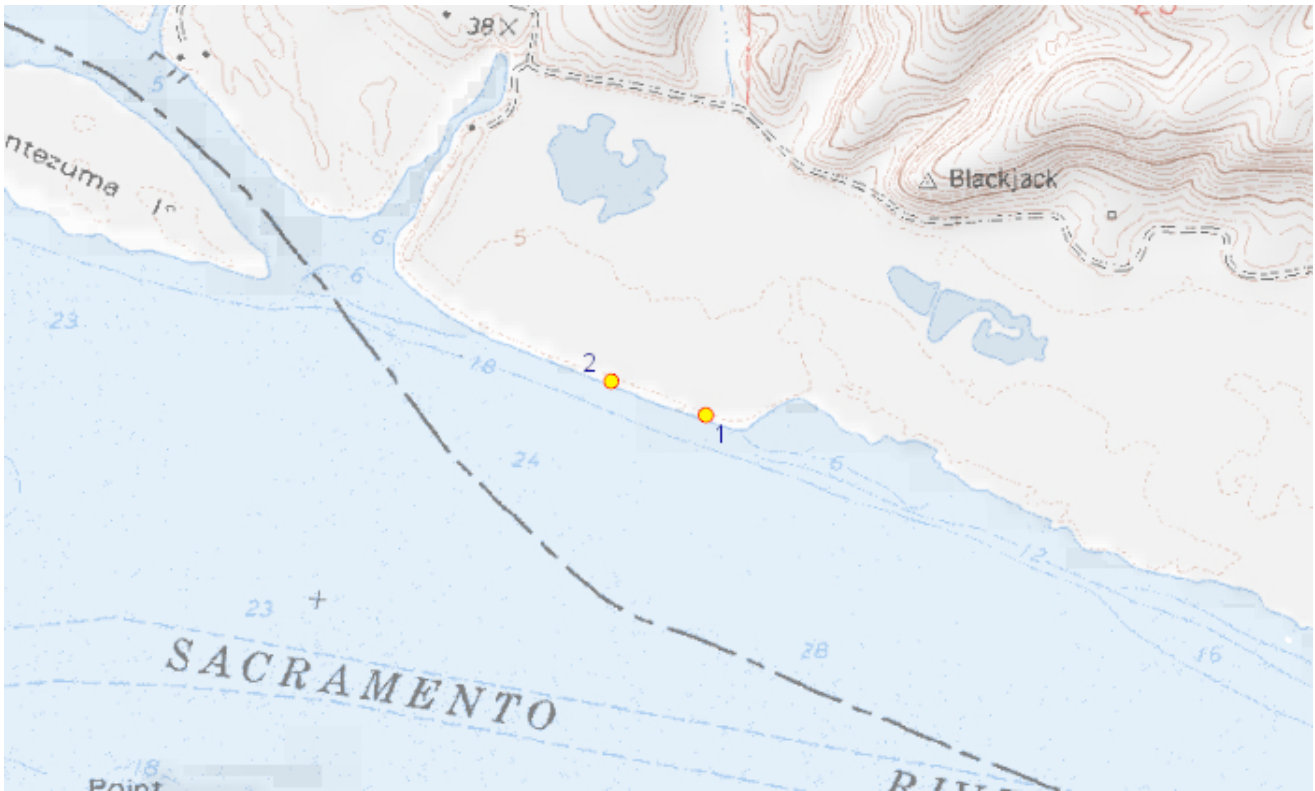
Immediate & surrounding land use: Potential grazing

Visible disturbances: [Trash/debris, man-made berms, riprap.](#)

Threats: [Trash accumulation, grazing.](#)

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	Solano	Antioch North	-9999	38.06929	-121.82582	602994	4214154	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26	Spreads via rhizomes consistent along coast						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
2	Solano	Antioch North	-9999	38.06990	-121.82799	602803	4214219	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26							

The mapped feature is accurate within: 10 m

Source of mapped feature: [Handheld submeter GPS unit](#)

Mapping notes: [Species spreads along coast in between mapped points.](#)

Location/directions comments:

Attachment(s):

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/



Source code CRO23F0001
Quad code 3812117
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Lathyrus jepsonii* var. *jepsonii*

Common name: Delta tule pea

Date of field work (mm-dd-yyyy): 05-24-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Brian Cropper

Affiliation: Insignia Environmental

Address: 3028 Juniper St Apt 3

Email: bcropper@insigniaenv.com

Phone: (920) 544-7989

Other observers: Deanna Giuliano

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in: Jepson Herbarium, Calflora

By another person: Deanna Giuliano

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes If not found, why not?

Level of survey effort: Fully botanical survey

Total number of individuals: 150-200

Collection? No

Collection number:

Museum/Herbarium:

PLANT INFORMATION

Phenology:	70 %	25 %	5 %
	vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: Rosa californica and Schoenoplectus dominated habitat and associations. Delta tule pea was commonly found climbing up upland shrubs adjacent to sloughs approximately 15-20 feet from the coast.

Slope: 5 to 10%

Land owner/manager:

Aspect:

Site condition + population viability: Fair

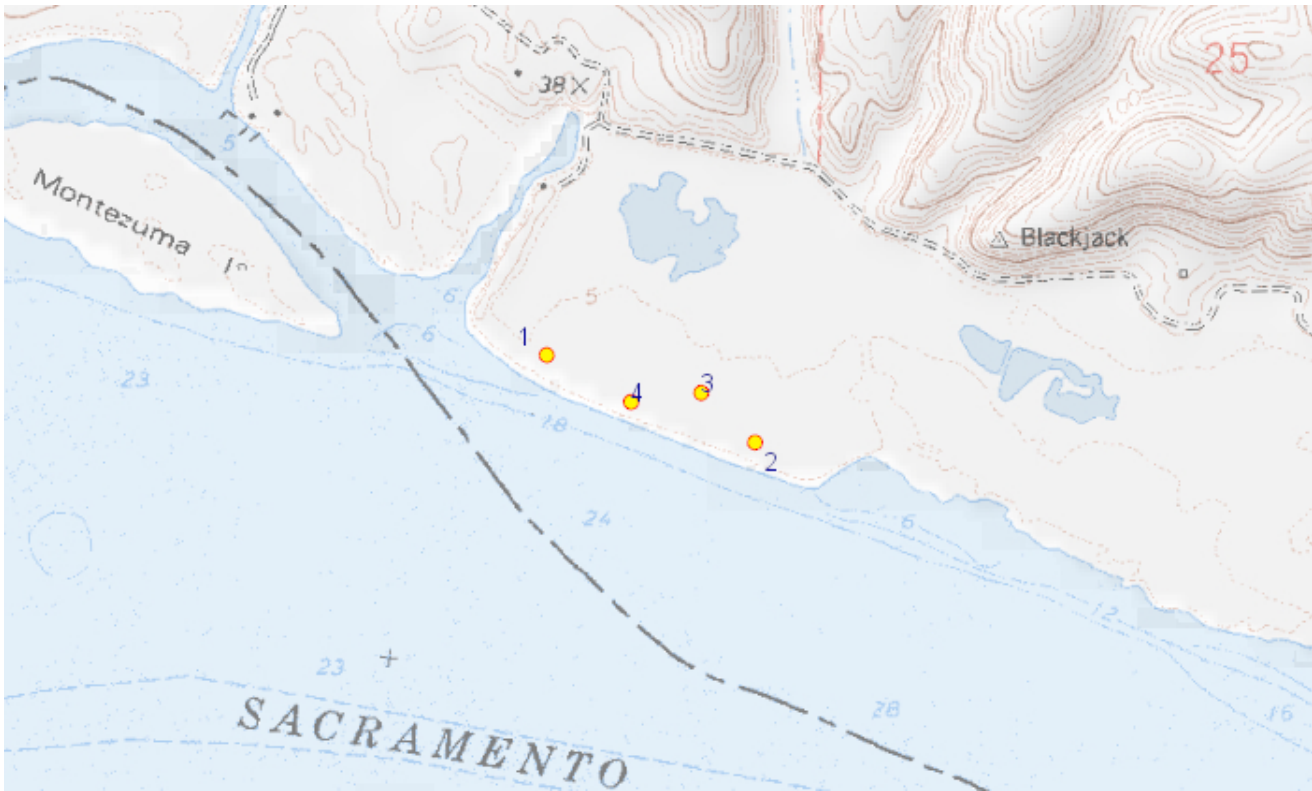
Immediate & surrounding land use: Agriculture/grazing

Visible disturbances: evidence of grazing, man-made berms, riprap along coastline.

Threats: Grazing, development

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	14	38.07143	-121.83111	602527	4214386	10
1	Public Land Survey	Feature Comment						
	M T03N R01E 26							
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	20	38.06985	-121.82633	602949	4214216	10
2	Public Land Survey	Feature Comment						
	M T03N R01E 26	Large polygon with 25+ individuals						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	20	38.07074	-121.82756	602839	4214314	10
3	Public Land Survey	Feature Comment						
	M T03N R01E 26	Large polygon with 20+ individuals						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	9	38.07058	-121.82917	602698	4214294	10
4	Public Land Survey	Feature Comment						
	M T03N R01E 26	Large polygon with 75+ individuals						

The mapped feature is accurate within: 20 m

Source of mapped feature: Submeter handheld GPS device

Mapping notes:

Location/directions comments:

Attachment(s):

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/



Source code CRO23F0002
Quad code 3812117
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Lilaeopsis masonii*

Common name: Mason's lilaeopsis

Date of field work (mm-dd-yyyy): 05-24-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Brian Cropper

Affiliation: Insignia Environmental

Address: 3028 Juniper St Apt 3

Email: bcropper@insigniaenv.com

Phone: (920) 544-7989

Other observers: Deanna Giuliano

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in: Jepson Herbarium, Calflora

By another person: Deanna Giuliano

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes If not found, why not?

Level of survey effort: Fully botanical survey

Total number of individuals: 200-500

Collection? No

Collection number:

Museum/Herbarium:

PLANT INFORMATION

Phenology:	15 %	85 %	0 %
	vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: Species were observed approximately 2-5 feet from the coast in tidally influenced saturated soils adjacent to riprap along coast. Dominant species and habitat included primarily Juncus.

Slope: 1-2 percent

Land owner/manager:

Aspect:

Site condition + population viability: Good

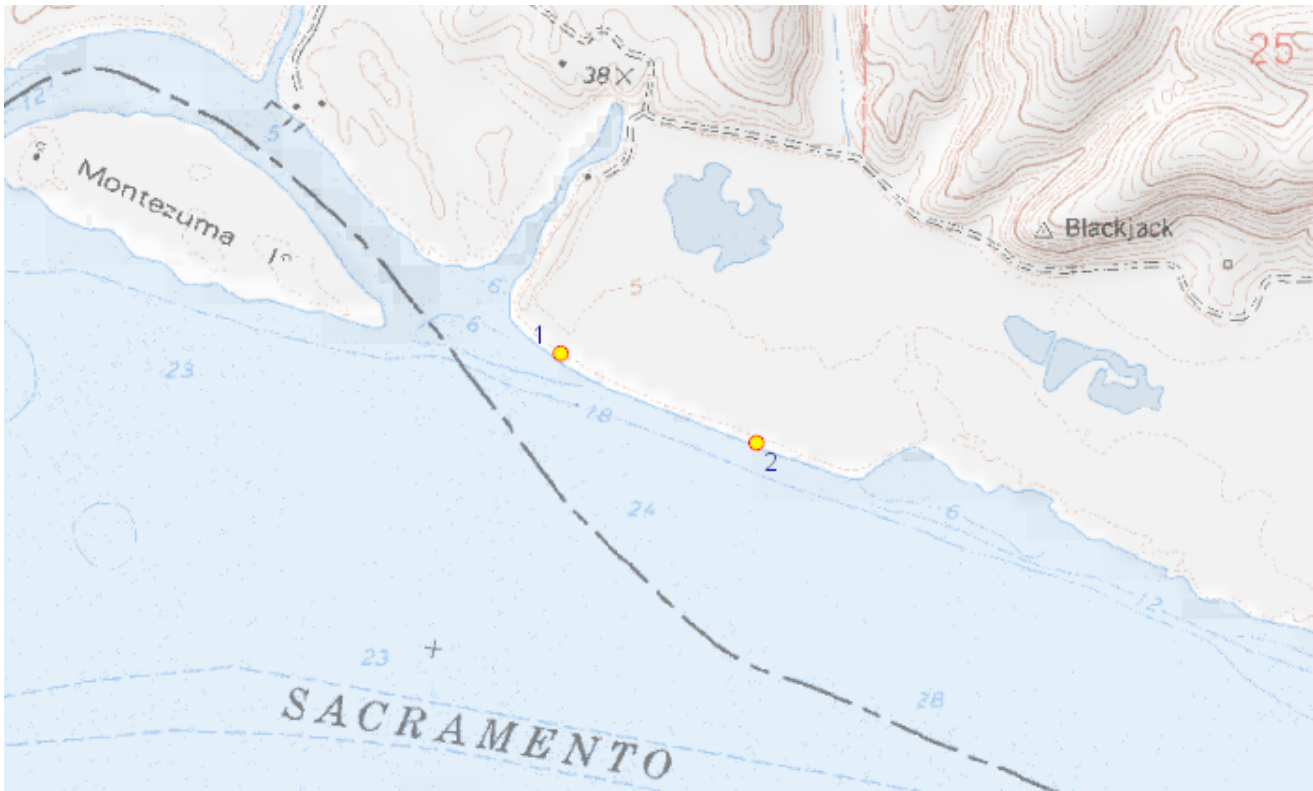
Immediate & surrounding land use: N/A

Visible disturbances: Riprap along coast, trash/debris, man-made berms.

Threats: Trash accumulation, potential grazing

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	Solano	Antioch North	-9999	38.07129	-121.83182	602465	4214370	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26	rhizomatous spreading aprox. 5 ft from coast						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
2	Solano	Antioch North	-9999	38.06968	-121.82733	602861	4214196	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26	Rhizomatous spreading along coast						

The mapped feature is accurate within: 10 m

Source of mapped feature: Handheld submeter GPS unit

Mapping notes: Species spreads along the coast and was found consistently between the two mapped points.

Location/directions comments:

Attachment(s):

**ATTACHMENT D: COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT BOTANICAL
SURVEY REPORT ADDENDUM**

LS POWER GRID CALIFORNIA, LLC
COLLINSVILLE 500/230 KILOVOLT SUBSTATION PROJECT
BOTANICAL SURVEY REPORT ADDENDUM

NOVEMBER 2024

PREPARED FOR:



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LIST OF ATTACHMENTS

Attachment A: Biological Resources Map
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Attachment C: Plant Species Observed
Attachment D: Special-Status Plant Photographs
Attachment E: CNDDDB Submittal Forms

1 – INTRODUCTION

LS Power Grid California, LLC (LSPGC) retained Insignia Environmental (Insignia) to conduct fully floristic botanical surveys for the Collinsville 500/230 Kilovolt (kV) Substation Project (Proposed Project). As depicted in Figure 1: Project Overview Map, the Proposed Project includes the construction of a new 500/230 kV substation (Collinsville Substation), the construction of two new 500 kV single-circuit transmission line segments that would loop Pacific Gas and Electric Company's (PG&E's) existing Vaca Dixon-Tesla 500 kV Transmission Line into the proposed LSPGC Collinsville Substation, and the construction of one new 230 kV double-circuit transmission line that would connect the proposed Collinsville Substation to PG&E's existing Pittsburg Substation. The Proposed Project has been designed to address overloads on the existing Contra Costa-Newark 230 kV corridor and provide an additional supply into the northern greater San Francisco Bay Area to increase reliability to the area and advance additional renewable generation.

The Botanical Survey Report (Report) (Insignia 2023) was prepared in October 2023 to identify special-status plant species that may be present within or adjacent to the Proposed Project's terrestrial survey area.¹ The terrestrial survey area has since been expanded by approximately 184 acres, and fully floristic botanical surveys were required within the revised terrestrial survey area. Additionally, the 2023 surveys were conducted outside the blooming period for four special-status plant species. Therefore, 2024 surveys included fully floristic botanical surveys in the revised terrestrial survey area and targeted botanical surveys for four special-status plant species in the terrestrial survey area. This Botanical Survey Report Addendum (Report Addendum) details the findings of the 2024 targeted and fully floristic surveys within the terrestrial survey area and revised terrestrial survey area, respectively.

2 – PROJECT LOCATION

The location of the Proposed Project has not changed since the submission of the 2023 Report. As depicted in Figure 1: Project Overview Map, the proposed LSPGC Collinsville Substation would be located near the unincorporated community of Collinsville, located in the southwestern portion of Solano County. The revised terrestrial survey area is bordered on the south and southwest by the Sacramento River, where it debouches into Suisun Bay; on the west by the Montezuma Hills and Suisun Marsh; and to the north and east by agricultural lands. The Proposed Project would create a connection to PG&E's existing Pittsburg Substation, which is located in the City of Pittsburg in the northern portion of Contra Costa County.

¹ The terrestrial survey area primarily consists of all terrestrial areas of the Proposed Project north of the Sacramento River, as well as an approximately 10-acre buffer. Terrestrial areas south of Suisun Bay, in the vicinity of PG&E's existing Pittsburg Substation, comprise a small portion of the terrestrial survey area.

3 – METHODS

3.0 DEFINITIONS

The following definitions were used to define special-status resources within the terrestrial survey area and revised terrestrial survey area.

3.0.0 Special-Status Plants

Plant species are considered special-status if they met one or more of the following criteria:

- Species listed or candidates for listing as threatened or endangered under the federal Endangered Species Act;
- Species listed or candidates for listing as threatened or endangered under the California Endangered Species Act;
- Species meeting the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 California Code of Regulations Section 15380), which may include species not found on the federal or state endangered species lists; or
- Species considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California (i.e., California Rare Plant Ranks [CRPRs] 1A, 1B, 2A, 2B, and 3).

