Origis Energy

San Luis West Solar and Storage Project



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San Luis West Solar and Storage Project

WETLANDS DELINEATION REVISED REPORT

Fresno County, California
July 2025

EXECUTIVE SUMMARY

Tetra Tech has prepared this Jurisdictional Waters and Wetlands Delineation Revised Report (Wetlands Delineation Report) for the proposed San Luis West Solar and Storage Project (Project) located in unincorporated Fresno County, California, for the development of a solar energy and storage facility. This Report describes the literature review, survey methodology, and results of the wetlands delineation conducted for the Project.

A wetlands delineation was performed in the original parcels within the Project site to assess potential jurisdictional waters and wetland features in April 2021 and April 2023. A wetlands delineation in the additional Califland Corp parcels was performed in January 2024. A general biological survey, including an assessment of any potential jurisdictional features, was performed in the Woolf Parcel South Addition in July 2025. Eight features under California Department of Fish and Wildlife (CDFW) jurisdiction were identified on the entire Project site. No features under U.S. Army Corps of Engineers (USACE) or Regional Water Quality Control Board (RWQCB) jurisdiction were identified on the site. Avoidance or minimization of impacts to areas under CDFW jurisdiction is recommended. A Lake and Streambed Alteration Agreement from the CDFW would be required if these features cannot be avoided, in which case early coordination with the CDFW is recommended. Determinations contained in this report are subject to verification by the USACE, RWQCB, and CDFW.

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ACRONYMS/ABBREVIATIONS

APN	Assessor's Parcel Number
California Aqueduct	Governor Edmund G. Brown California Aqueduct
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
LLC	Limited Liability Company
LSAA	Lake and Streambed Alteration Agreement
NWI	National Wetlands Inventory
OBL	Obligate Wetland
OHWM	ordinary high water mark
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1969
Procedures	State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
UPL	Upland
USACE	U.S. Army Corps of Engineers
USDA NRCS	U.S. Department of Agriculture National Resources Conservation Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDRs	waste discharge requirements

1 INTRODUCTION

Tetra Tech has prepared this Jurisdictional Waters and Wetlands Delineation Revised Report (Wetlands Delineation Report) for the proposed San Luis West Solar and Storage Project (Project). Origis Development, LLC (Project proponent) proposes to develop approximately 1,265 acres of land (Project site) located in unincorporated Fresno County, California, as a solar energy and storage facility.

The purpose of this Wetlands Delineation Report is to:

- Summarize the major applicable federal and state laws that apply to protecting jurisdictional wetlands, waters, and water quality.
- Document the methods and results of the wetlands delineations conducted for the Project.
- Identify jurisdictional areas under the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) criteria.

1.1 Project Location

The Project site, which encompasses all parcels within the Project, is located on approximately 1,265 acres of privately-owned agricultural land within the Great Valley, also called the Central Valley. The Project Footprint, the area where ground disturbance is anticipated to occur, is located on approximately 770 acres of land within the Project site. The proposed Project is in rural unincorporated southwestern Fresno County, California, immediately adjacent to the Governor Edmund G. Brown California Aqueduct (California Aqueduct) (Figures 1 and 2). The Project site is about 3 miles southeast of the City of Huron, 8 miles northeast of Interstate 5, 10 miles northwest of Kettleman City, and about 38 miles south-southwest of Fresno. The Project site is in the United States Geological Survey (USGS) *Huron* 7.5-Minute Topographic Quadrangle Map (Figure 3). The Project site is within the following Townships (T), Ranges I, and Sections (S), Mount Diablo Principal Meridian:

- Township 21S, Range 17E, Sections 02 and 03,
- Township 21S, Range 18E, Section 06,
- Township 20S, Range 18E, Section 31, and
- Township 20S, Range 17E, Section 35.