3.0.1 Sensitive Natural Communities and Habitats

Natural communities are considered sensitive if they met one or more of the following criteria:

- Sensitive vegetation communities/habitats identified in local or regional plans, policies, or regulations, or designated as sensitive by the California Department of Fish and Wildlife (CDFW) or United States (U.S.) Fish and Wildlife Service (USFWS) (including communities assigned a State Rarity Rank of S1 to S3 under the CDFW Vegetation Classification and Mapping Program);
- Areas that provide habitat for locally unique biotic species/communities (e.g., oak woodlands, grasslands, and forests);
- Habitat that contains or supports rare, endangered, or threatened wildlife or plant species as defined by the CDFW and USFWS;
- Habitat that supports one or more CDFW Species of Special Concern;
- Areas that provide habitat for rare or endangered species and that meet the definition in CEQA Guidelines Section 15380;
- Existing game and wildlife refuges and reserves;

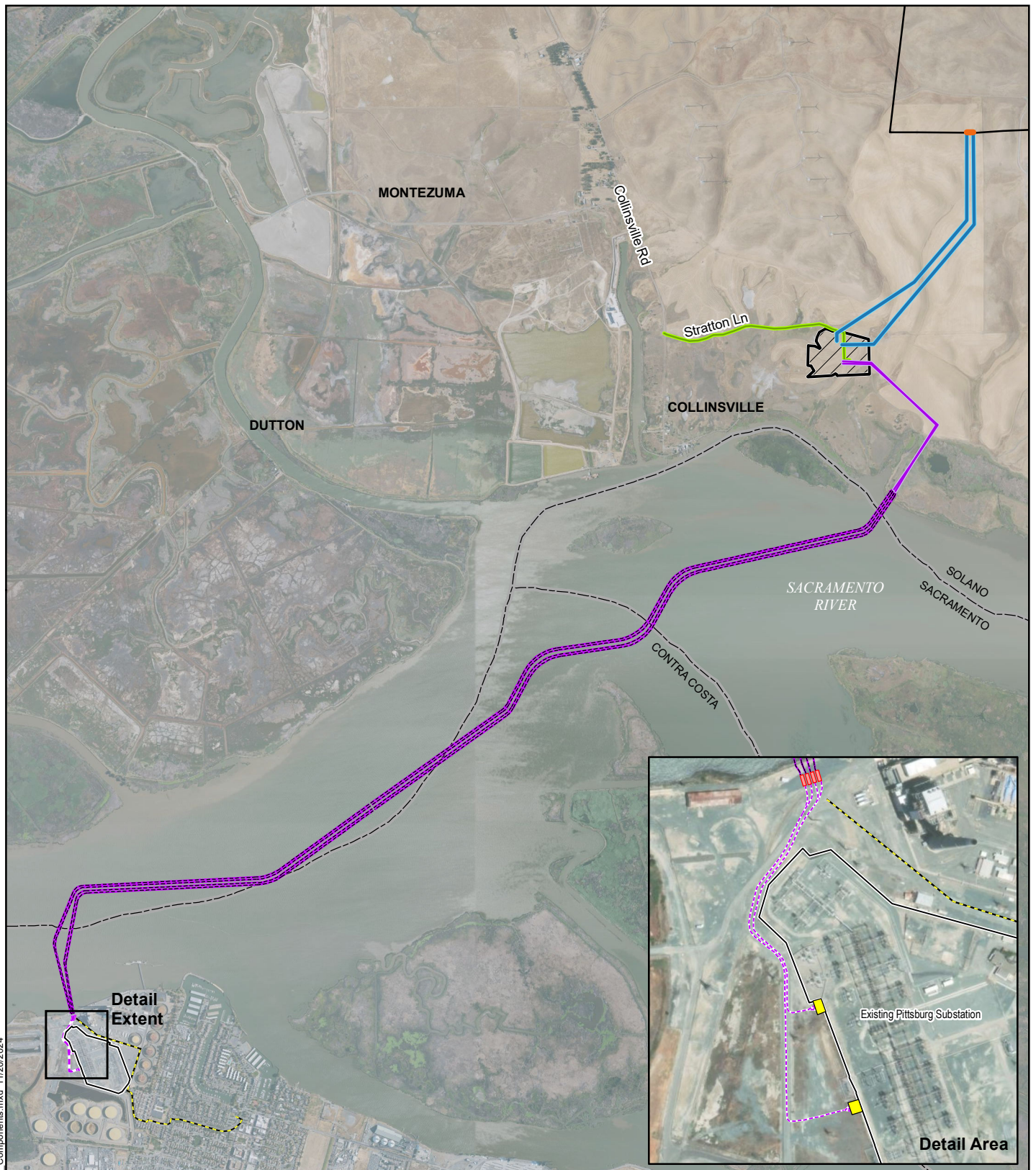
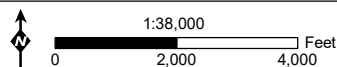


Figure 1: Project Overview Map

Collinsville 500/230 Kilovolt Substation Project

- | | | |
|--|--|--|
| Proposed LSPGC 230 kV Overhead Segment | County Boundary | Proposed LSPGC Telecommunications Line |
| Proposed LSPGC 230 kV Submarine Segment | Existing PG&E Vaca Dixon-Tesla Transmission Line | Proposed Riser |
| Proposed LSPGC 230 kV Underground Segment | Existing Pittsburg Substation | Proposed Utility Vault |
| Proposed PG&E 500 kV Interconnection | Proposed LSPGC Collinsville Substation Site | |
| Proposed PG&E 12 kV Distribution Line | | |
| Existing PG&E 500 kV Transmission Line to be Removed | | |



- Lakes, wetlands, estuaries, lagoons, streams, and rivers; or
- Riparian corridors.

3.1 DESKTOP REVIEW

A literature and database review was conducted to identify special-status plant species with the potential to occur within the terrestrial survey area and revised terrestrial survey area. A geographic information system review of records from the California Natural Diversity Database (CNDDDB) (CDFW 2023b), was conducted in the U.S. Geological Survey 7.5-minute quadrangles within and adjacent to the terrestrial survey area. Records for all known special-status plant species within 0.25 mile, 1 mile, and 5 miles of the Proposed Project were compiled and reviewed. The CNPS Inventory of Rare and Endangered Plants of California (CNPS 2023a) was reviewed with a nine-quadrangle search to obtain additional information regarding special-status plant species. The terrestrial survey area overlaps significantly with the Sacramento Municipal Utility District's (SMUD's) Solano 4 Wind Project, for which a final Environmental Impact Report is available (SMUD 2021); this document was referenced during the preliminary desktop review to identify special-status plant species and their potential to occur within the terrestrial survey area. Attachment B: Special-Status Species with the Potential to Occur in the 2023 Report contains a list of special-status plants with the potential to occur in the terrestrial survey area. Aerial imagery (Google Earth 2024) and the Vegetation Community and Mapping Program (VegCAMP) (CDFW 2023c) were used to assess land cover and habitat types within the terrestrial survey area and revised terrestrial survey area.

3.2 REFERENCE POPULATION SEARCH

Reference population checks were conducted in accordance with the CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities guidelines (CDFW 2018). Known occurrences and populations of special-status plants within 12 miles of the revised terrestrial survey area were investigated concurrent with the botanical surveys to confirm the blooming status and obtain a visual image of the special-status plant species. Further, local botanists working in areas adjacent to the Proposed Project were consulted to determine if special-status plants were observed to be blooming prior to field surveys dates.

3.3 FIELD SURVEY

3.3.0 Fully Floristic Survey

The geographical boundaries of the fully floristic survey, as depicted in Attachment A: Biological Resources Map, were limited to the revised terrestrial survey area and included approximately 184 acres of previously unsurveyed land associated with the land-based portions of the Proposed LSPGC Collinsville Substation Site, the Proposed LSPGC 230 kV Overhead Segment, the Proposed PG&E 500 kV Interconnection, and the Proposed PG&E 12 kV Distribution Line. While PG&E's existing Pittsburg Substation, located at the southern terminus of the Proposed Project in Contra Costa County, is situated adjacent to marsh habitat suitable for marsh-dependent special-status plant species, the substation site does not provide suitable habitat for special-status plant species because the facility is located entirely within developed land (e.g.,

graveled or paved), and unvegetated rip-rap is present along much of the shoreline. Because Proposed Project activities at PG&E's existing Pittsburg Substation site are not anticipated to occur within or result in impacts to suitable habitat for special-status plant species, the revised terrestrial survey area in the vicinity of PG&E's existing Pittsburg Substation site was excluded from fully floristic surveys.

Insignia biologists conducted fully floristic plant surveys that covered 100 percent of the revised terrestrial survey area. Transect spacing between surveyors was less than or equal to 10 meters. The surveys were conducted in accordance with guidelines published by the CNPS (2001), the CDFW (2018), and the USFWS (2000), which state the following:

- Surveys should be conducted at the proper time of year when locally significant plants are both evident and identifiable.
- Surveys must be floristic in nature, and the species, subspecies, or variety must be identified for every observed plant to determine the rarity status.
- Surveys must be conducted in a manner that is consistent with conservation ethics and accepted plant collection and documentation techniques.

3.3.1 Targeted Survey

The geographical boundaries of the targeted survey, depicted as the terrestrial survey area in Attachment A: Biological Resources Map of the 2023 Report, were limited to the terrestrial survey area from the 2023 Report and include the land-based portions of the Proposed LSPGC Collinsville Substation Site, the Proposed LSPGC 230 kV Overhead Segment, the Proposed PG&E 500 kV Interconnection, and the Proposed PG&E 12 kV Distribution Line. As described in Section 3.3.0 Fully Floristic Survey, PG&E's existing Pittsburg Substation site was excluded from the targeted surveys.

Insignia biologists conducted targeted surveys during appropriate blooming periods for three of four special-status plant species that covered 100 percent of the terrestrial survey area. The fourth species, Carquinez goldenbush, is a perennial shrub and is identifiable year-round.

Transect spacing between surveyors was less than or equal to 10 meters. The targeted surveys were focused on the following special-status plant species:

- diamond-petaled California poppy (*Eschscholzia rhombipetala*),
- fragrant fritillary (*Fritillaria liliacea*),
- Carquinez goldenbush (*Isocoma arguta*), and
- chaparral ragwort (*Senecio aphanactisii*).

4 – RESULTS

4.0 GEOGRAPHY, CLIMATE, AND HYDROLOGY

The Proposed Project area receives an average of 16.6 inches of rainfall per year, with the majority of precipitation falling between November and March (Weather Spark 2024). Average annual temperatures range from 48 to 73 degrees Fahrenheit (National Oceanic and Atmospheric

Administration [NOAA] 2023). The elevation of the Proposed Project area ranges from 3 to 250 feet above sea level.

4.1 DESKTOP REVIEW

Similar to the results of the initial desktop analysis, upland areas around the proposed LSPGC Collinsville Substation site and transmission line route within the revised terrestrial survey area are mainly composed of grassland habitat and agricultural areas. The southern edge of the revised terrestrial survey area along the Sacramento River appeared to support native riparian habitat areas and freshwater wetlands.² No special-status plant species were observed in portions of the terrestrial survey area and the revised terrestrial survey area that overlap with the Solano 4 Winds Project. PG&E's existing Pittsburg Substation site in Contra Costa County may have some fringe marsh habitat near the shoreline outside of the revised terrestrial survey area, but the majority of the facility appeared to be developed (e.g., graveled or paved) with rip-rap present along much of the revised terrestrial survey area shoreline.

Insignia compiled a list of 28 special-status plant species that have potential to occur within 5 miles of the revised terrestrial survey area and terrestrial survey area. A list of these species and further details about their listing status, life history, blooming period, and a brief assessment of their potential to occur within the terrestrial survey area and revised terrestrial survey area are described in Attachment B: Special-Status Species with the Potential to Occur of the Report. Attachment B: CNDDDB Plant Occurrences Map depicts the locations of all special-status plant occurrences in the CNDDDB within 5 miles of the terrestrial survey area and the revised terrestrial survey area. No USFWS-designated critical habitat for federally listed plants was found within or adjacent to the terrestrial survey area or the revised terrestrial survey area.

4.2 REFERENCE POPULATION SEARCH

Prior to fully floristic botanical surveys in 2023, reference checks were attempted at eight locations within 5 miles of the terrestrial survey area. Many of these locations have historically documented occurrences of special-status plants but have since been converted to active agriculture use. This cover type is extensive and is the primary land use within 5 miles of the terrestrial survey area. Further, the reference populations for many special-status plant species in the Report were located on private property and were inaccessible to the survey team. None of the eight reference sites checked in 2023 were revisited in 2024.

To increase the chances of observing reference populations of special-status plant species, three additional locations up to 12 miles from the revised terrestrial survey area were assessed. Two of the three reference sites visited in 2024 were located on private property with limited access; however, one special-status plant species, Contra Costa goldfields (*Lasthenia conjugens*), was observed blooming abundantly at the third reference site.

To supplement field reference checks, local botanists working in areas adjacent to the Proposed Project were consulted. The following six special-status plant species were observed in leaf or in

² Formal wetland and waters delineations were conducted between May 6, 2024 and July 10, 2024 in the Proposed Project area. Attachment A: Biological Resources Map depicts wetland boundaries from the formal delineations.

bloom in habitats adjacent to the Proposed Project before or during the April survey period (Bartosh 2024):

- Alkali milk-vetch (*Astragalus tener* var. *tener*) was observed in bloom during April.
- Mt. Diablo buckwheat (*Eriogonum truncatum*) was observed in leaf before April.
- Diamond-petaled California poppy was observed in leaf before April.
- San Joaquin spearscale (*Extriplex joaquinana*) was observed in leaf during April.
- Fragrant fritillary was observed in bloom before April.
- Diablo helianthella (*Helianthella castanea*) was observed in bloom during April.

Findings from reference population checks and additional outreach with local botanists prompted the initiation of the field surveys and confirmed that they would be conducted within the appropriate blooming periods for the applicable species.

4.3 FIELD SURVEY

From April 22 to 26, 2024, Insignia biologists conducted fully floristic botanical surveys and targeted surveys within the revised terrestrial survey area and terrestrial survey area, respectively. All observed special-status plant species were photographed and recorded using a submeter-accurate Global Positioning System unit. The following subsections describe the results of the field surveys.

4.3.0 Vegetation Communities

The following 11 vegetation community alliances and land cover types were identified within the terrestrial survey area and revised terrestrial survey area:

- *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- *Distichlis spicata* Herbaceous Alliance
- *Frankenia salina* Herbaceous Alliance*³
- *Juncus arcticus* (var. *balticus, mexicanus*) Herbaceous Alliance
- *Lolium perenne* Herbaceous Semi-Natural Alliance
- Open water
- Road
- *Rosa californica* Shrubland Alliance*
- *Salix exigua* Shrubland Alliance
- *Schoenoplectus (acutus, californicus)* Herbaceous Alliance*
- *Schoenoplectus acutus/Rosa californica* Association*

The vegetation community and land cover locations are documented in Attachment A: Biological Resources Map. Four of the nine natural communities observed are considered sensitive natural communities by the CDFW (CDFW 2023a). Descriptions of each vegetation community identified within the terrestrial survey area and revised terrestrial survey area are provided in the 2023 Report.

³ The asterisks refer to a CDFW-designated sensitive natural community (State Rarity Rank S1-S3).

4.3.1 Special-Status Plants

Insignia biologists identified a total of 208 plant species during the 2023 and 2024 fully floristic botanical surveys in the terrestrial survey area and revised terrestrial survey area. An additional 56 plant species were identified within the revised terrestrial survey area that had not been previously observed within the terrestrial survey area. The addition of the revised terrestrial survey area did not change any determinations on Attachment B: Special-Status Plant Species with the Potential to Occur in the 2023 Report because there were no changes in suitable habitat within the revised terrestrial survey area and the terrestrial survey area. One special-status plant species—Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*)—was identified within the revised terrestrial survey area. Several new populations of Delta mudwort (*Limosella australis*) were observed within the terrestrial survey area. All plants observed within the terrestrial survey area and revised terrestrial survey area are listed in Attachment C: Plant Species Observed; species not previously observed within the terrestrial survey area are noted with asterisks. Photographs of the special-status plants observed within the revised terrestrial survey area are provided in Attachment D: Special-Status Plant Photographs. The locations of all special-status plants observed within the terrestrial survey area and revised terrestrial survey area are depicted in Attachment A: Biological Resources Map. A summary of the special-status plant species observed during fully floristic surveys and targeted surveys is provided in the following subsections.

Delta Tule Pea

Delta tule pea is a perennial herb endemic to California with a CRPR of 1B.2. Two populations of this species were observed within the revised terrestrial survey area. One of the two populations is located adjacent to an inlet along the north shore of the Sacramento River within *Rosa californica* Shrubland Alliance and *Schoenoplectus acutus*/*Rosa Californica* Association vegetation communities. The second population is located on the south shore of the Sacramento River within *Schoenoplectus (acutus, californicus)* Herbaceous Alliance nearby Delta tule pea populations found during 2023 surveys. Populations found in 2023 were observed and confirmed to be present in 2024. These areas are depicted on maps 1 and 13 in Attachment A: Biological Resources Map. Attachment D: Special-Status Plant Photographs provides photographs of select populations of Delta tule pea. CNDDDB forms for the Delta tule pea populations identified in the terrestrial survey area have been completed and are provided in Attachment E: CNDDDB Submittal Forms.

Mason's Lilaeopsis

Mason's lilaeopsis (*Lilaeopsis masonii*) is a perennial herb endemic to California with a CRPR of 1B.1. During the 2023 surveys, extensive populations of this species were observed along the southern edge of the terrestrial survey area within intertidal vegetation communities, including the *Schoenoplectus acutus* Herbaceous Alliance and *Juncus arcticus* (var. *balticus, mexicanus*) Herbaceous Alliance. During the 2024 surveys, this species was observed in bloom and confirmed to be present within the same areas of the terrestrial survey area mapped in 2023. These areas are depicted in map 1 of Attachment A: Biological Resources Map. No additional populations were observed during the 2024 surveys.

Welsh Mudwort

Welsh mudwort is a perennial herb native to California with a CRPR of 2B.1. During the 2023 surveys, this species was observed within the intertidal zone at the southern edge of the terrestrial survey area and within the *Schoenoplectus acutus* Herbaceous Alliance. During the 2024 surveys, this species was observed in bloom and confirmed to be present within the areas of the terrestrial survey area mapped in 2023. Additional populations of this species were observed and recorded within the same intertidal zone in 2024. These areas are depicted in map 1 of Attachment A: Biological Resources Map.

5 – DISCUSSION AND SUMMARY

During the fully floristic surveys conducted in April 2024, one special-status plant species—Delta tule pea—was observed in the revised terrestrial survey area on both the north and south shores of the Sacramento River, as shown in Attachment A: Biological Resources Map. Additionally, during targeted surveys, incidental observations of Delta mudwort and Mason’s lilaeopsis were mapped in the terrestrial survey area adjacent to the populations that were previously mapped during the 2023 surveys. These populations are depicted in Attachment A: Biological Resources Map. No additional special-status species were observed in the terrestrial survey area or the revised terrestrial survey area during the 2024 surveys.

The vast majority of the upland habitats in the northern portions of the terrestrial survey area and revised terrestrial survey area are dominated by non-native and invasive plant species and therefore likely do not provide suitable habitat for the special-status plants with potential to occur. Additionally, some upland habitat in the northern portion of the terrestrial survey area and revised terrestrial survey area was observed to have been disturbed and subsequently hydroseeded with a native seed mix as a part of construction on the Solano 4 Wind Project.

6 – REFERENCES

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- CNPS. 2023. Inventory of Rare and Endangered Plants of California. Online. <http://www.rareplants.cnps.org/>. Site visited May 1, 2023.
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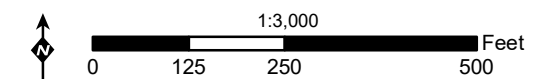
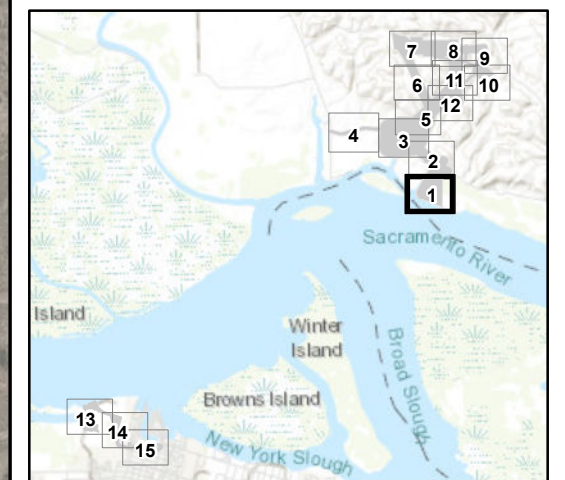
ATTACHMENT A: BIOLOGICAL RESOURCES MAP

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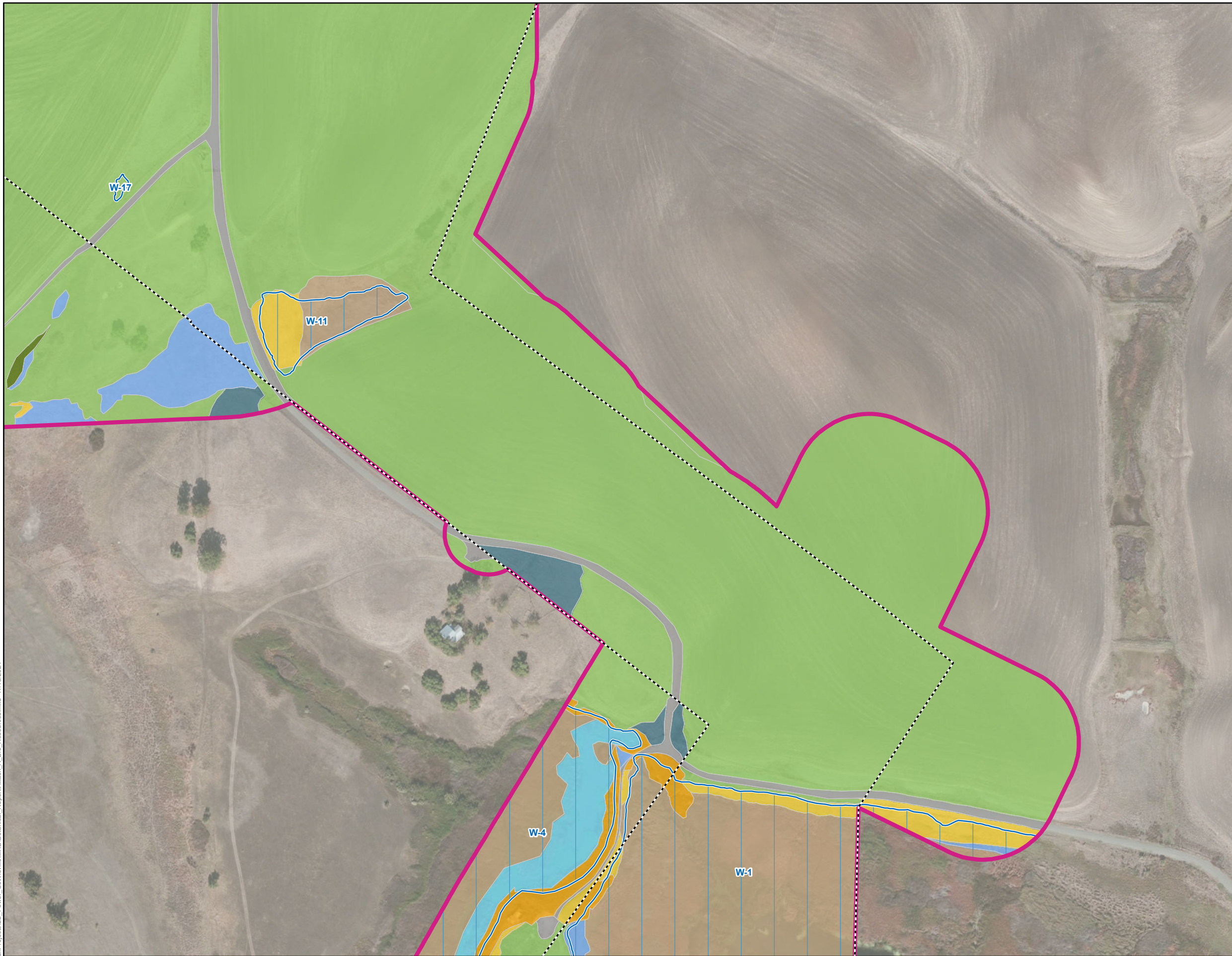
**Attachment A:
Biological Resources Map
Map 1 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
[Pink Outline] Revised Terrestrial Survey Area
[Blue Outline] Wetland
[Orange Square] Northern Harrier Nest
- Rare Plants**
- ◆ Delta tule pea
◆ Mason's lilaeopsis
◆ Welsh mudwort
[Red X] Delta tule pea
[Black X] Mason's lilaeopsis
[Yellow X] Welsh mudwort
- Vegetation Community**
- [Blue] *Distichlis spicata* Herbaceous Alliance
[Yellow] *Frankenia salina* Herbaceous Alliance
[Light Green] *Juncus arcticus* (var. *balticus*, *mexicanus*) Herbaceous Alliance
[Green] *Lolium perenne* Herbaceous Semi-Natural Alliance
[Orange] *Rosa californica* Shrubland Alliance
[Purple] *Salix exigua* Shrubland Alliance
[Brown] *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
[Pink] *Schoenoplectus acutus/rosa californica* Association
[Grey] Road/Bare Ground
[Light Blue] Open Water



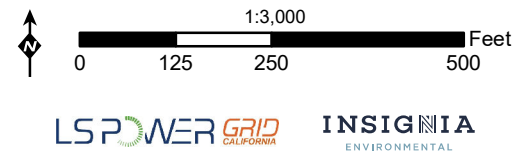
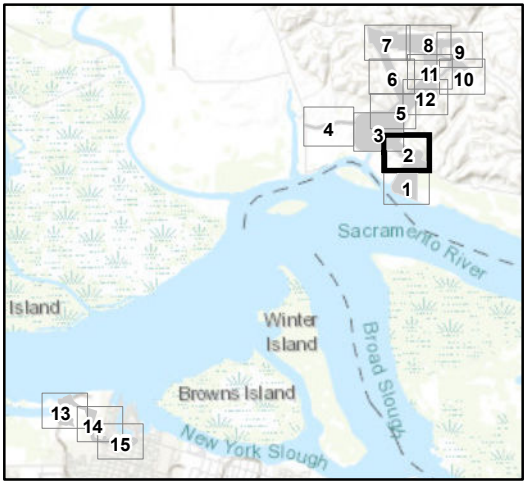
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**Attachment A:
Biological Resources Map
Map 2 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
█ Revised Terrestrial Survey Area
█ Wetland
- Vegetation Community**
- █ *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - █ *Distichlis spicata* Herbaceous Alliance
 - █ *Frankenia salina* Herbaceous Alliance
 - █ *Lolium perenne* Herbaceous Semi-Natural Alliance
 - █ *Polygonum lapathifolium* - *Xanthium strumarium* Herbaceous Alliance
 - █ *Rosa californica* Shrubland Alliance
 - █ *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
 - █ Road/Bare Ground
 - █ Open Water

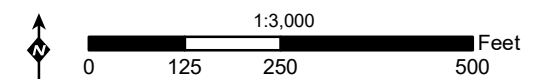
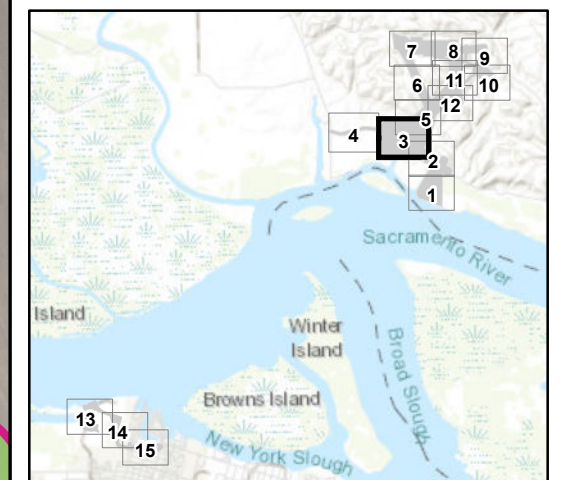


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**Attachment A:
Biological Resources Map
Map 3 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
[Pink Outline] Revised Terrestrial Survey Area
[Blue Outline] Wetland
- Vegetation Community**
- [Dark Blue] *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - [Light Blue] *Distichlis spicata* Herbaceous Alliance
 - [Yellow] *Frankenja salina* Herbaceous Alliance
 - [Light Green] *Lolium perenne* Herbaceous Semi-Natural Alliance
 - [Dark Green] *Polygonum lapathifolium* - *Xanthium strumarium* Herbaceous Alliance
 - [Pink] *Sarcocornia pacifica* Herbaceous Alliance
 - [Orange] *Rosa californica* Shrubland Alliance
 - [Tan] *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
 - [Purple] *Schoenoplectus americanus* Herbaceous Alliance
 - [Magenta] *Typha (angustifolia, domingensis, latifolia)* Herbaceous Alliance
 - [Grey] Road/Bare Ground

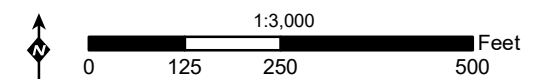
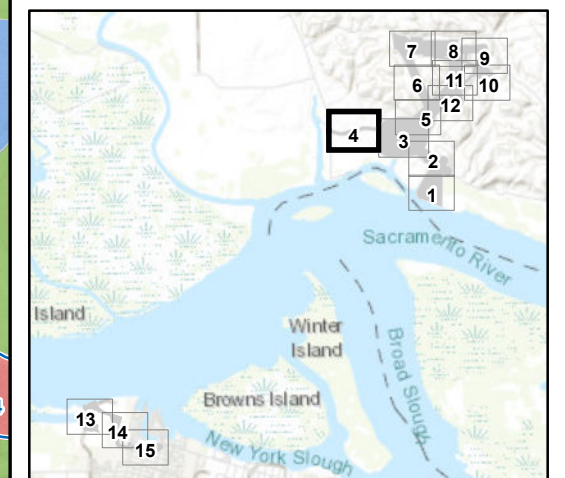


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**Attachment A:
Biological Resources Map
Map 4 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

-  Revised Terrestrial Survey Area
-  Wetland
- Vegetation Community**
-  *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
-  *Distichlis spicata* Herbaceous Alliance
-  *Frankenia salina* Herbaceous Alliance
-  *Lolium perenne* Herbaceous Semi-Natural Alliance
-  *Sarcocornia pacifica* Herbaceous Alliance
-  *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
-  Road/Bare Ground
-  Developed

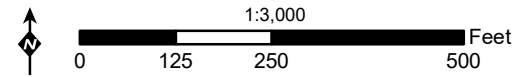
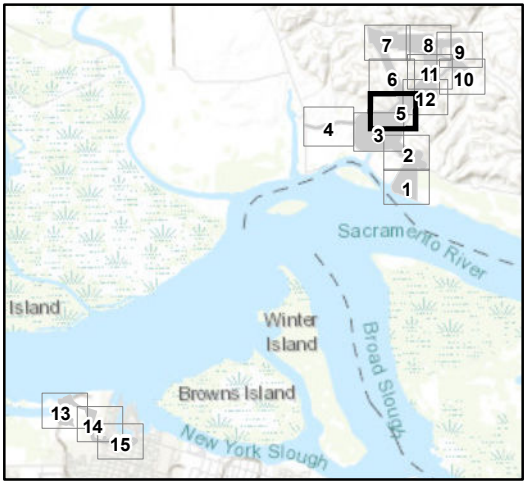


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Attachment A:
Biological Resources Map
Map 5 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Terrestrial Survey Area
- Revised Terrestrial Survey Area
- Ephemeral Stream
- Wetland
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - Distichlis spicata* Herbaceous Alliance
 - Frankenian salina* Herbaceous Alliance
 - Lolium perenne* Herbaceous Semi-Natural Alliance
 - Typha (angustifolia, domingensis, latifolia)* Herbaceous Alliance
 - Road/Bare Ground

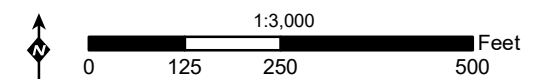
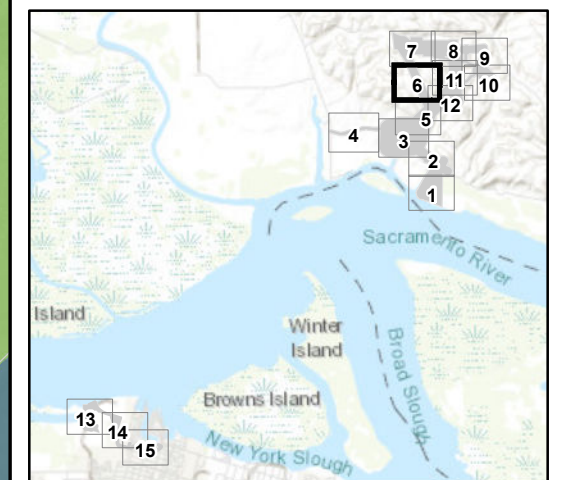


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**Attachment A:
Biological Resources Map
Map 6 of 15**

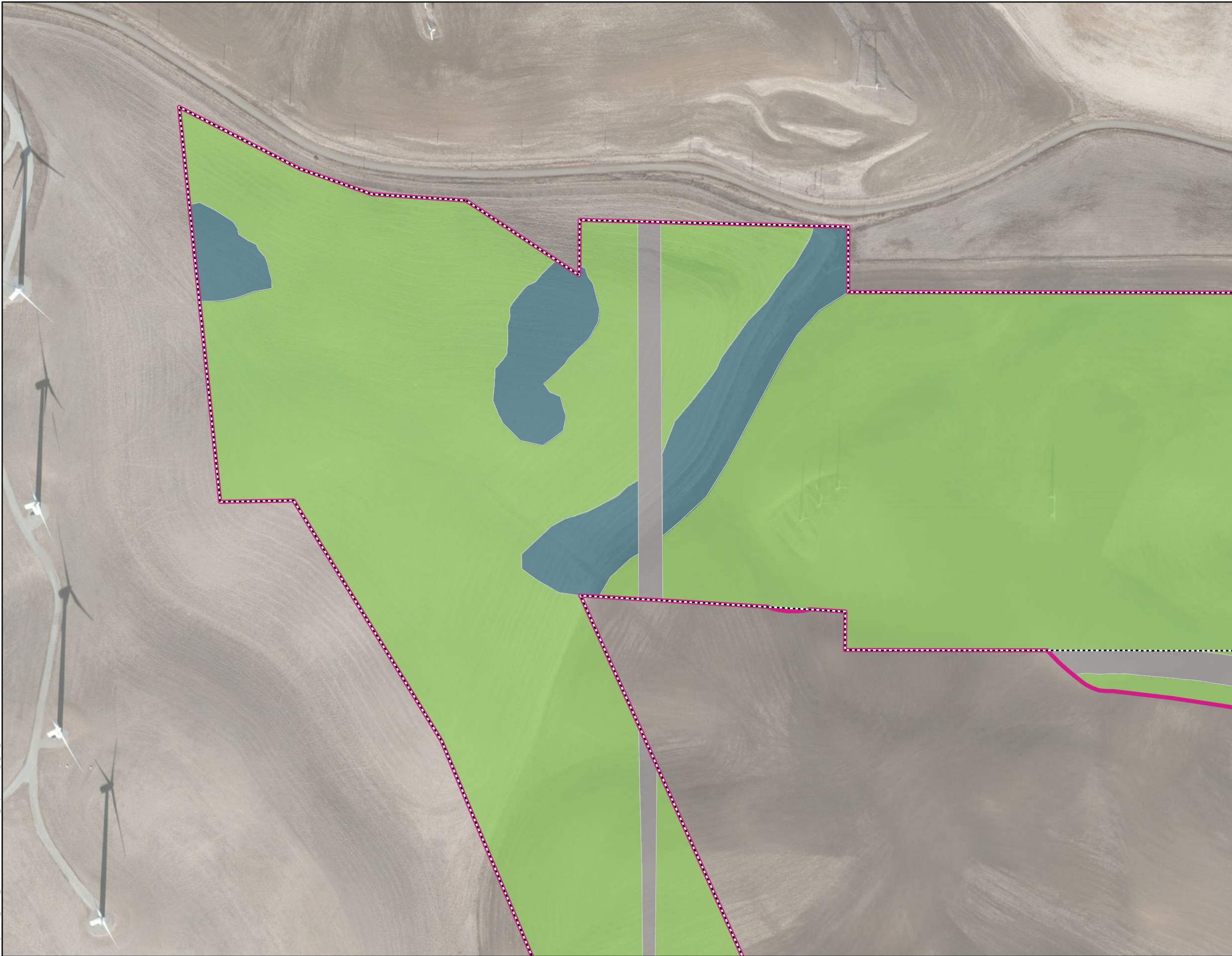
**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
- Revised Terrestrial Survey Area
- Ephemeral Stream
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Road/Bare Ground



LSPower GRID CALIFORNIA INSIGNIA ENVIRONMENTAL

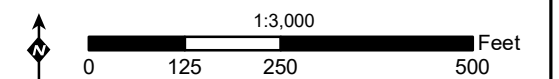
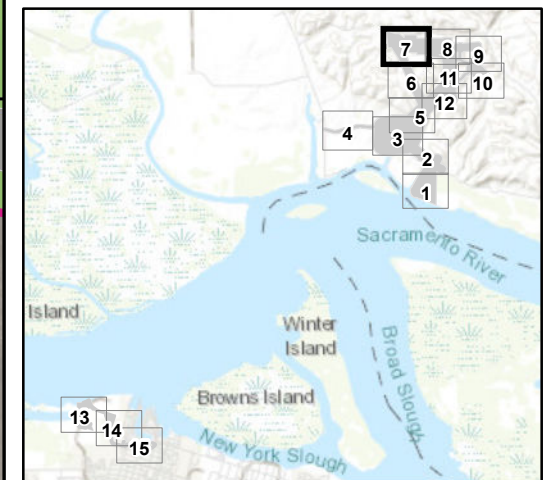
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**Attachment A:
Biological Resources Map
Map 7 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
--- Revised Terrestrial Survey Area
- Vegetation Community**
-  *Brassica nigra - Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 -  *Lolium perenne* Herbaceous Semi-Natural Alliance
 -  Road/Bare Ground

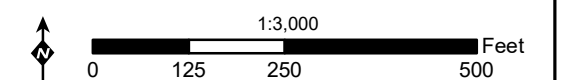
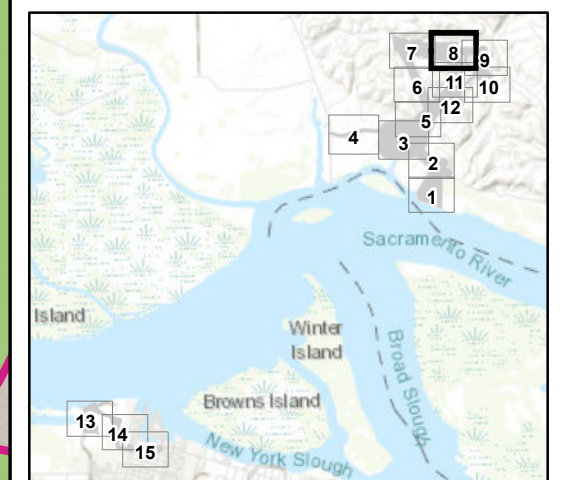


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**Attachment A:
Biological Resources Map
Map 8 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
█ Revised Terrestrial Survey Area
- Vegetation Community**
- █ *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - █ *Lolium perenne* Herbaceous Semi-Natural Alliance
 - █ Road/Bare Ground

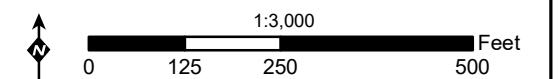
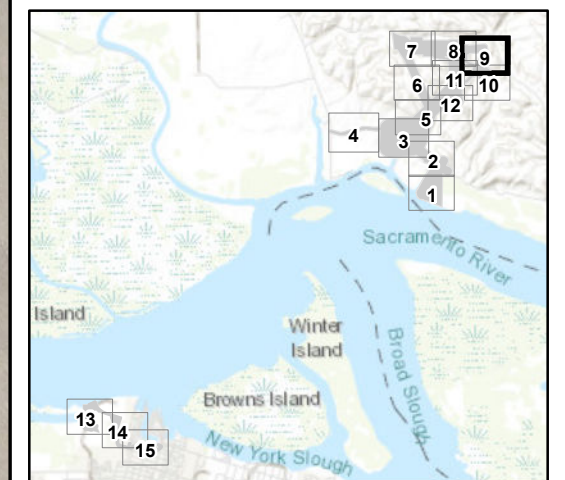


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**Attachment A:
Biological Resources Map
Map 9 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
█ Revised Terrestrial Survey Area
- Vegetation Community**
- █ *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- █ *Lolium perenne* Herbaceous Semi-Natural Alliance
- █ Road/Bare Ground

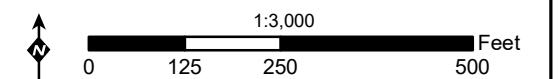
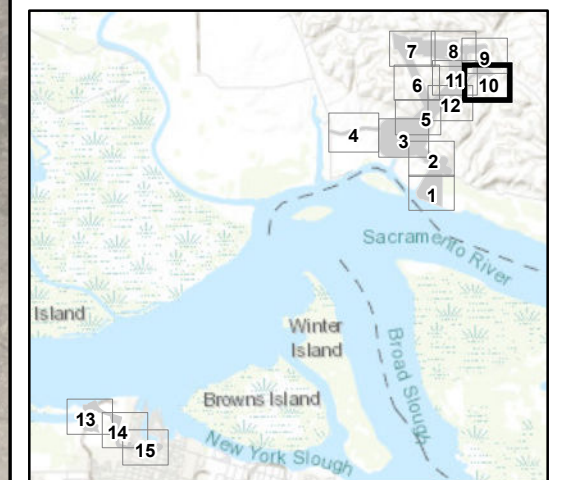