The Project site is comprised of multiple parcels grouped into seven areas. Three additional parcels were added to the Project site in November 2023 and the gen-tie line was added in January 2024. An additional area within Woolf Parcel South that was not previously part of the Project site was surveyed in July 2025. The original and additional parcels include the following:

- Original parcels:
    - Woolf Parcel North (Assessor's Parcel Number [APN]: 075-070-54S)
    - Woolf Parcel South (APN: 085-050-01S)
    - Sageberry Parcel (APN: 078-080-55)
    - Parcel 5 (APN: 078-060-85S)
- Additional parcels:
    - Califland Corp parcels (APNs: 085-050-47S, 085-055-048S, 085-050-84S)
    - Gen-tie line

- Woolf Parcel South Addition (APN: 085-050-01S)

The Project site also contains three Subareas, which are made up of the following parcels:

- Subarea A: Woolf Parcel South (including Woolf Parcel South Addition), Califland Corp Parcels
- Subarea B: Woolf Parcel North
- Subarea C: Sageberry Parcel, Parcel 5

Each parcel shares one boundary with West Jayne Avenue. Woolf Parcel North and Parcel 5 are located on the north side of West Jayne Avenue. Sageberry, Woolf Parcel South, and Califland Corp parcels are located on the south side. The proposed Project site spans across 4.3 miles from the southwest corner of Woolf Parcel South to the northern edge of Parcel 5.

Each parcel boundary is bordered by dirt roads on each side, except for Woolf Parcel North, Woolf Parcel South, and the Califland Corp parcels. Woolf Parcel North is bound by a paved road, Lassen Avenue, on its west side. Woolf Parcel South is bound by West Jayne Avenue on its north side. The Califland Corp parcels are bound by Lassen Avenue on their east side. Woolf Parcel South is directly across the street from Pacific Gas & Electric's (PG&E) Gates Substation, which is located at the intersection of South Trinity Avenue and West Jayne Avenue.

The Project also includes a proposed gen-tie route as shown in Figures 1 to 3. The gen-tie route does not contain potential jurisdictional areas based on the results of the literature review and therefore a jurisdictional delineation of this area was not required.

1.2 Environmental Setting

No creeks or streams are located on or adjacent to the Project site. The nearest natural stream is Arroyo Vadoso about 1 mile south of the Project site. The Project site is flat and ranges in elevation from about 315 to 405 feet above mean sea level. The site has been cleared for agricultural use and vegetation throughout the site consists of predominantly disturbed fields that are bare or support non-native mustards and grasses. Rainfall in 2023 was higher than typical. From July 1, 2022 through June 30, 2023, rainfall for Fresno County was estimated to be about 162 percent of typical (Golden Gate Weather Services 2023). A few rainfall events occurred during the beginning of the 2023-2024 rainfall year, prior to the January 2024 wetland delineation. Overall, rainfall in 2024 was slightly lower than normal, at 93% of typical between July 1, 2023 and June 30, 2024 (Golden Gate Weather Services 2024).