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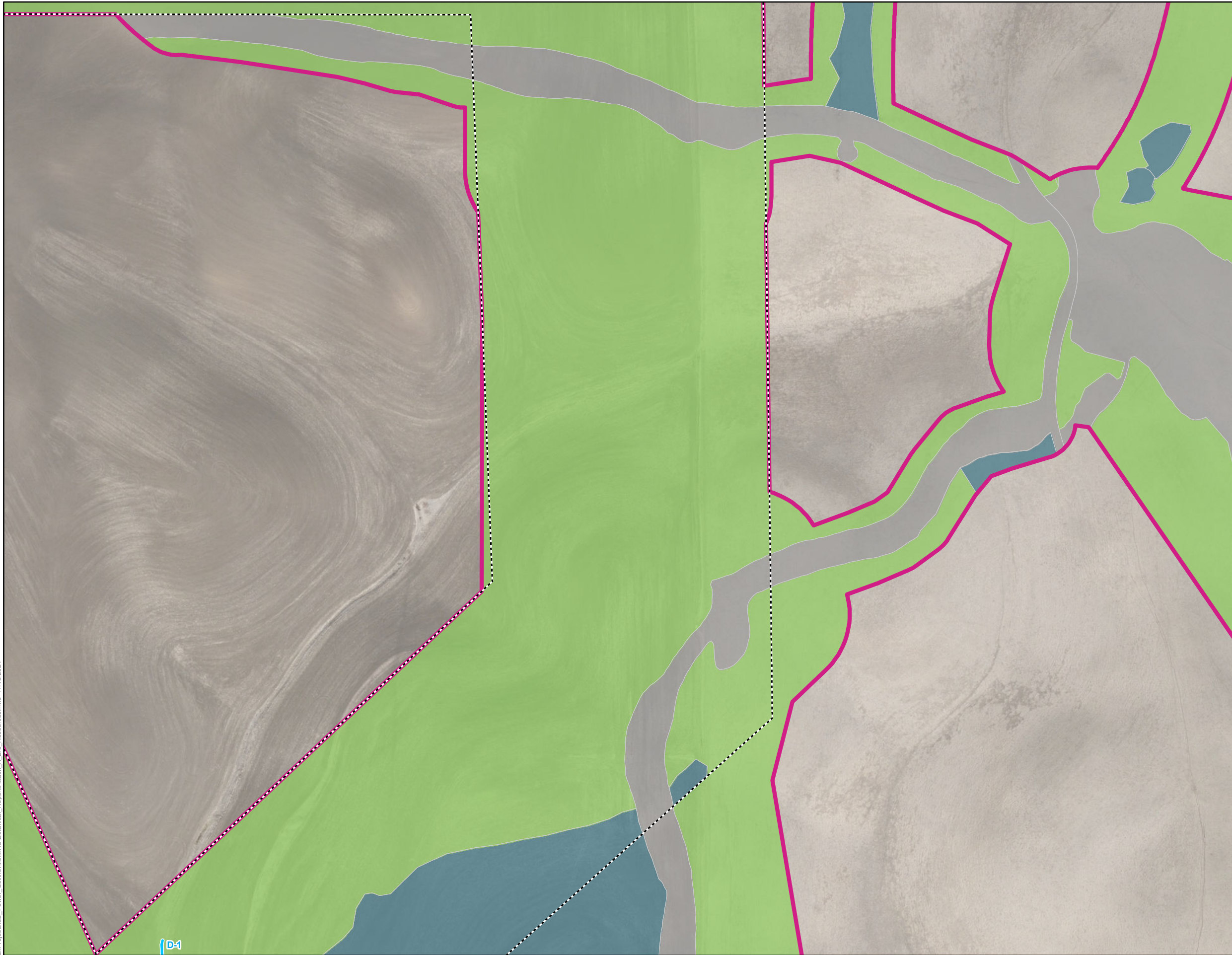
Attachment A:
Biological Resources Map
Map 10 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Terrestrial Survey Area
█ Revised Terrestrial Survey Area
- Vegetation Community**
- █ *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- █ *Lolium perenne* Herbaceous Semi-Natural Alliance
- █ Road/Bare Ground



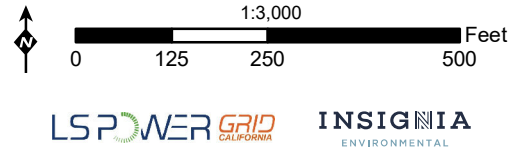
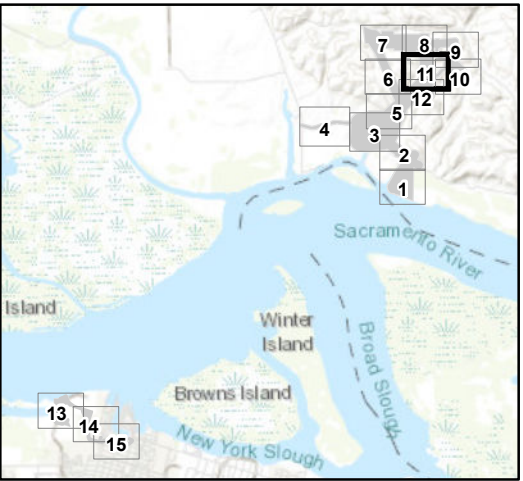
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**Attachment A:
Biological Resources Map
Map 11 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Terrestrial Survey Area
[Pink Line] Revised Terrestrial Survey Area
[Blue Line] Ephemeral Stream
- Vegetation Community**
- [Dark Blue] *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - [Light Green] *Lolium perenne* Herbaceous Semi-Natural Alliance
 - [Grey] Road/Bare Ground

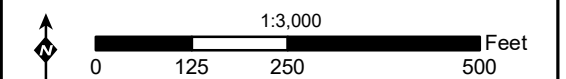
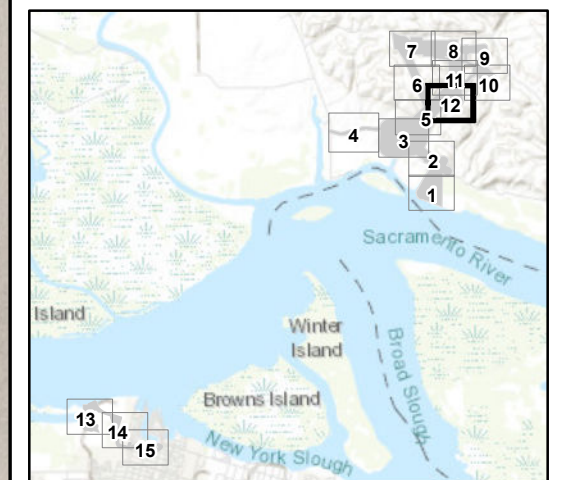


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Attachment A:
Biological Resources Map
Map 12 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Terrestrial Survey Area
█ Revised Terrestrial Survey Area
— Ephemeral Stream
- Vegetation Community**
- █ *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
█ *Lolium perenne* Herbaceous Semi-Natural Alliance
█ Road/Bare Ground



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Attachment A:
Biological Resources Map
Map 13 of 15

Collinsville 500/230 Kilovolt
Substation Project

Revised Terrestrial Survey Area

Rare Plants

Delta tule pea

Vegetation Community

Lepidium latifolium – *Lactuca serriola*
Herbaceous Alliance

Ornamental Vegetation

Juncus arcticus (var. *balticus*, *mexicanus*)
Herbaceous Alliance

Schoenoplectus (acutus, californicus)
Herbaceous Alliance

Baccharis pilularis Shrubland Alliance

Disturbed

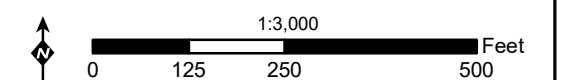
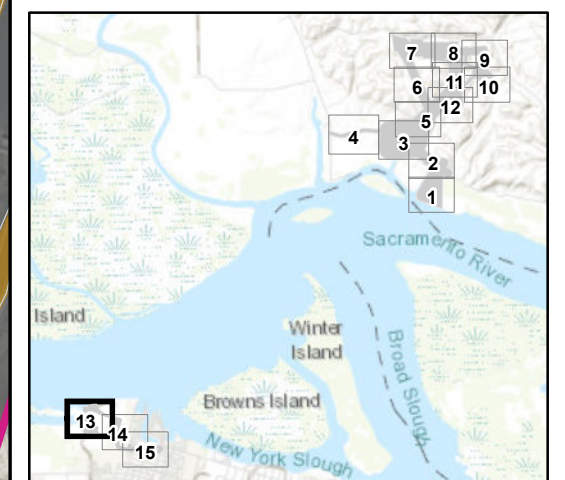
Road/Bare Ground

Rip Rap

Open Water

Developed

Not Surveyed

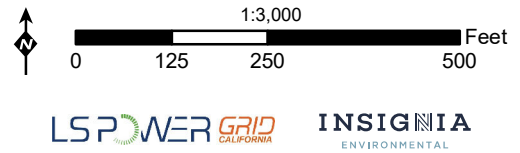
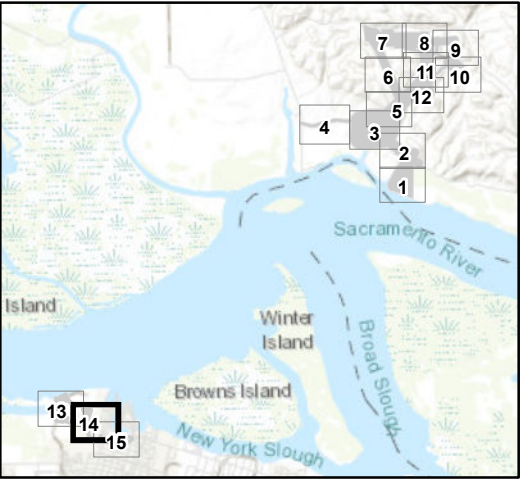


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Attachment A:
Biological Resources Map
Map 14 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Revised Terrestrial Survey Area
- Vegetation Community**
- Lepidium latifolium* – *Lactuca serriola*
Herbaceous Alliance
 - Ornamental Vegetation
 - Baccharis pilularis* Shrubland Alliance
 - Disturbed
 - Developed
 - Not Surveyed



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**Attachment A:
Biological Resources Map
Map 15 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

 Revised Terrestrial Survey Area

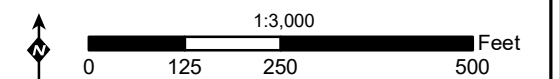
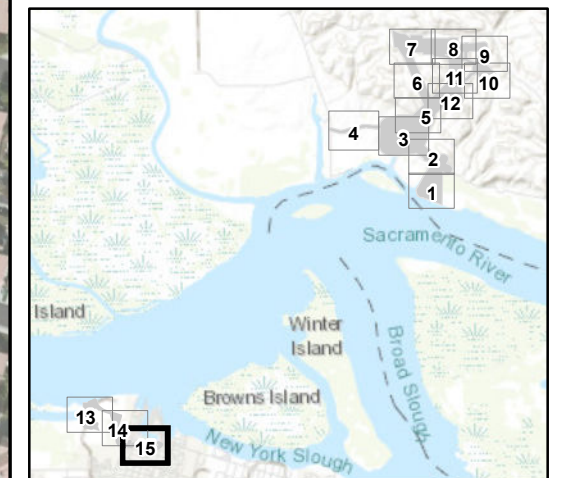
Vegetation Community

 Ornamental Vegetation

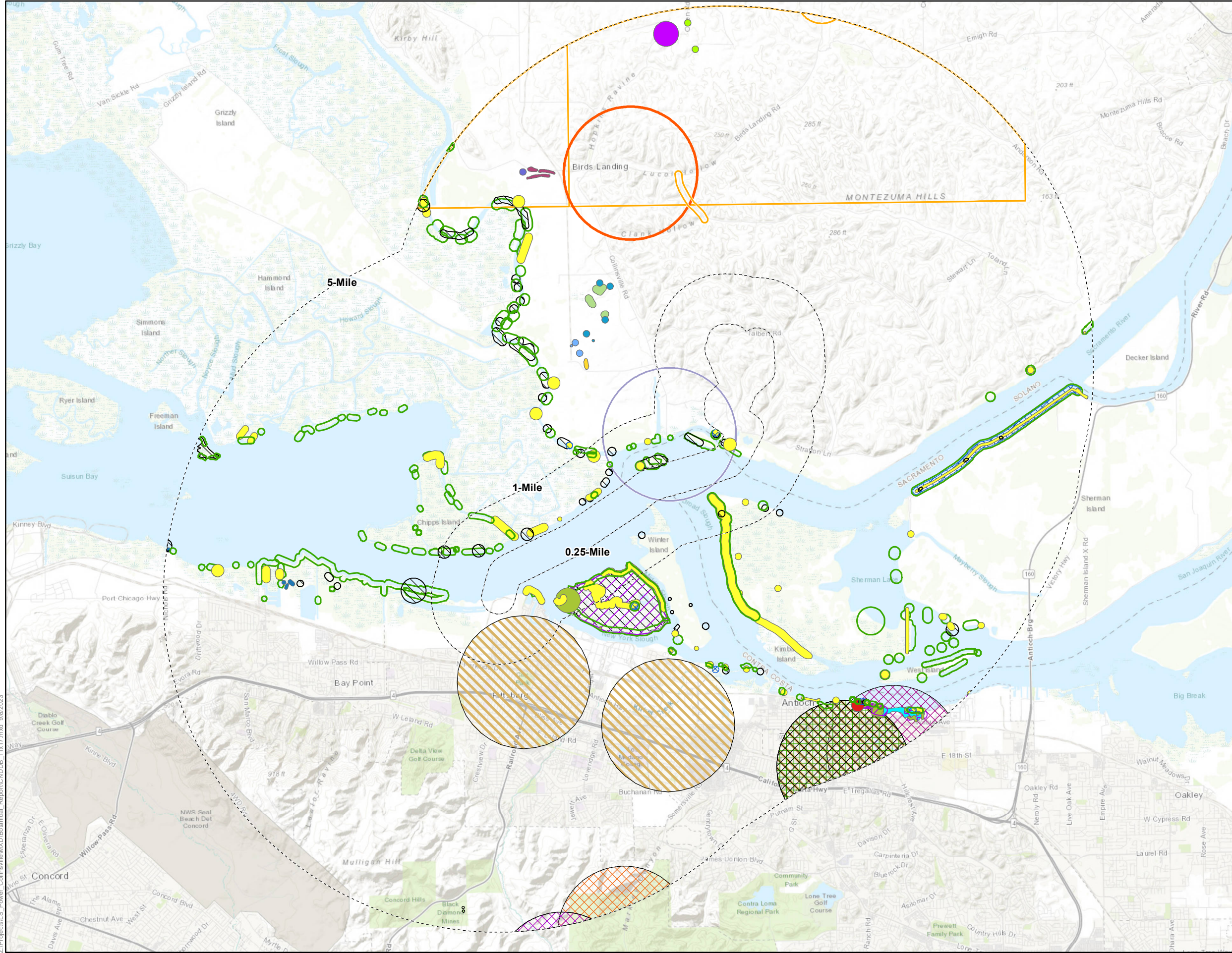
 Disturbed

 Developed

 Not Surveyed



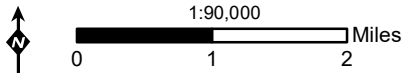
ATTACHMENT B: CNDDB PLANT OCCURRENCES MAP



**Attachment B:
CNDDB Plant Occurrences Map**

**Collinsville 500/230 Kilovolt
Substation Project**

- Project Buffers**
- 5-Mile
 - 1-Mile
 - 0.25-Mile
- Special Status Plant Species**
- Alkali milk-vetch
 - Antioch Dunes buckwheat
 - Antioch Dunes evening-primrose (within 1 mile)
 - Bearded popcornflower
 - Big tarplant (within 1 mile)
 - Bolander's water-hemlock (within 1 mile)
 - Brittlescale
 - Carquinez goldenbush
 - Chaparral ragwort
 - Contra Costa goldfields
 - Contra Costa wallflower (within 1 mile)
 - Delta mudwort (within 1 mile)
 - Delta tule pea (within 1 mile)
 - Diablo helianthella
 - Diamond-petaled California poppy
 - Dwarf downingia
 - Fragrant fritillary
 - Hall's bush-mallow
 - Heartscale
 - Hoover's cryptantha
 - Keck's checkerbloom
 - Mason's lilaepsis (within 1 mile)
 - Mt. Diablo buckwheat
 - Pappose tarplant
 - San Joaquin spearscale
 - Showy golden madia
 - Suisun Marsh aster (within 1 mile)
 - Soft salty bird's-beak



ATTACHMENT C: PLANT SPECIES OBSERVED

ATTACHMENT C: PLANT SPECIES OBSERVED

Family	Scientific Name	Common Name
Aizoaceae	<i>Sesuvium verrucosum</i>	Smooth Sea-Purslane
Alismataceae	<i>Alisma gramineum</i>	Slender Water Plantain
Alismataceae	<i>Alisma triviale</i>	Northern Water Plantain
Amaranthaceae	<i>Alternanthera philoxeroides</i> ¹	Alligator Weed
Amaranthaceae	<i>Atriplex prostrata</i> *	Spreading Saltbush
Amaranthaceae	<i>Atriplex semibaccata</i>	Australian Saltbush
Amaranthaceae	<i>Atriplex suberecta</i>	Desert Holly
Amaranthaceae	<i>Chenopodium murale</i>	Nettle-leaved Goosefoot
Amaranthaceae	<i>Chenopodium vulvaria</i>	Stinking Goosefoot
Amaranthaceae	<i>Salicornia pacifica</i>	Pacific Glasswort
Amaranthaceae	<i>Salsola tragus</i>	Russian Thistle
Anacardiaceae	<i>Schinus molle</i>	California Pepper Tree
Anacardiaceae	<i>Pistacia atlantica</i> *	Pistachio
Apiaceae	<i>Anthriscus caucalis</i> *	Bur Parsley
Apiaceae	<i>Apium graveolens</i>	Wild Celery
Apiaceae	<i>Conium maculatum</i>	Poison Hemlock
Apiaceae	<i>Foeniculum vulgare</i>	Sweet Fennel
Apiaceae	<i>Lilaeopsis masonii</i>	Mason's Lilaeopsis
Apiaceae	<i>Oenanthe sarmentosa</i>	Water Parsley
Apiaceae	<i>Sanolus parviflorus</i>	Small-Flowered Sanolus
Apiaceae	<i>Torilis nodosa</i>	Wild Parsley
Apocynaceae	<i>Asclepias fascicularis</i>	Narrow-Leaved Milkweed
Araliaceae	<i>Hydrocotyle verticillata</i>	Whorled Pennywort
Arecaceae	<i>Phoenix canariensis</i> *	Canary Island Date Palm
Asparagaceae	<i>Asparagus officinalis</i>	Wild Asparagus
Asteraceae	<i>Achillea millefolium</i> *	Common Yarrow
Asteraceae	<i>Achyrachaena mollis</i>	Soft Blow Wives
Asteraceae	<i>Ambrosia psilostachya</i>	Western Ragweed

¹ Species that were observed in the revised terrestrial survey area and were not observed in the terrestrial survey area during 2023 surveys are marked with an asterisk.

Family	Scientific Name	Common Name
Asteraceae	<i>Anaphalis margaritacea</i> *	Pearly Everlasting
Asteraceae	<i>Anthemis cotula</i>	Mayweed
Asteraceae	<i>Artemisia douglasiana</i>	Mugwort
Asteraceae	<i>Baccharis glutinosa</i>	Sticky Baccharis
Asteraceae	<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	Coyote Brush
Asteraceae	<i>Baccharis salicifolia</i>	Mule Fat
Asteraceae	<i>Carduus pycnocephalus</i>	Italian Thistle
Asteraceae	<i>Centaurea calcitrapa</i> *	Purple Star Thistle
Asteraceae	<i>Centaurea solstitialis</i>	Yellow Starthistle
Asteraceae	<i>Centromadia parryi</i>	Pappose Tarweed
Asteraceae	<i>Centromadia pungens</i> ssp. <i>pungens</i> *	Common Tarweed
Asteraceae	<i>Chondrilla juncea</i>	Rush Skeletonweed
Asteraceae	<i>Cirsium vulgare</i>	Bull Thistle
Asteraceae	<i>Cotula cornopilfoila</i>	Brass Buttons
Asteraceae	<i>Cynara cardunculus</i> ssp. <i>cardunculus</i> *	Artichoke
Asteraceae	<i>Erigeron philadelphicus</i>	Philadelphia Fleabane
Asteraceae	<i>Euthamia occidentalis</i>	Western Goldenrod
Asteraceae	<i>Grindelia camporum</i> *	Common Gumplant
Asteraceae	<i>Grindelia stricta</i>	Gumplant
Asteraceae	<i>Helenium puberulum</i> *	Sneezeweed
Asteraceae	<i>Helminthotheca echioides</i>	Bristly Oxtongue
Asteraceae	<i>Heterotheca grandiflora</i>	Telegraph Weed
Asteraceae	<i>Hoita macrostachya</i>	Showy Goldeneye
Asteraceae	<i>Hypochoeris glabra</i>	Smooth Cat's Ear
Asteraceae	<i>Iva axillaris</i>	Poverty Weed
Asteraceae	<i>Lactuca serriola</i>	Prickly Lettuce
Asteraceae	<i>Madia gracilis</i>	Graceful Tarweed
Asteraceae	<i>Matricaria discoidea</i> *	Pineapple Weed
Asteraceae	<i>Matricaria occidentalis</i>	Valley Mayweed
Asteraceae	<i>Pseudognaphalium stramineum</i> *	Cottonbatting Plant
Asteraceae	<i>Senecio hydrophilus</i>	Marsh Ragwort
Asteraceae	<i>Senecio vulgaris</i>	Common Groundsel

Family	Scientific Name	Common Name
Asteraceae	<i>Silybum marianum</i>	Milk Thistle
Asteraceae	<i>Sonchus asper</i>	Prickly Sowthistle
Asteraceae	<i>Tragopogon porrifolius</i> *	Purple Salsify
Asteraceae	<i>Xanthium spinosum</i>	Spiny Cocklebur
Asteraceae	<i>Xanthium strumarium</i>	Common Cocklebur
Bataceae	<i>Batis maritima</i> *	Saltwort
Betulaceae	<i>Alnus rhombifolia</i> *	White Alder
Boraginaceae	<i>Amsinckia intermedia</i>	Common Fiddleneck
Boraginaceae	<i>Eriodictyon crassifolium</i>	Thick-leaved Yerba Santa
Boraginaceae	<i>Heliotropium curassavicum</i>	Salt Heliotrope
Brassicaceae	<i>Brassica nigra</i>	Black Mustard
Brassicaceae	<i>Cakile edentula</i> *	Sea Rocket
Brassicaceae	<i>Capsella bursa-pastoris</i> *	Shepherd's Purse
Brassicaceae	<i>Lepidium latifolium</i>	Broadleaf Pepperweed
Brassicaceae	<i>Raphanus sativus</i>	Radish
Caryophyllaceae	<i>Silene gallica</i> *	Common Catchfly
Caryophyllaceae	<i>Spergula marina</i>	Salt Sandspurry
Caryophyllaceae	<i>Spergularia arvensis</i>	Corn Spurry
Caryophyllaceae	<i>Stellaria media</i> *	Chickweed
Chenopodiaceae	<i>Bassia scoparia</i> *	Burningbush
Chenopodiaceae	<i>Salicornia depressa</i> *	Annual Pickleweed
Convolvulaceae	<i>Calystegia silvatica</i>	Chaparral Dodder
Convolvulaceae	<i>Convolvulus arvensis</i>	Field Bindweed
Convolvulaceae	<i>Cressa truxillensis</i>	Alkaliweed
Crassulaceae	<i>Crassula tillaea</i> *	Mediterranean Pygmy Weed
Cucurbitaceae	<i>Marah fabacea</i>	Wild Cucumber
Cyperaceae	<i>Bolboschoenus maritimus</i> *	Alkali Bulrush
Cyperaceae	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i> *	Saltmarsh Bulrush
Cyperaceae	<i>Bolboschoenus robustus</i>	California Bulrush
Cyperaceae	<i>Carex barbarae</i>	Santa Barbara Sedge
Cyperaceae	<i>Eleocharis acicularis</i> var. <i>acicularis</i>	Needle Spikerush
Cyperaceae	<i>Eleocharis macrostachya</i>	Tall Spike-rush

Family	Scientific Name	Common Name
Cyperaceae	<i>Isolepis cernua</i>	Nodding Centaury
Cyperaceae	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Common Tule
Cyperaceae	<i>Schoenoplectus americanus</i>	Three Square Bulrush
Cyperaceae	<i>Schoenoplectus californicus</i>	California Bulrush
Cyperaceae	<i>Schoenoplectus pungens</i>	Common Threesquare
Equisetaceae	<i>Equisetum hyemale</i> ssp. <i>affine</i>	Scouring Rush
Euphorbiaceae	<i>Croton setiger</i>	Dove Weed
Fabaceae	<i>Acmispon americanus</i> var. <i>americanus</i>	American Bird's-Foot
Fabaceae	<i>Acmispon glaber</i> var. <i>glaber</i>	Deerweed
Fabaceae	<i>Acmispon strigosus</i>	Strigose Bird's-Foot Trefoil
Fabaceae	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta Tule Pea
Fabaceae	<i>Lotus corniculatus</i>	Bird's-Foot Trefoil
Fabaceae	<i>Lotus tenuis</i>	Slender Lotus
Fabaceae	<i>Lupinus bicolor</i>	Miniature Lupine
Fabaceae	<i>Lupinus microcarpus</i> *	Chick Lupine
Fabaceae	<i>Lupinus succulentus</i>	Arroyo Lupine
Fabaceae	<i>Medicago polymorpha</i>	California Burr Medic
Fabaceae	<i>Melilotus indicus</i>	Annual Yellow Sweetclover
Fabaceae	<i>Sesbania punicea</i>	Red Sesbania
Fabaceae	<i>Trifolium hirtum</i>	Rose Clover
Fabaceae	<i>Trifolium hybridum</i>	Alsike Clover
Fabaceae	<i>Trifolium incarnatum</i> *	Crimson Clover
Fabaceae	<i>Trifolium wormskioldii</i>	Cow Clover
Fabaceae	<i>Vicia sativa</i>	Common Vetch
Fabaceae	<i>Vicia villosa</i>	Hairy Vetch
Frankeniaceae	<i>Frankenia salina</i>	Alkali Heath
Gentianaceae	<i>Centaurium tenuiflorum</i> *	Slender Centaury
Geraniaceae	<i>Erodium botrys</i>	Long-Beaked Filaree
Geraniaceae	<i>Erodium cicutarium</i>	Redstem Filaree
Geraniaceae	<i>Geranium dissectum</i>	Cutleaf Geranium
Hydrocharitaceae	<i>Limnobium laevigatum</i> *	West Indian Spongeplant
Iridaceae	<i>Iris pseudacorus</i>	Yellow Flag Iris

Family	Scientific Name	Common Name
Juglandaceae	<i>Juglans hindsii</i> *	Northern California Black Walnut
Juncaceae	<i>Juncus balticus</i>	Baltic Rush
Juncaceae	<i>Juncus bufonius</i>	Toad Rush
Juncaceae	<i>Juncus effusus</i> *	Common Bog Rush
Juncaceae	<i>Juncus gerardii</i> ssp. <i>gerardii</i>	Salt Marsh Rush
Juncaceae	<i>Juncus mexicanus</i>	Mexican Rush
Juncaginaceae	<i>Triglochin striata</i> *	Three Ribbed Arrow Grass
Lamiaceae	<i>Lamium amplexicaule</i> *	Giraffe Head
Lamiaceae	<i>Marrubium vulgare</i>	White Horehound
Lamiaceae	<i>Mentha spicata</i>	Spearmint
Lamiaceae	<i>Pterostegia drymariodes</i>	Fairy Mist
Lythraceae	<i>Lythrum hyssopifolia</i>	Hyssop Loosestrife
Malvaceae	<i>Malva multiflora</i> *	Cretan Mallow
Malvaceae	<i>Malva parviflora</i>	Small-Flowered Mallow
Malvaceae	<i>Malvella leprosa</i>	Round-Leaved Mallow
Montiaceae	<i>Calandrinia menziesii</i> *	Red Maids
Montiaceae	<i>Claytonia perfoliata</i>	Miner's Lettuce
Onagraceae	<i>Epilobium brachycarpum</i> *	Annual Fireweed
Onagraceae	<i>Epilobium ciliatum</i>	Fringed Willowherb
Onagraceae	<i>Ludwigia grandiflora</i> *	Large-Flowered Primrose-Willow
Onagraceae	<i>Ludwigia peploides</i> *	Floating Primrose Willow
Orobanchaceae	<i>Castilleja exserta</i> ssp. <i>exserta</i>	Purple Owl's Clover
Orobanchaceae	<i>Bellardia trixago</i>	Mediterranean Lineseed
Oxalidaceae	<i>Oxalis pes-caprae</i> *	Bermuda Buttercup
Papaveraceae	<i>Eschscholzia californica</i> *	California Poppy
Phrymaceae	<i>Erythranthe grandis</i> *	Magnificent Seep Monkeyflower
Plantaginaceae	<i>Plantago coronopus</i>	Buckshorn Plantain
Plantaginaceae	<i>Plantago lanceolata</i>	English Plantain
Plantaginaceae	<i>Veronica persica</i> *	Birdeye Speedwell
Poaceae	<i>Agrostis stolonifera</i>	Creeping Bentgrass
Poaceae	<i>Arundo donax</i>	Giant Reed
Poaceae	<i>Avena fatua</i>	Wild Oat

Family	Scientific Name	Common Name
Poaceae	<i>Bromus berterianus</i>	Chilean Brome
Poaceae	<i>Bromus diandrus</i>	Ripgut Brome
Poaceae	<i>Bromus hordeaceus</i>	Soft Brome
Poaceae	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red Brome
Poaceae	<i>Bromus tectorum</i>	Cheatgrass
Poaceae	<i>Cortaderia jubata</i>	Purple Pampas Grass
Poaceae	<i>Cynodon dactylon</i>	Bermuda Grass
Poaceae	<i>Cynosurus echinatus</i>	Coast Bur Grass
Poaceae	<i>Distichlis spicata</i>	Saltgrass
Poaceae	<i>Elymus triticoides</i>	Beardless Wildrye
Poaceae	<i>Festuca bromoides</i>	Red Fescue
Poaceae	<i>Festuca perennis</i>	Meadow Fescue
Poaceae	<i>Hordeum jubatum</i>	Foxtail Barley
Poaceae	<i>Hordeum marinum</i>	Seaside Barley
Poaceae	<i>Hordeum murinum</i>	Wall Barley
Poaceae	<i>Hordeum vulgare</i>	Common Barley
Poaceae	<i>Phalaris canariensis</i>	Canary Grass
Poaceae	<i>Phalaris paradoxa</i>	Hairy Canarygrass
Poaceae	<i>Phragmites australis</i>	Common Reed
Poaceae	<i>Polypogon monspeliensis</i> *	Rabbitsfoot Grass
Poaceae	<i>Triticum aestivum</i> *	Common Wheat
Polygonaceae	<i>Persicaria</i> spp.	Smartweeds
Polygonaceae	<i>Polygonum argyrocoleon</i>	Silverweed Knotweed
Polygonaceae	<i>Polygonum aviculare</i>	Prostrate Knotweed
Polygonaceae	<i>Rumex acetosella</i>	Sheep Sorrel
Polygonaceae	<i>Rumex californicus</i>	California Dock
Polygonaceae	<i>Rumex crispus</i>	Curly Dock
Polygonaceae	<i>Rumex pulcher</i> *	Fiddle Dock
Pontederiaceae	<i>Eichhornia crassipes</i> *	Common Water Hyacinth
Portulacaceae	<i>Portulaca oleracea</i> *	Common Purslane
Ranunculaceae	<i>Ranunculus sceleratus</i>	Cursed Buttercup
Rosaceae	<i>Potentilla anseriana</i> ssp. <i>pacifica</i>	Silverweed

Family	Scientific Name	Common Name
Rosaceae	<i>Rosa californica</i>	California Wild Rose
Rosaceae	<i>Rubus armeniacus</i>	Himalayan Blackberry
Rosaceae	<i>Rubus ursinus</i> *	California Blackberry
Salicaceae	<i>Salix exigua</i>	Narrowleaf Willow
Salicaceae	<i>Salix exigua</i> var. <i>hindsiana</i>	Sandbar Willow
Salicaceae	<i>Salix gooddingii</i>	Goodding's Willow
Salicaceae	<i>Salix laevigata</i>	Red Willow
Salicaceae	<i>Salix lasiolepis</i> *	Arroyo Willow
Salviniaceae	<i>Azolla filiculoides</i>	Water Fern
Scrophulariaceae	<i>Limosella australis</i>	Delta Mudwort
Scrophulariaceae	<i>Zeltnera muehlenbergii</i>	Little Redstem
Simaroubaceae	<i>Ailanthus altissima</i> *	Tree of Heaven
Solanaceae	<i>Solanum americanum</i>	American Nightshade
Tamaricaceae	<i>Tamarix parviflora</i> *	Fourstamen Tamarisk
Themidaceae	<i>Brodiaea elegans</i> ssp. <i>elegans</i>	Elegant Brodiaea
Themidaceae	<i>Triteleia laxa</i> *	Ithurie's Spear
Typhaceae	<i>Sparganium erectum</i> *	Simplestem Bur Reed
Typhaceae	<i>Typha latifolia</i>	Common Cattail
Urticaceae	<i>Urtica urens</i> *	Annual Stinging Nettle
Verbenaceae	<i>Phyla nodiflora</i>	Turkey Tangle Fogfruit

ATTACHMENT D: SPECIAL-STATUS PLANT PHOTOGRAPHS

ATTACHMENT D: SPECIAL-STATUS PLANT PHOTOGRAPHS

	Photograph 1: Delta tule pea (<i>Lathyrus</i> <i>jepsonii</i> var. <i>jepsonii</i>).
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ATTACHMENT E: CNDDDB SUBMITTAL FORMS

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/



Source code CRO23F0003
Quad code 3812117
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Limosella australis*

Common name: *Delta mudwort*

Date of field work (mm-dd-yyyy): *05-24-2023*

Comment about field work date(s):

OBSERVER INFORMATION

Observer: *Brian Cropper*

Affiliation: *Insignia Environmental*

Address: *3028 Juniper St Apt 3*

Email: *bcropper@insigniaenv.com*

Phone: *(920) 544-7989*

Other observers: *Deanna Giuliano*

DETERMINATION

Keyed in: *Jepson Manual*

Compared w/ specimen at:

Compared w/ image in: *Jepson Herbarium, Calflora*

By another person: *Deanna Giuliano*

Other:

Identification explanation:

Identification confidence: *Very confident*

Species found: *Yes* If not found, why not?

Level of survey effort: *Fully botanical survey*

Total number of individuals: *150-250*

Collection? *No*

Collection number:

Museum/Herbarium:

PLANT INFORMATION

Phenology:	<i>90 %</i>	<i>10 %</i>	<i>0 %</i>
	vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: *Species were found in tidally influenced saturated soils directly adjacent to riprap along the coastline. Associated species included predominantly Juncus.*

Slope: *1-2 percent*

Land owner/manager:

Aspect:

Site condition + population viability:

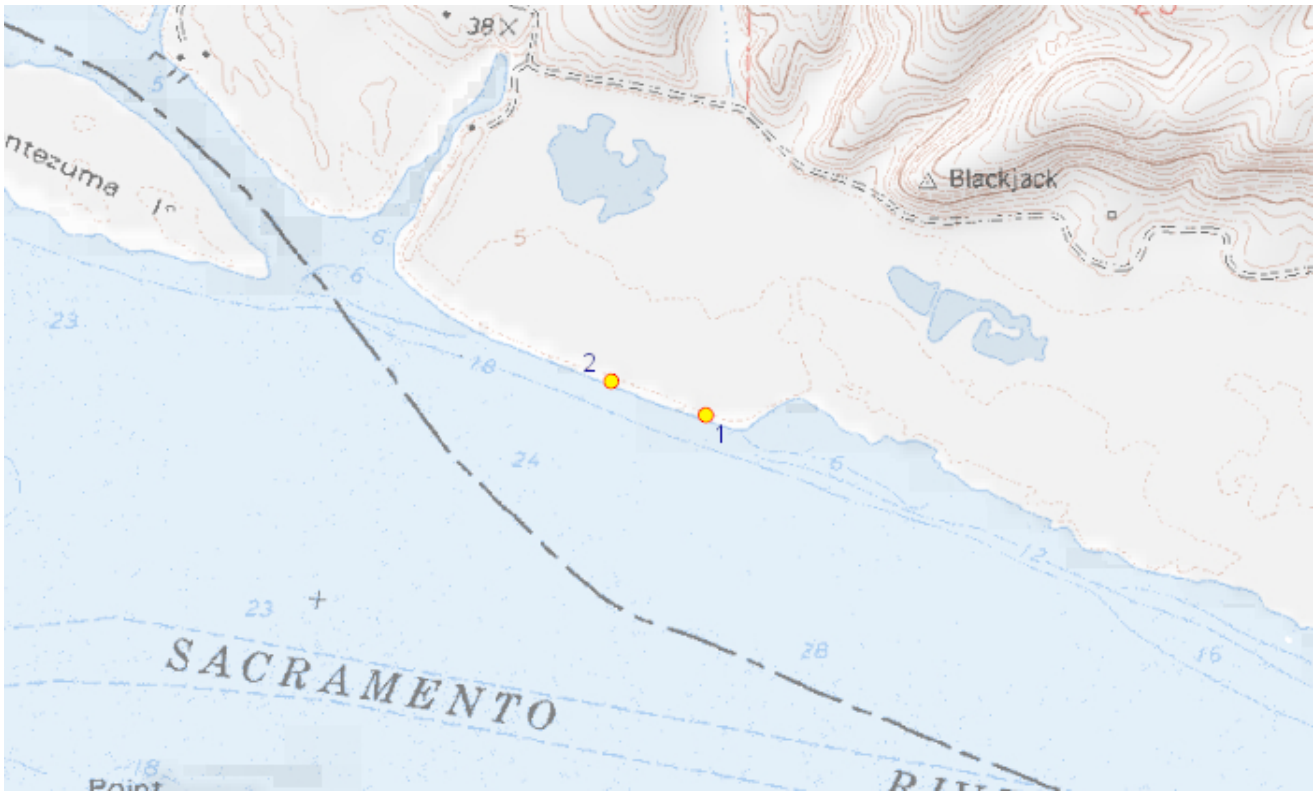
Immediate & surrounding land use: *Potential grazing*

Visible disturbances: [Trash/debris, man-made berms, riprap.](#)

Threats: [Trash accumulation, grazing.](#)

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	Solano	Antioch North	-9999	38.06929	-121.82582	602994	4214154	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26	Spreads via rhizomes consistent along coast						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
2	Solano	Antioch North	-9999	38.06990	-121.82799	602803	4214219	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26							

The mapped feature is accurate within: 10 m

Source of mapped feature: [Handheld submeter GPS unit](#)

Mapping notes: [Species spreads along coast in between mapped points.](#)

Location/directions comments:

Attachment(s):

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/



Source code CRO23F0001
Quad code 3812117
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Lathyrus jepsonii* var. *jepsonii*

Common name: Delta tule pea

Date of field work (mm-dd-yyyy): 05-24-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Brian Cropper

Affiliation: Insignia Environmental

Address: 3028 Juniper St Apt 3

Email: bcropper@insigniaenv.com

Phone: (920) 544-7989

Other observers: Deanna Giuliano

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in: Jepson Herbarium, Calflora

By another person: Deanna Giuliano

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes If not found, why not?

Level of survey effort: Fully botanical survey

Total number of individuals: 150-200

Collection? No

Collection number:

Museum/Herbarium:

PLANT INFORMATION

Phenology:	70 %	25 %	5 %
	vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: Rosa californica and Schoenoplectus dominated habitat and associations. Delta tule pea was commonly found climbing up upland shrubs adjacent to sloughs approximately 15-20 feet from the coast.