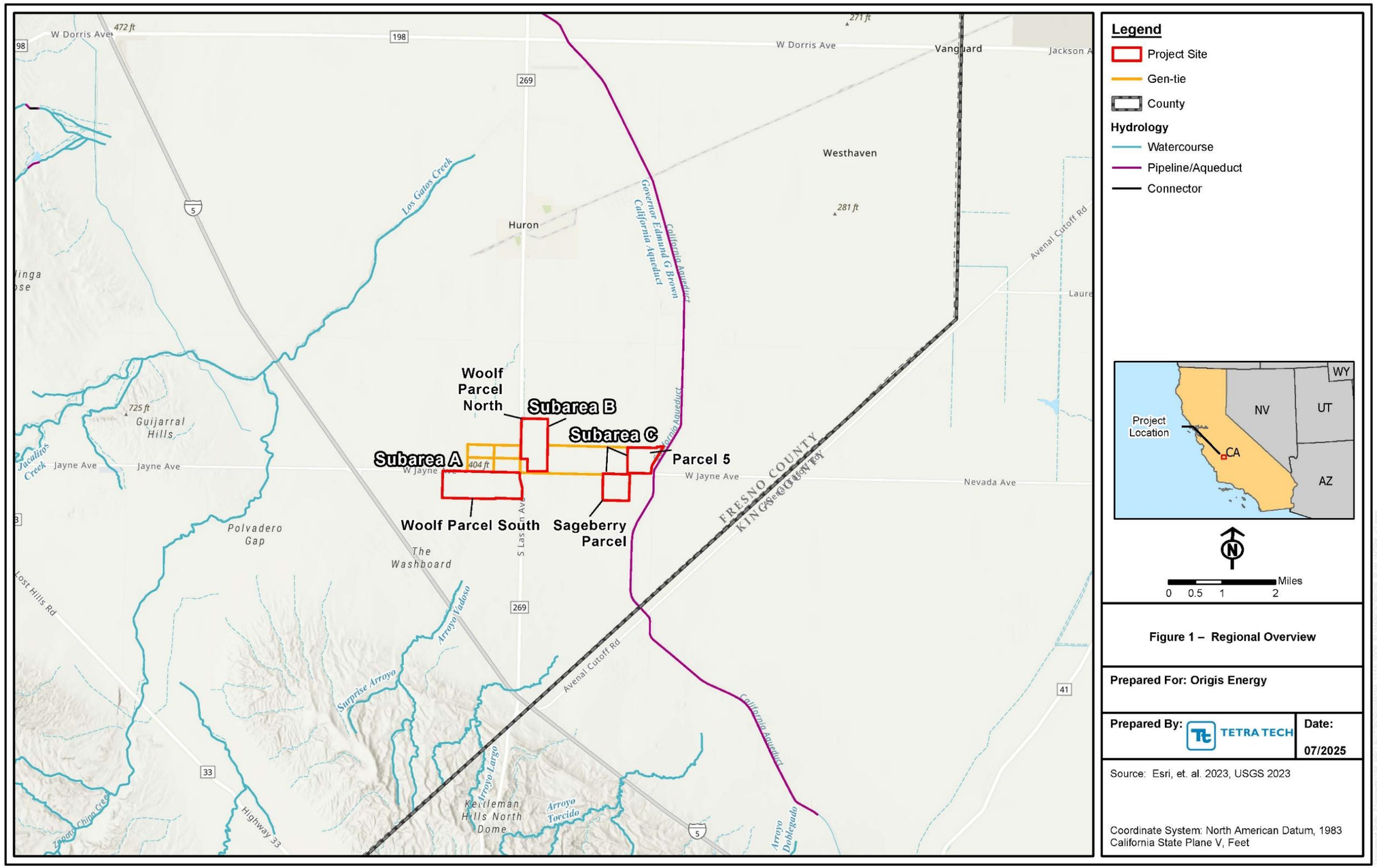


Figure 1 – Regional Overview

Prepared For: Origis Energy

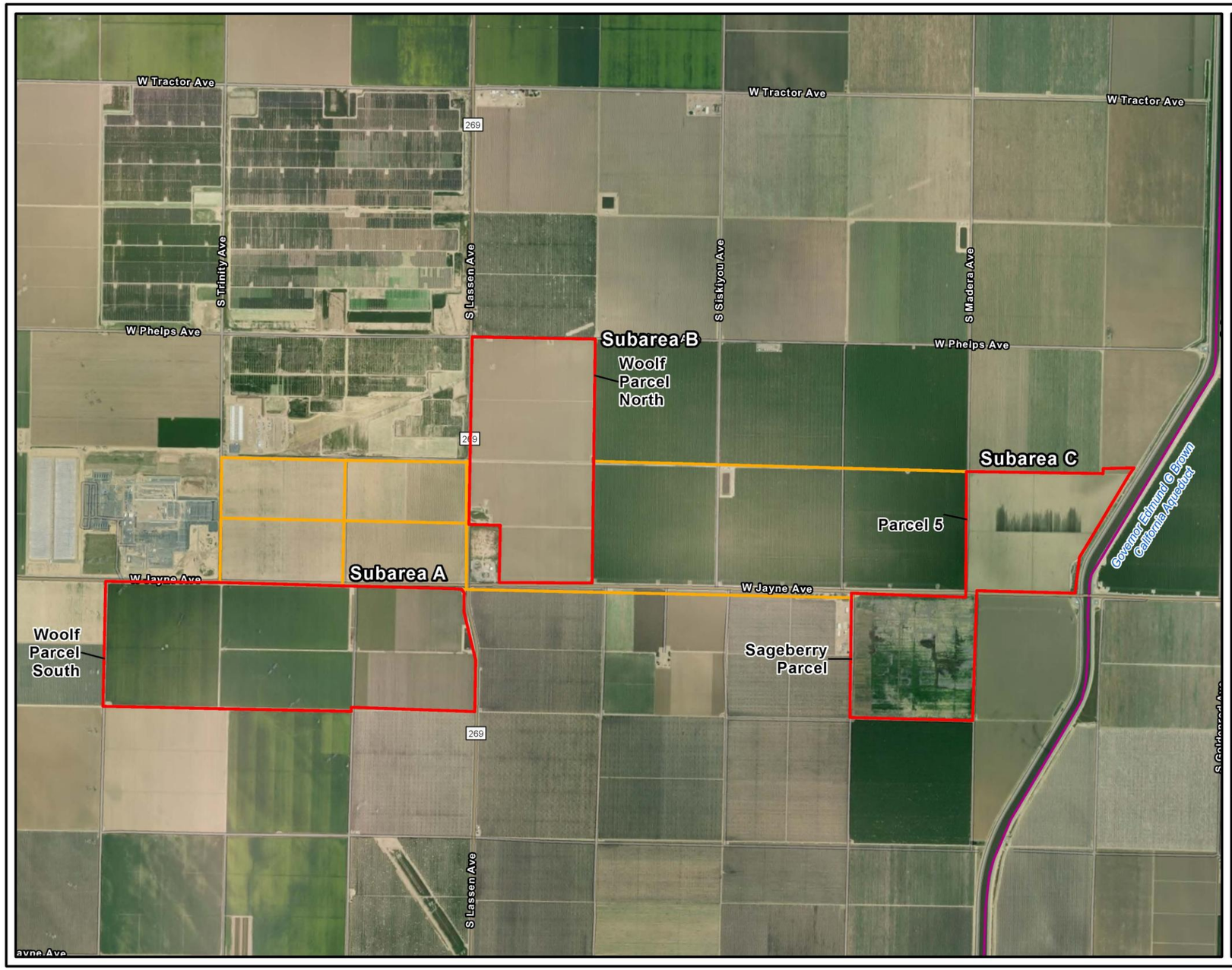
Prepared By: TETRA TECH

Date: 07/2025

Source: Esri, et. al. 2023, USGS 2023

Coordinate System: North American Datum, 1983 California State Plane V, Feet

Not for Construction



Legend

- Project Site
- Gen-tie

Hydrology

- Pipeline/Aqueduct



N

0 1,000 2,000 4,000 Feet

Figure 2 – Project Location

Prepared For: Origis Energy

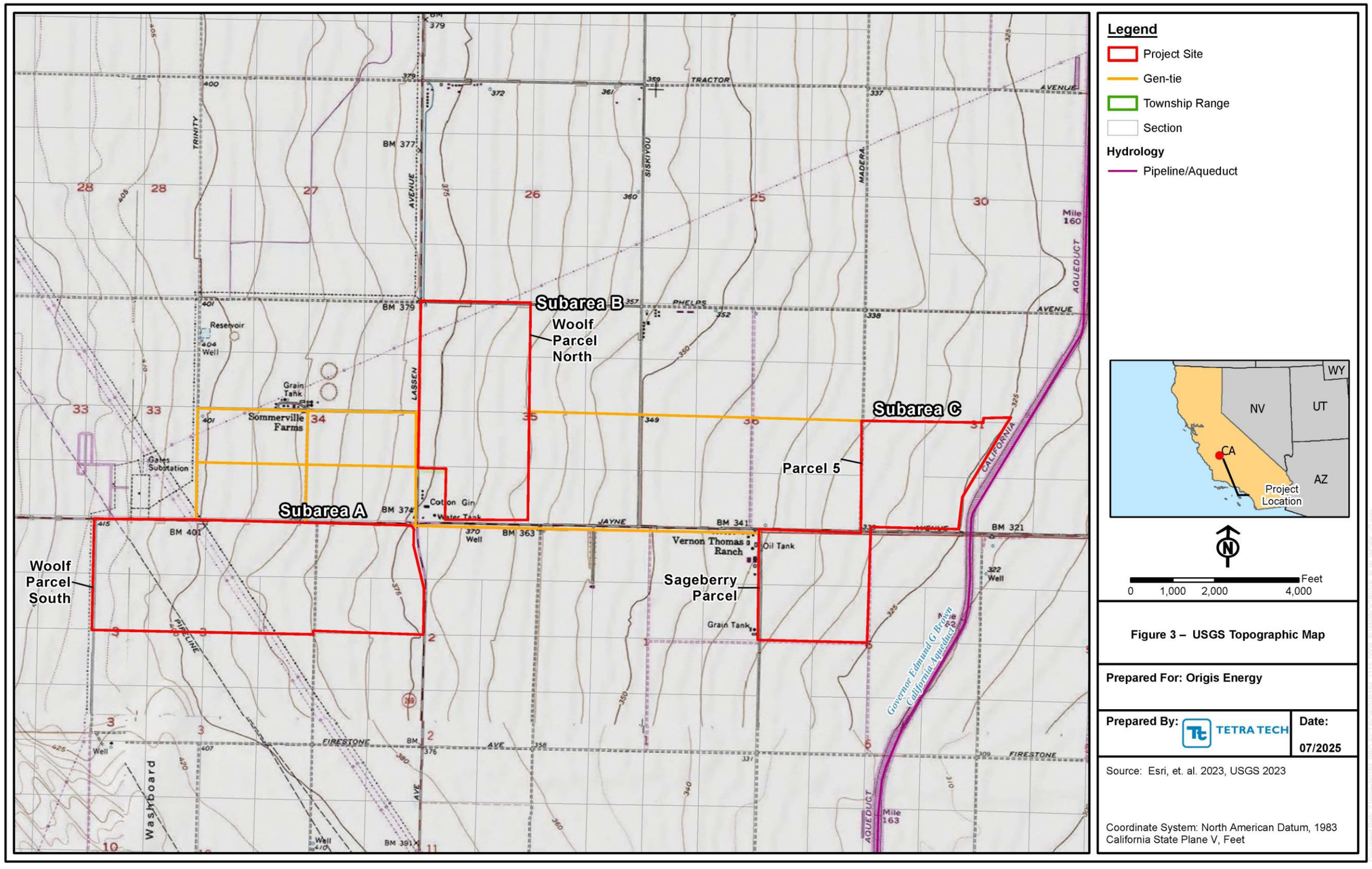
Prepared By: TETRA TECH

Date: 07/2025

Source: Esri, et. al. 2023, USGS 2023

Coordinate System: North American Datum, 1983 California State Plane V, Feet

Not for Construction



Not for Construction

2 REGULATORY OVERVIEW AND DEFINITIONS

This Report has been prepared based on the regulations applicable at the time of Report preparation.

2.1 U.S. Army Corps of Engineers

The Clean Water Act provides the U.S. Environmental Protection Agency (EPA) and the USACE regulatory and permitting authority over activities that result in the discharge of dredged or fill material into Waters of the U.S. Waters of the U.S. include (1) waters which are: (i) currently used, or were used in the past, or may be susceptible to use in commerce, including all waters which are subject to tides; (ii) the