Slope: 5 to 10%

Land owner/manager:

Aspect:

Site condition + population viability: Fair

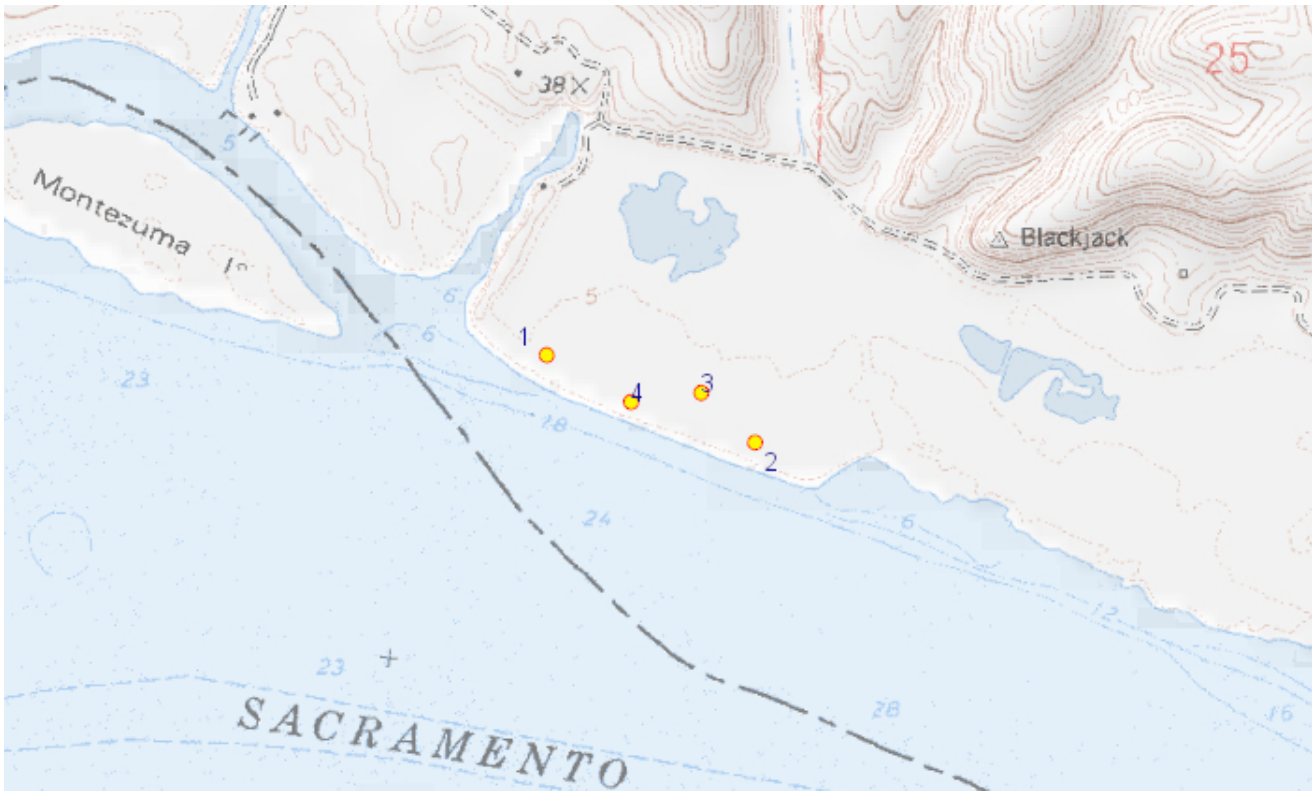
Immediate & surrounding land use: Agriculture/grazing

Visible disturbances: [evidence of grazing, man-made berms, riprap along coastline.](#)

Threats: [Grazing, development](#)

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	14	38.07143	-121.83111	602527	4214386	10
1	Public Land Survey	Feature Comment						
	M T03N R01E 26							
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	20	38.06985	-121.82633	602949	4214216	10
2	Public Land Survey	Feature Comment						
	M T03N R01E 26	Large polygon with 25+ individuals						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	20	38.07074	-121.82756	602839	4214314	10
3	Public Land Survey	Feature Comment						
	M T03N R01E 26	Large polygon with 20+ individuals						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Solano	Antioch North	9	38.07058	-121.82917	602698	4214294	10
4	Public Land Survey	Feature Comment						
	M T03N R01E 26	Large polygon with 75+ individuals						

The mapped feature is accurate within: 20 m

Source of mapped feature: [Submeter handheld GPS device](#)

Mapping notes:

Location/directions comments:

Attachment(s):

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
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Source code CRO23F0002
Quad code 3812117
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Lilaeopsis masonii*

Common name: Mason's lilaeopsis

Date of field work (mm-dd-yyyy): 05-24-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Brian Cropper

Affiliation: Insignia Environmental

Address: 3028 Juniper St Apt 3

Email: bcropper@insigniaenv.com

Phone: (920) 544-7989

Other observers: Deanna Giuliano

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in: Jepson Herbarium, Calflora

By another person: Deanna Giuliano

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes If not found, why not?

Level of survey effort: Fully botanical survey

Total number of individuals: 200-500

Collection? No

Collection number:

Museum/Herbarium:

PLANT INFORMATION

Phenology:	15 %	85 %	0 %
	vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: Species were observed approximately 2-5 feet from the coast in tidally influenced saturated soils adjacent to riprap along coast. Dominant species and habitat included primarily Juncus.

Slope: 1-2 percent

Land owner/manager:

Aspect:

Site condition + population viability: Good

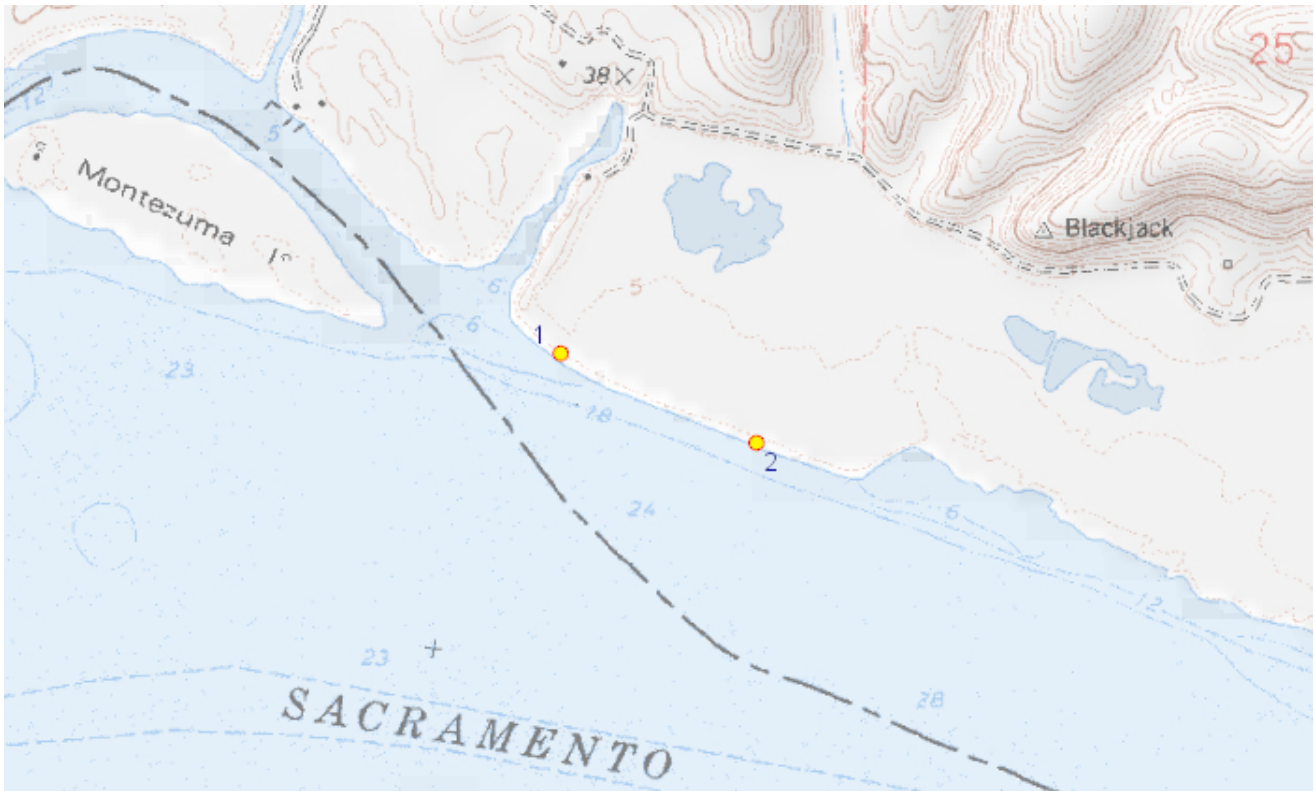
Immediate & surrounding land use: N/A

Visible disturbances: Riprap along coast, trash/debris, man-made berms.

Threats: Trash accumulation, potential grazing

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	Solano	Antioch North	-9999	38.07129	-121.83182	602465	4214370	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26	rhizomatous spreading aprox. 5 ft from coast						
ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
2	Solano	Antioch North	-9999	38.06968	-121.82733	602861	4214196	10
	Public Land Survey	Feature Comment						
	M T03N R01E 26	Rhizomatous spreading along coast						

The mapped feature is accurate within: 10 m

Source of mapped feature: Handheld submeter GPS unit

Mapping notes: Species spreads along the coast and was found consistently between the two mapped points.

Location/directions comments:

Attachment(s):

ATTACHMENT E: BIOLOGICAL RESOURCES MAP

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**Attachment E:
Biological Resources Map
Map 1 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

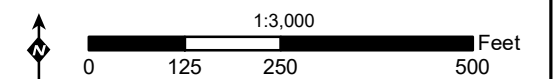
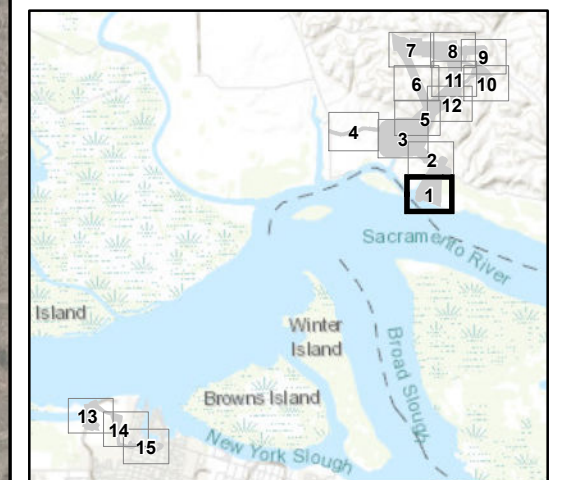
-  Original Survey Area
-  Expanded Survey Area
-  Potential Wetland
-  Northern Harrier Nest

Rare Plant

-  Delta tule pea
-  Mason's lilaeopsis
-  Welsh mudwort
-  Delta tule pea
-  Mason's lilaeopsis
-  Welsh mudwort

Vegetation Community

-  *Distichlis spicata* Herbaceous Alliance
-  *Frankenia salina* Herbaceous Alliance
-  *Juncus arcticus* (var. *balticus*, *mexicanus*) Herbaceous Alliance
-  *Lolium perenne* Herbaceous Semi-Natural Alliance
-  *Rosa californica* Shrubland Alliance
-  *Salix exigua* Shrubland Alliance
-  *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
-  *Schoenoplectus acutus/rosa californica* Association
-  Road/Bare Ground
-  Open Water



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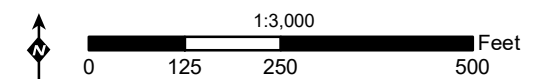
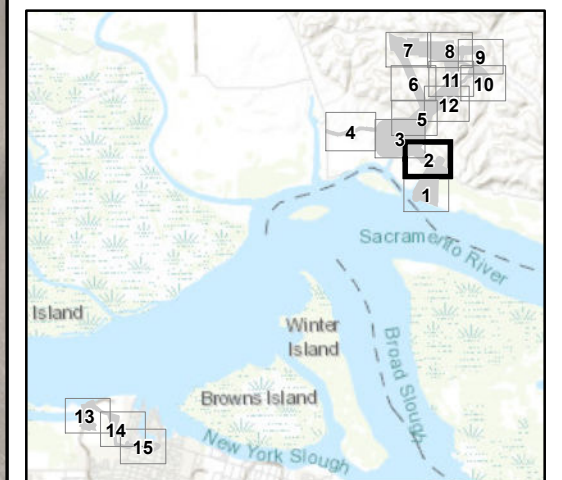
**Attachment E:
Biological Resources Map
Map 2 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Original Survey Area
- Expanded Survey Area
- Potential Wetland

Vegetation Community

- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Distichlis spicata* Herbaceous Alliance
- Frankenia salina* Herbaceous Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Polygonum lapathifolium* - *Xanthium strumarium* Herbaceous Alliance
- Rosa californica* Shrubland Alliance
- Schoenoplectus (acutus, californicus)* Herbaceous Alliance
- Road/Bare Ground
- Open Water



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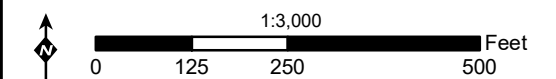
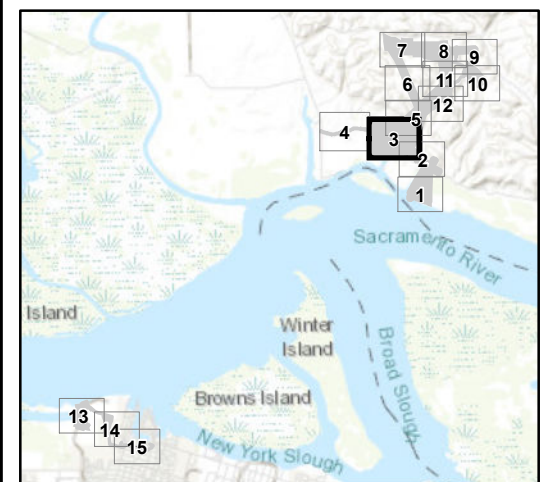
**Attachment E:
Biological Resources Map
Map 3 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Original Survey Area
- Expanded Survey Area
- Potential Wetland

Vegetation Community

- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Distichlis spicata* Herbaceous Alliance
- Frankenia salina* Herbaceous Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Polygonum lapathifolium* - *Xanthium strumarium* Herbaceous Alliance
- Sarcocornia pacifica* Herbaceous Alliance
- Rosa californica* Shrubland Alliance
- Schoenoplectus (acutus, californicus)* Herbaceous Alliance
- Schoenoplectus americanus* Herbaceous Alliance
- Typha (angustifolia, domingensis, latifolia)* Herbaceous Alliance
- Road/Bare Ground

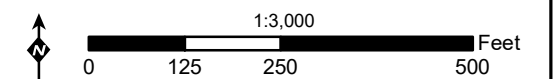
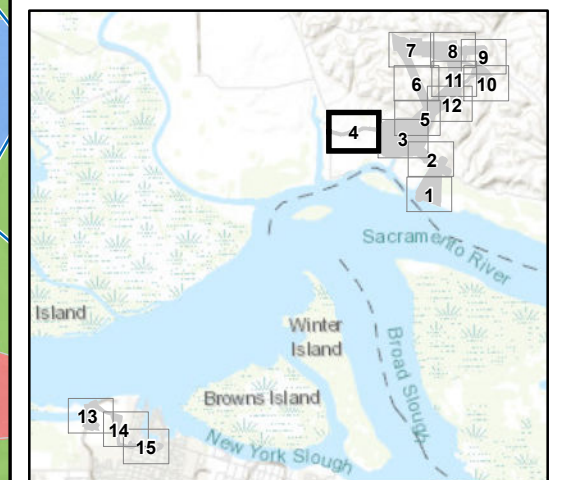


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**Attachment E:
Biological Resources Map
Map 4 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

-  Expanded Survey Area
-  Potential Wetland
- Vegetation Community**
-  *Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 -  *Distichlis spicata* Herbaceous Alliance
 -  *Frankenia salina* Herbaceous Alliance
 -  *Lolium perenne* Herbaceous Semi-Natural Alliance
 -  *Sarcocornia pacifica* Herbaceous Alliance
 -  *Schoenoplectus (acutus, californicus)* Herbaceous Alliance
 -  Road/Bare Ground
 -  Developed

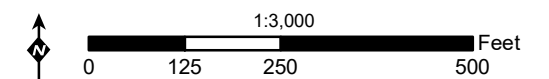
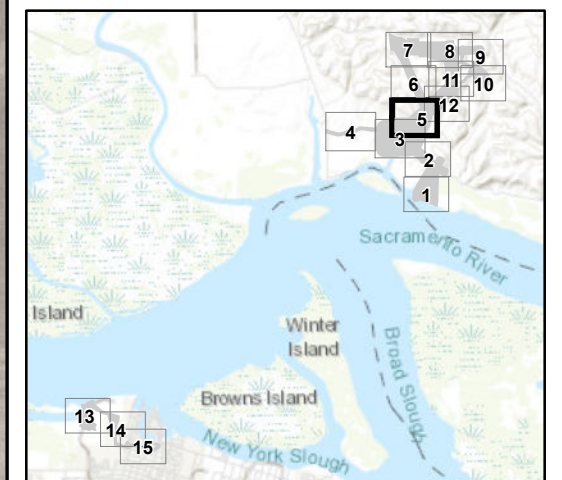


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**Attachment E:
Biological Resources Map
Map 5 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Original Survey Area
Expanded Survey Area
Ephemeral Stream
Potential Wetland
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - Distichlis spicata* Herbaceous Alliance
 - Frankenia salina* Herbaceous Alliance
 - Lolium perenne* Herbaceous Semi-Natural Alliance
 - Typha (angustifolia, domingensis, latifolia)* Herbaceous Alliance
 - Road/Bare Ground

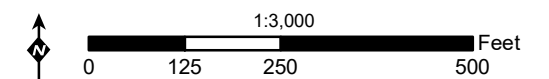
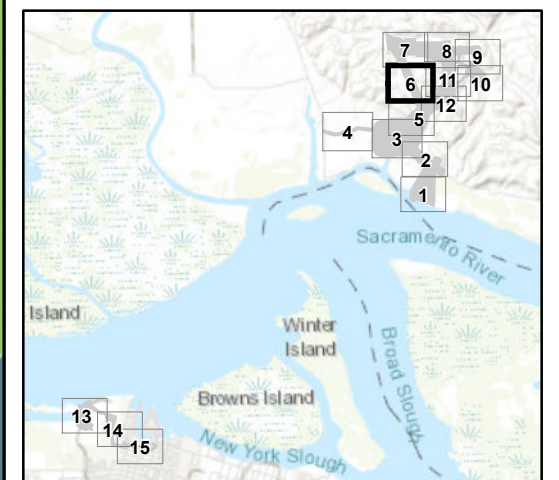


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**Attachment E:
Biological Resources Map
Map 6 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Original Survey Area
Expanded Survey Area
Ephemeral Stream
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Road/Bare Ground



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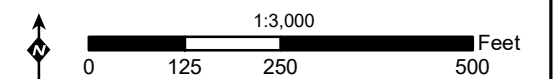
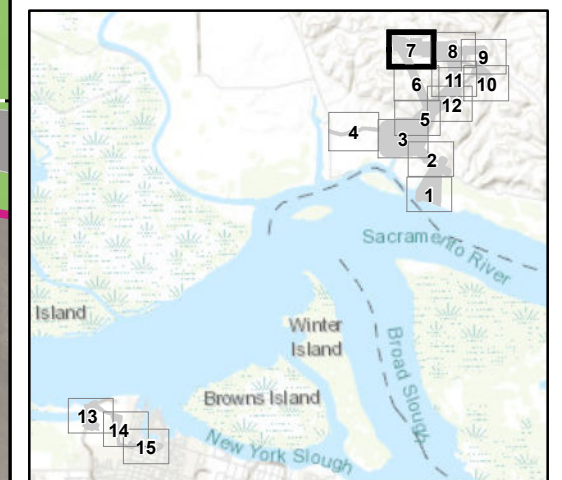
**Attachment E:
Biological Resources Map
Map 7 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Original Survey Area
Expanded Survey Area

Vegetation Community

- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Road/Bare Ground

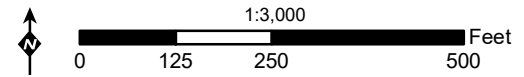
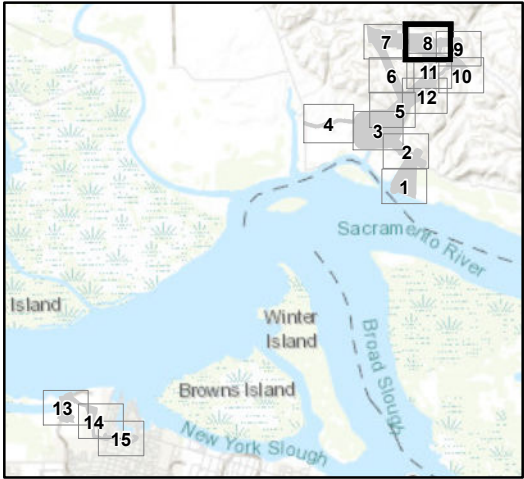


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Attachment E:
Biological Resources Map
Map 8 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Original Survey Area
Expanded Survey Area
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - Lolium perenne* Herbaceous Semi-Natural Alliance
 - Road/Bare Ground

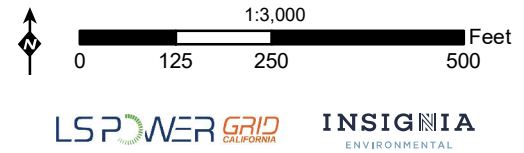
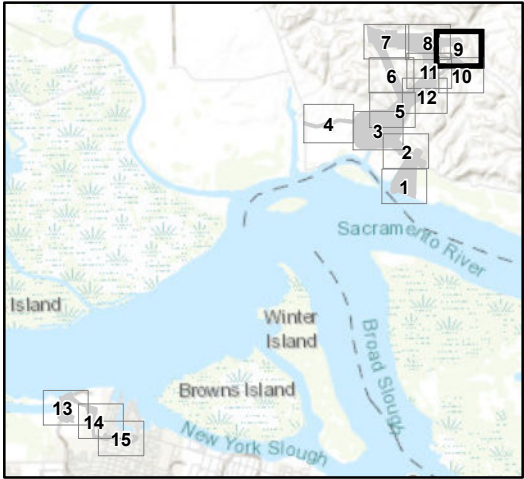


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Attachment E:
Biological Resources Map
Map 9 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Original Survey Area
Expanded Survey Area
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
 - Lolium perenne* Herbaceous Semi-Natural Alliance
 - Road/Bare Ground



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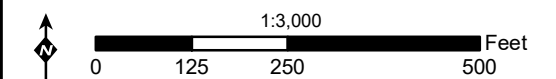
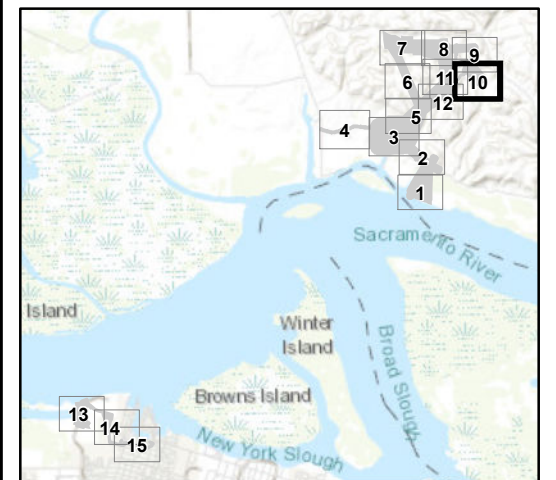
**Attachment E:
Biological Resources Map
Map 10 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

- Original Survey Area
Expanded Survey Area

Vegetation Community

- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Road/Bare Ground



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**Attachment E:
Biological Resources Map
Map 11 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

Original Survey Area

Expanded Survey Area

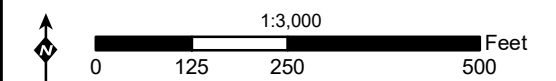
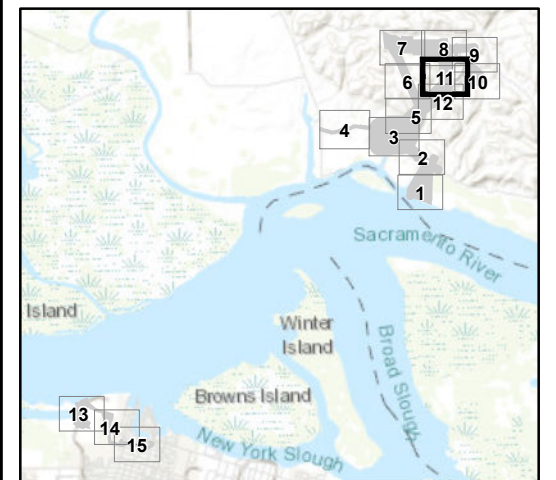
Ephemeral Stream

Vegetation Community

Brassica nigra - Centaurea (solstitialis, melitensis) Herbaceous Semi-Natural Alliance

Lolium perenne Herbaceous Semi-Natural Alliance

Road/Bare Ground



LSPower GRID
CALIFORNIA

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ENVIRONMENTAL

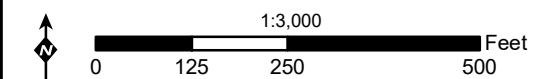
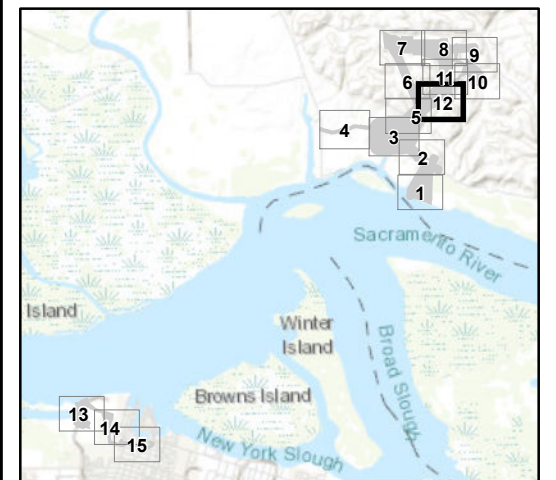
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Attachment E:
Biological Resources Map
Map 12 of 15

Collinsville 500/230 Kilovolt
Substation Project

- Original Survey Area
Expanded Survey Area
Ephemeral Stream
- Vegetation Community**
- Brassica nigra* - *Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance
- Lolium perenne* Herbaceous Semi-Natural Alliance
- Road/Bare Ground

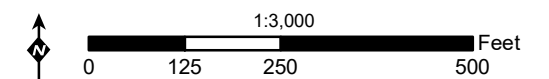
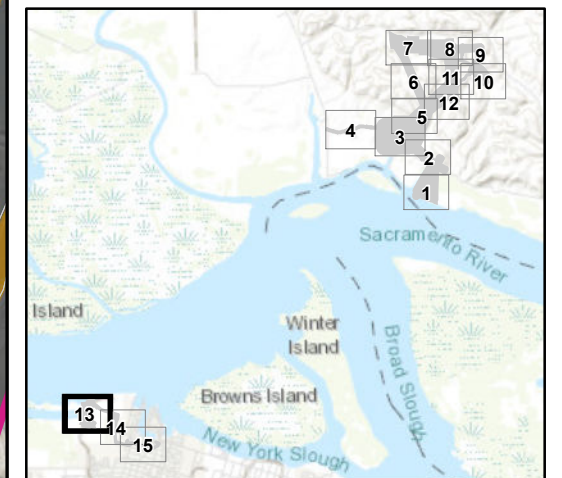


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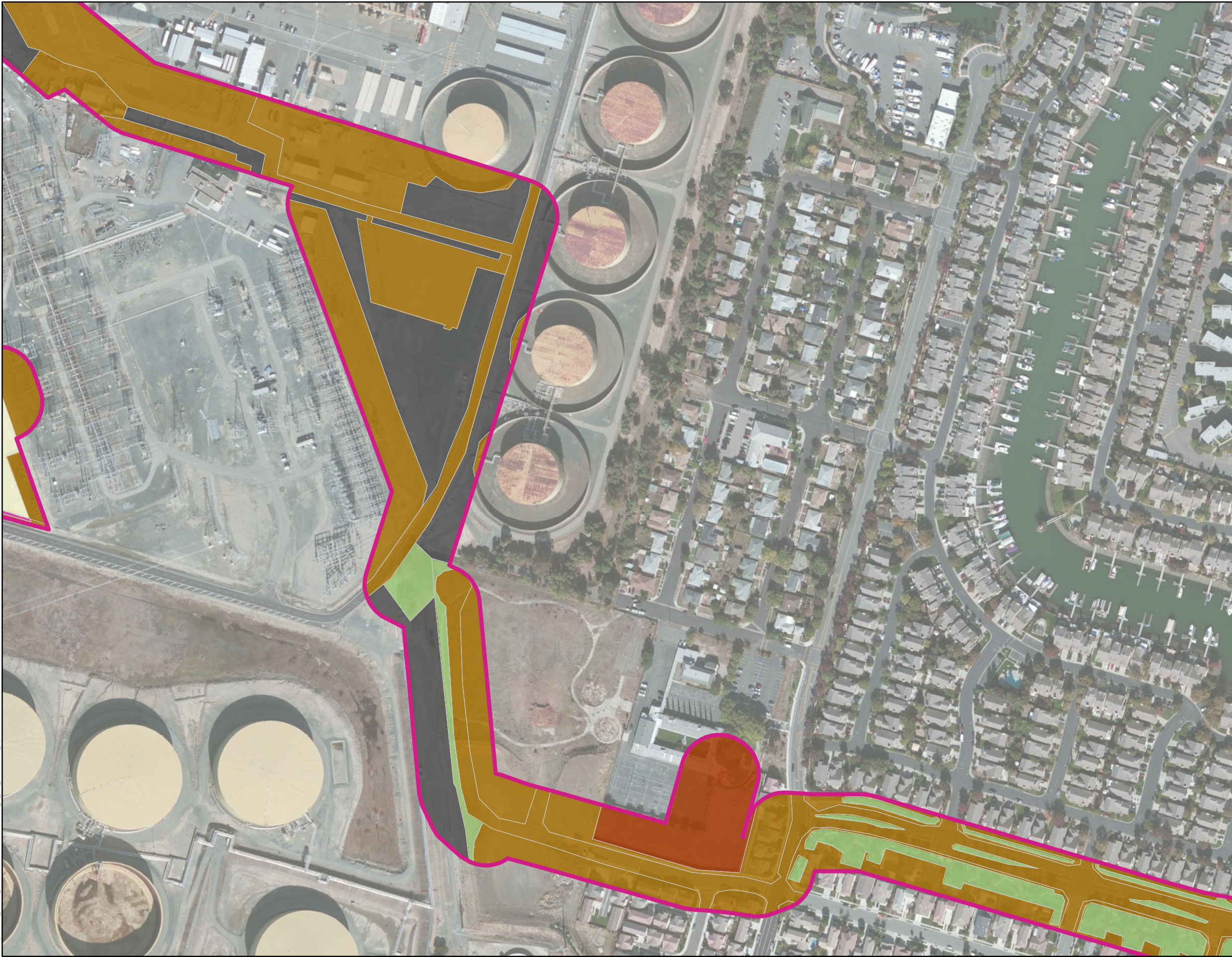
**Attachment E:
Biological Resources Map
Map 13 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

-  Expanded Survey Area
- Rare Plant**
-  Delta tule pea
- Vegetation Community**
-  *Lepidium latifolium* – *Lactuca serriola*
Herbaceous Alliance
-  Ornamental Vegetation
-  *Juncus arcticus* (var. *balticus*, *mexicanus*)
Herbaceous Alliance
-  *Schoenoplectus* (*acutus*, *californicus*)
Herbaceous Alliance
-  *Baccharis pilularis* Shrubland Alliance
-  Disturbed
-  Road/Bare Ground
-  Rip Rap
-  Open Water
-  Developed
-  Not Surveyed



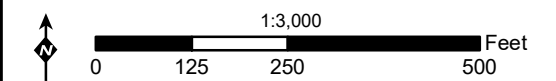
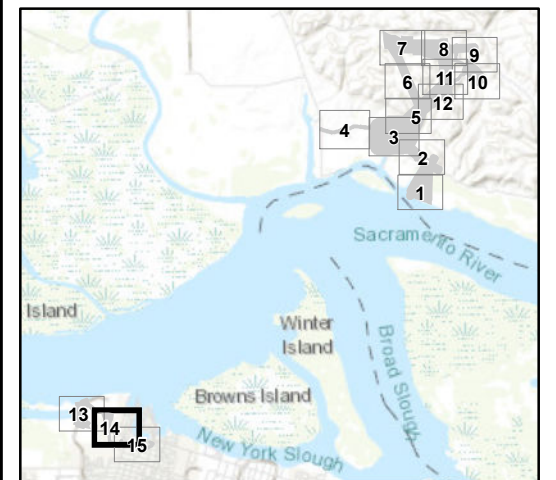
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**Attachment E:
Biological Resources Map
Map 14 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

-  Expanded Survey Area
- Vegetation Community**
-  *Lepidium latifolium* – *Lactuca serriola*
Herbaceous Alliance
 -  Ornamental Vegetation
 -  *Baccharis pilularis* Shrubland Alliance
 -  Disturbed
 -  Developed
 -  Not Surveyed



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**Attachment E:
Biological Resources Map
Map 15 of 15**

**Collinsville 500/230 Kilovolt
Substation Project**

 Expanded Survey Area

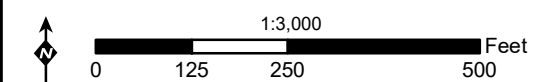
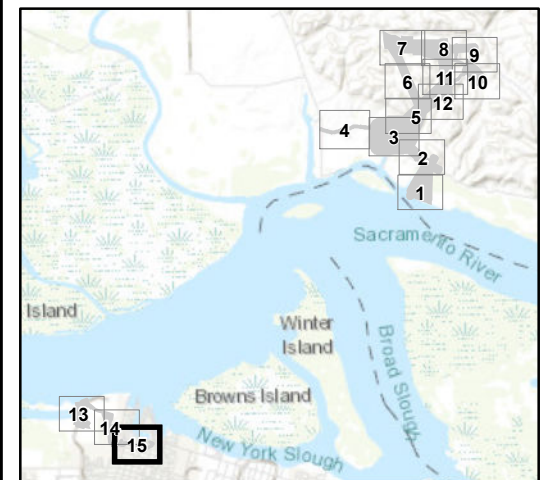
Vegetation Community

 Ornamental Vegetation

 Disturbed

 Developed

 Not Surveyed



ATTACHMENT F: HABITAT ASSESSMENT PHOTOGRAPHS

ATTACHMENT F: HABITAT ASSESSMENT PHOTOGRAPHS



Photograph 1:
Lolium perenne
Herbaceous
Semi-Natural
Alliance, facing
west.



Photograph 2:
Rosa Californica
Shrubland
Alliance, facing
east.



Photograph 3:
Brassica nigra -
Centaurea
(*solstitialis*,
melitensis)
Herbaceous
Semi-Natural
Alliance, facing
east.



Photograph 4:
Juncus Arcticus
(var. *balticus*,
mexicanus)
Herbaceous
Alliance, facing
south.



Photograph 5:
Frankenia Salina
Herbaceous
Alliance, facing
south.



Photograph 6:
Distichlis
Spicata
Herbaceous
Alliance, facing
northeast.



Photograph 7:
Salix Exigua
Shrubland
Alliance, facing
east.



Photograph 8:
Sarcocornia
pacifica
(*Salicornia*
depressa)
Herbaceous
Alliance, facing
northwest.



Photograph 9:
Schoenoplectus
(acutus,
californicus)
Herbaceous
Alliance, facing
east.



Photograph 10:
Schoenoplectus
Acutus/Rosa
Californica
Association,
facing west.



Photograph 11:
Lepidium
latifolium –
Lactuca serriola
Herbaceous
Semi-Natural
Alliance, facing
northeast.



Photograph 12:
Delta tule pea
(*Lathyrus*
jepsonii
jepsonii).



Photograph 13:
Mason's
lilaeopsis
(*Lilaeopsis
masonii*).



Photograph 14:
Welsh mudwort
(*Limosella
australis*).

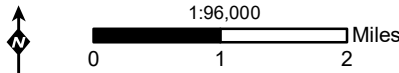
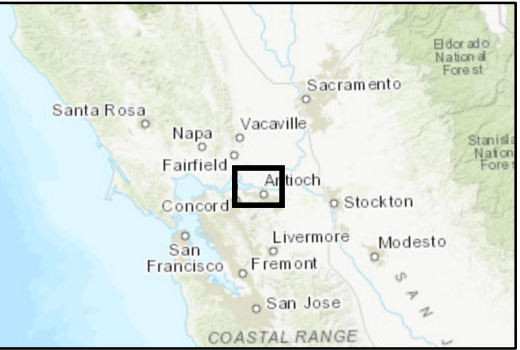
ATTACHMENT G: CNDDB OCCURRENCES OF SPECIAL-STATUS PLANT SPECIES

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Attachment G:
CNDDB Occurrences of
Special-Status Plant Species

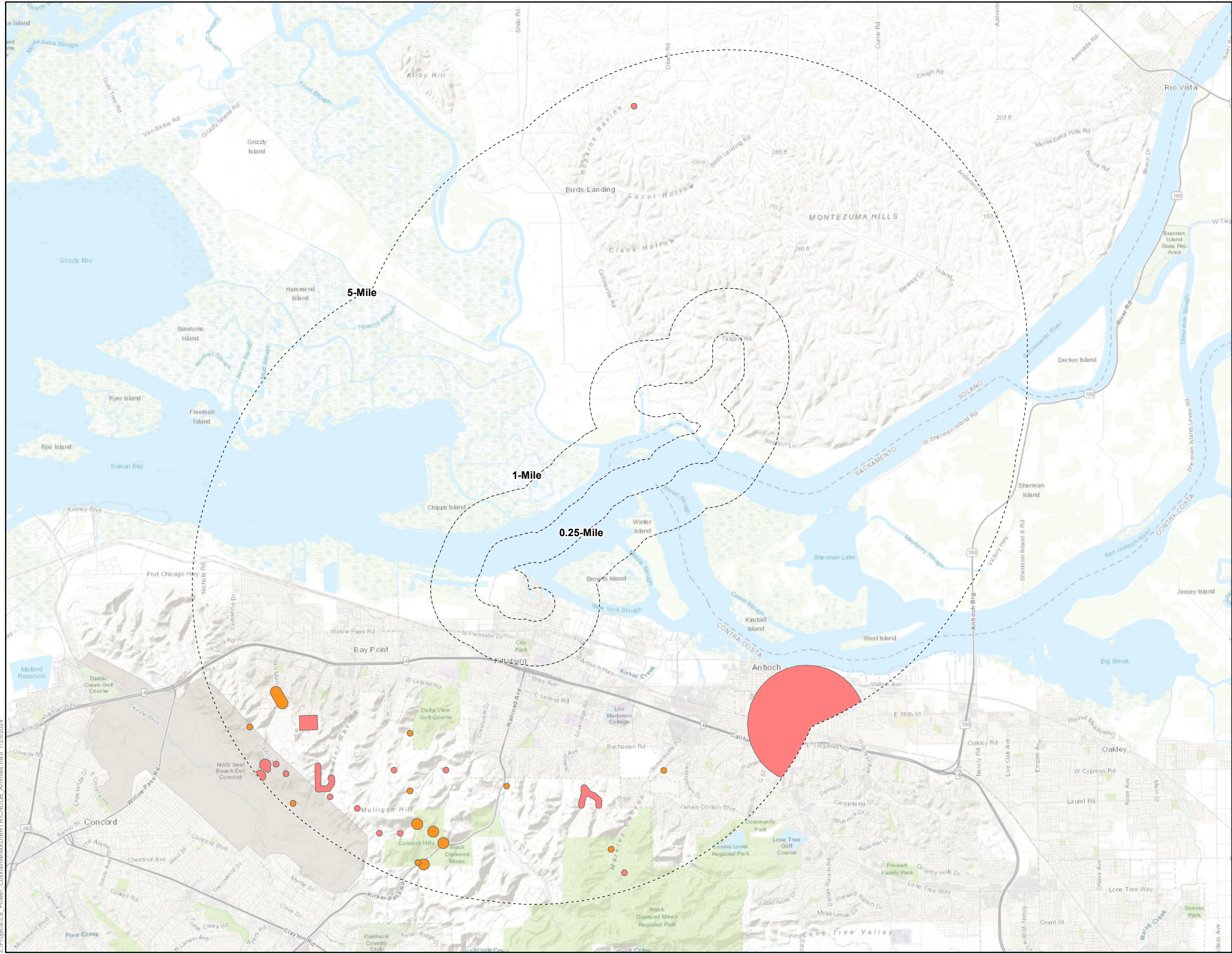
Collinsville 500/230 Kilovolt
Substation Project

- Proposed Project Buffers
- Special Status Plant Species
- Alkali milk-vetch
 - Antioch Dunes buckwheat
 - Antioch Dunes evening-primrose
 - Bearded popcornflower
 - Big tarplant
 - Bolander's water-hemlock
 - Brittlescale
 - Carquinez goldenbush
 - Chaparral ragwort
 - Contra Costa goldfields
 - Contra Costa wallflower
 - Delta mudwort
 - Delta tule pea
 - Diablo helianthella
 - Diamond-petaled California poppy
 - Dwarf downingia
 - Fragrant fritillary
 - Hall's bush-mallow
 - Heartscale
 - Hoover's cryptantha
 - Keck's checkerbloom
 - Mason's lilaeopsis
 - Mt. Diablo buckwheat
 - Pappose tarplant
 - San Joaquin spearscale
 - Showy golden madia
 - Suisun Marsh aster
 - Soft salty bird's-beak



LSPower GRID CALIFORNIA INSIGNIA ENVIRONMENTAL

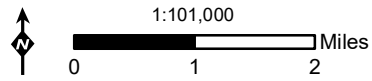
ATTACHMENT H: CNDDB OCCURRENCES OF SPECIAL-STATUS WILDLIFE SPECIES



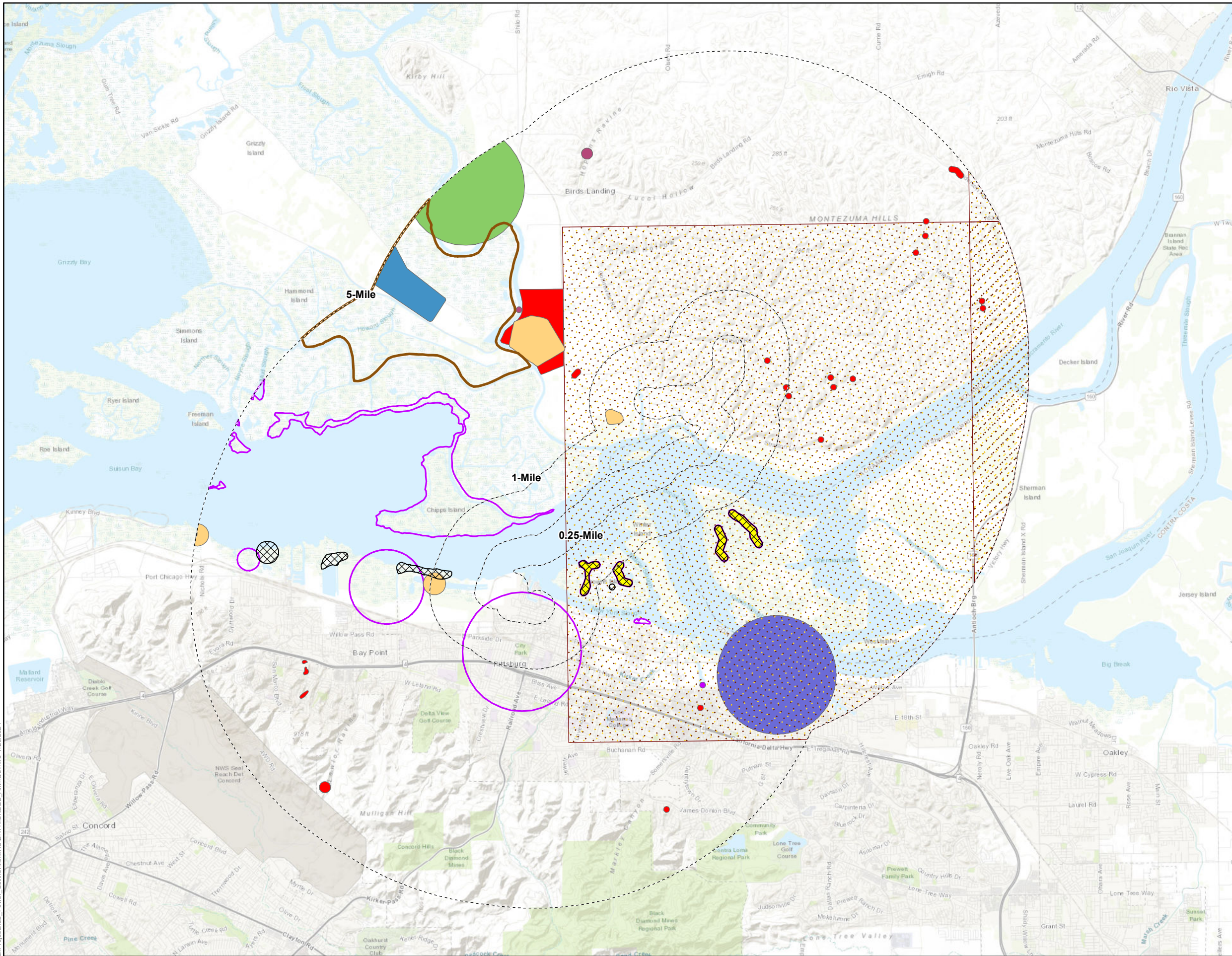
**Attachment H:
CNDDB Occurrences of
Special-Status Wildlife Species
Amphibians - Map 1 of 6**

**Collinsville 500/230 Kilovolt
Substation Project**

- Proposed Project buffers
- California red-legged frog
- California tiger salamander - central California DPS



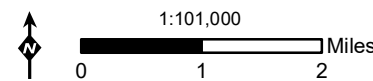
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Attachment G: CNDDB Occurrences of Special-Status Wildlife Species Birds - Map 2 of 6

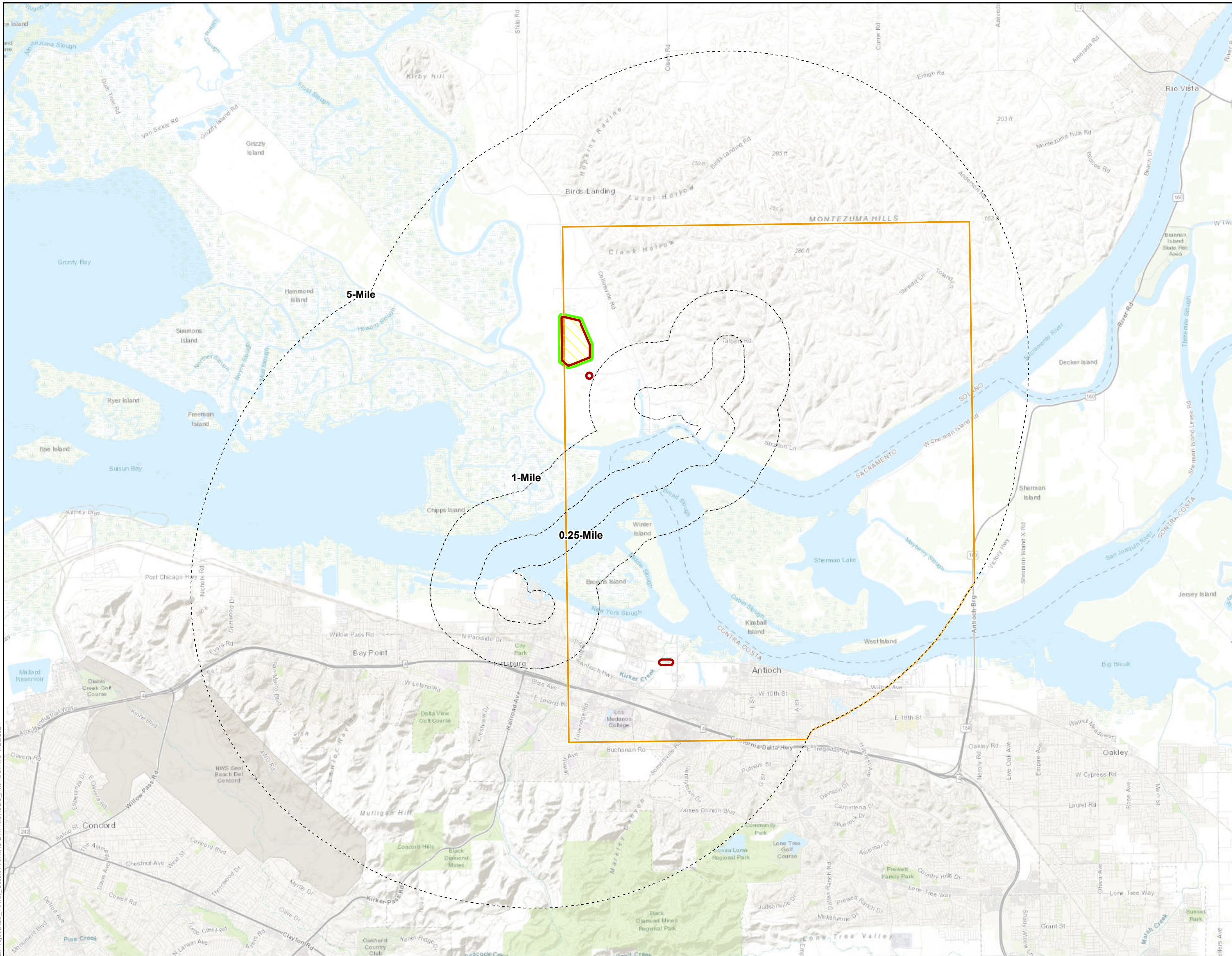
Collinsville 500/230 Kilovolt Substation Project

- Proposed Project buffers
- American peregrine falcon
- Burrowing owl
- California Ridgway's rail
- California black rail
- California least tern
- Saltmarsh common yellowthroat
- Short-eared owl
- Song sparrow ("Modesto" population)
- Suisun song sparrow
- Swainson's hawk
- Tricolored blackbird
- White-tailed kite
- Yellow rail



LSPower GRID CALIFORNIA INSIGNIA ENVIRONMENTAL

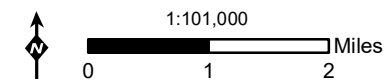
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Attachment G:
CNDDDB Occurrences of
Special-Status Wildlife Species
Crustaceans/Insects - Map 3 of 6

Collinsville 500/230 Kilovolt
Substation Project

- Proposed Project buffers
- Conservancy fairy shrimp
- Lange's metalmark butterfly
- Vernal pool fairy shrimp
- Vernal pool tadpole shrimp



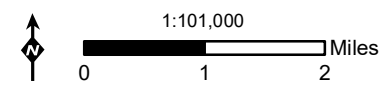
Collinsville 500/230 Kilovolt Substation Project

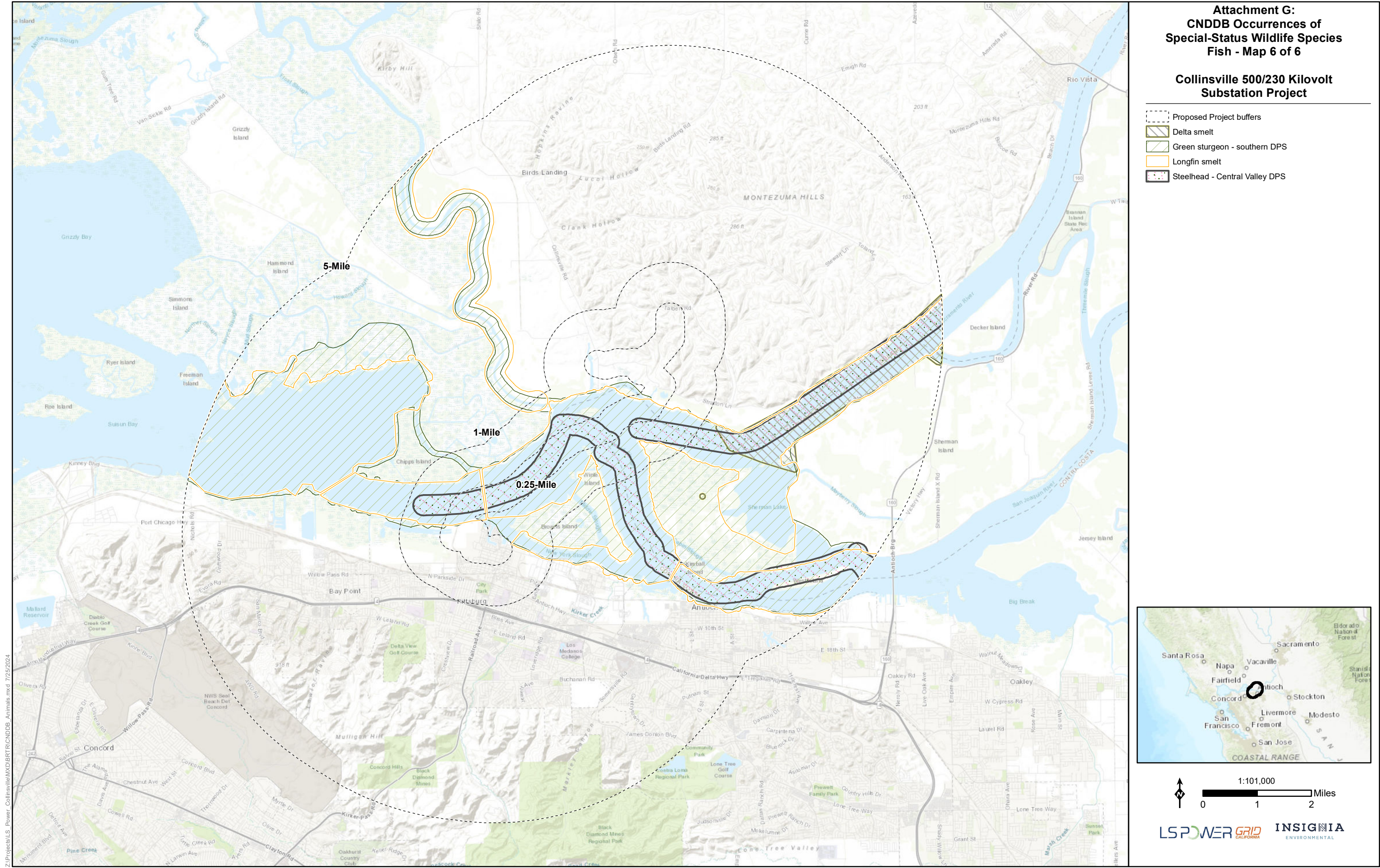
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Collinsville 500/230 Kilovolt Substation Project

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ATTACHMENT I: LINEAR WATER FEATURE PHOTOGRAPHS

ATTACHMENT I: LINEAR WATER FEATURE PHOTOGRAPHS



Photograph 1:
D-1, facing
upstream and
northwest.



Photograph 2:
D-1, facing
downstream and
south.

ATTACHMENT J: WETLAND FEATURE PHOTOGRAPHS

ATTACHMENT J: WETLAND FEATURE PHOTOGRAPHS



Photograph 1:
W-1, facing
south.



Photograph 2:
W-2, facing
southeast.



Photograph 3:
W-3, facing
southwest.



Photograph 4:
W-4, facing
northeast.



Photograph 5:
W-5, facing
southwest.



Photograph 6:
W-6, facing
northeast.



Photograph 7:
W-7, facing
west.

ATTACHMENT K: POTENTIALLY JURISDICTIONAL WATER FEATURES TABLE

ATTACHMENT K: POTENTIALLY JURISDICTIONAL WATER FEATURES TABLES

Table K-1: Potentially Jurisdictional Wetland Features

Wetland Identification Number	Vegetation Type	Cowardin Classification	Page Number in Attachment A	Potential USACE- and RWQCB- Jurisdictional Area within Survey Area (acres)	Potential CDFW- Jurisdictional Area within Survey Area (acres)
W-1	<i>Schoenoplectus (acutus, californicus)</i> Herbaceous Alliance, <i>Juncus arcticus</i> (var. <i>balticus, mexicanus</i>) Herbaceous Alliance, <i>Rosa californica</i> Shrubland Alliance, and <i>Schoenoplectus acutus/Rosa californica</i> Association	E2EM1	1, 2	7.43	7.43
W-2	<i>Schoenoplectus (acutus, californicus)</i> Herbaceous Alliance, <i>Distichlis spicata</i> Herbaceous Alliance, and <i>Frankenia salina</i> Herbaceous Alliance	PEM1	1, 2	22.43	22.43
W-3	<i>Distichlis spicata</i> Herbaceous Alliance	PEM1	2	0.25	0
W-4	<i>Frankenia salina</i> Herbaceous Alliance and <i>Schoenoplectus (acutus, californicus)</i> Herbaceous Alliance	PEM1	2	1.22	0
W-5	<i>Distichlis spicata</i> Herbaceous Alliance and <i>Juncus arcticus</i> (var. <i>balticus, mexicanus</i>) Herbaceous Alliance	PEM1	3, 4	15.16	15.16
W-6	<i>Distichlis spicata</i> Herbaceous Alliance and <i>Juncus arcticus</i> (var. <i>balticus, mexicanus</i>) Herbaceous Alliance	PEM1	5, 6	10.02	11.85
W-7	<i>Distichlis spicata</i> Herbaceous Alliance	PEM1	4	1.55	0
Total	--	--	--	58.06	55.04

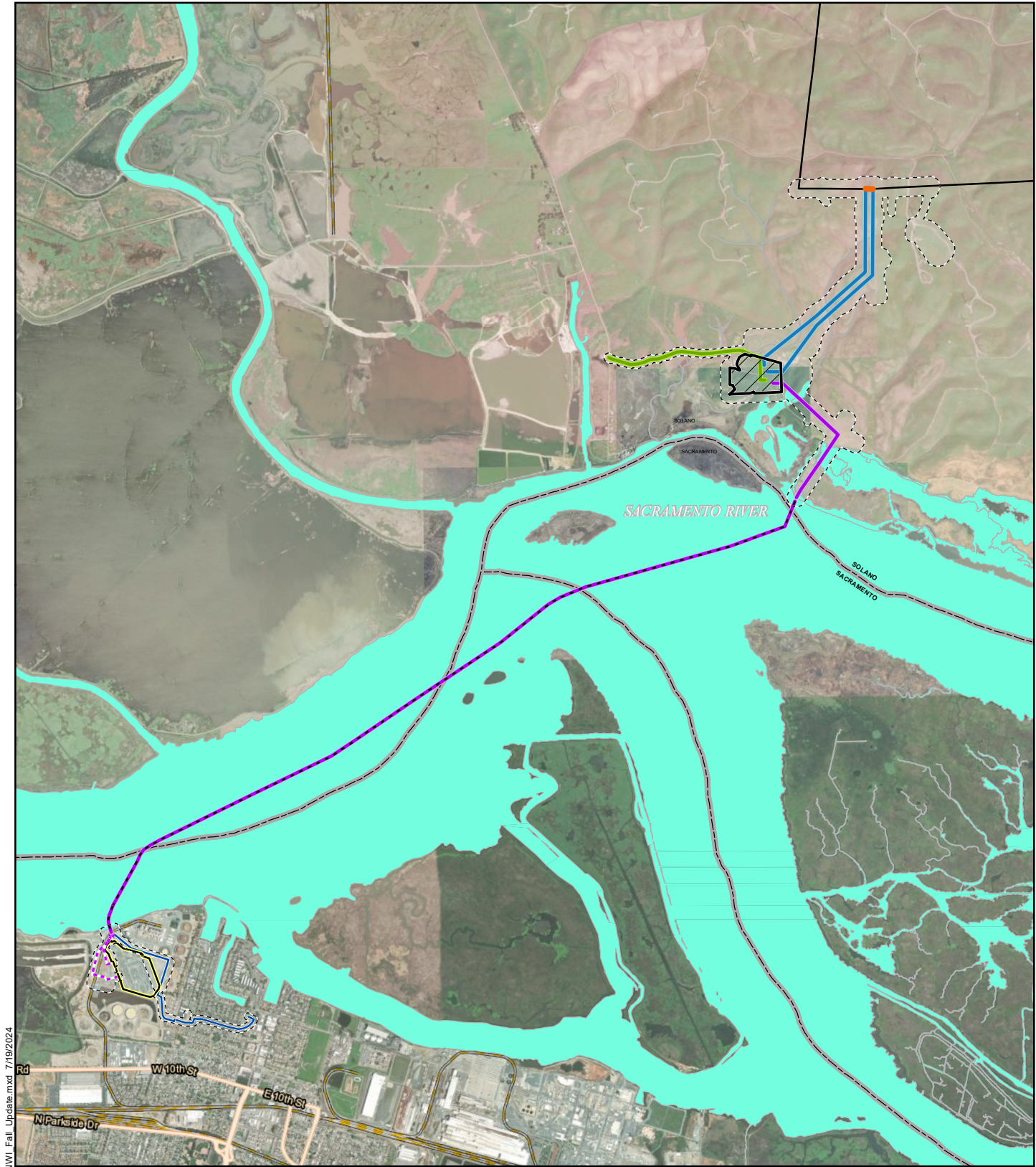
Notes: USACE = United States Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife

Table K-2: Potentially Jurisdictional Linear Water Features

ID	Feature Type	Average Measurements (feet)					Jurisdictional Areas (acres)		
		Length	OHWB Width	OHWB Depth	TOB Width	TOB Depth	USACE	RWQCB	CDFW
D-1	Ephemeral	926.12	3.00	0.10	4.90	2.20	0.06	0.06	0.10

Notes: OHWB = ordinary high water mark; TOB = top of bank

ATTACHMENT L: NATIONAL WETLANDS INVENTORY MAP



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Attachment L: National Wetlands Inventory Map

Collinsville 500/230 Kilovolt Substation Project

- Proposed LSPGC 230 kV Overhead Segment
- Proposed LSPGC 230 kV Submarine Segment
- Proposed LSPGC 230 kV Underground Segment
- Proposed PG&E 500 kV Interconnection
- Proposed PG&E 12 kV Distribution Line
- Existing PG&E 500 kV Transmission Line to be Removed

- Survey Area
- Proposed Collinsville Substation
- Existing PG&E Pittsburg Substation
- National Wetlands Inventory Feature

- County Boundary
- Existing PG&E Vaca Dixon-Tesla Transmission Line
- Proposed LSPGC Telecommunications Line