territorial seas; or (iii) interstate waters; (2) impoundments of waters; (3) tributaries of waters; (4) wetlands adjacent to waters; (5) intrastate lakes and ponds (33 Code of Federal Regulations [CFR] 328.3). The limits of USACE jurisdiction under Section 404 as defined in 33 CFR Section 328.4 are as follows: (a) Territorial seas: three nautical miles in a seaward direction from the baseline; (b) Tidal Waters of the U.S.: high tide line or to the limit of adjacent non-tidal waters; (c) Non-tidal Waters of the U.S.: ordinary high water mark (OHWM) or to the limit of adjacent wetlands, or when Waters of the U.S. consist only of wetlands to the limit of the wetland.

2.1.1 Section 404 Jurisdictional Wetlands

The USACE has defined the term “wetlands” as follows (33 CFR 328.3):

> *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. Wetlands generally include swamps, marshes, bogs, and similar areas.*

The three parameters that are used to determine the presence of wetlands are: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. Evidence of a minimum of one positive wetland indicator from each of the three parameters must be found in order to make a positive wetland delineation (USACE 2008). Wetlands, which do not have a surface connection to, and are not adjacent to, Waters of the U.S. may be considered isolated and not subject to USACE jurisdiction.

Vegetation

Hydrophytic vegetation is defined as areas where the frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurrence in a wetland. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE has published the *Arid West 2020 Regional Wetland Plant List* (USACE 2022) which separates vascular plants into the following categories based on plant species frequency of occurrence in wetlands:

- Obligate Wetland (OBL). Occur almost always (estimated probability greater than 99 percent) under natural conditions in wetlands.
- Facultative Wetland (FACW). Usually occur in wetlands (estimated probability 67-99 percent), but occasionally found in non-wetlands.

- Facultative (FAC). Equally likely to occur in wetlands or non-wetlands (estimated probability 34–66 percent).
- Facultative Upland (FACU). Usually occur in non-wetlands (estimated probability 67–99 percent), but occasionally found in wetlands (estimated probability 1–33 percent).
- Obligate Upland (UPL). Occur almost always (estimated probability greater than 99 percent) under natural conditions in non-wetlands.

The USACE considers OBL, FACW, and FAC species to be indicators of a wetland. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not listed in the USACE wetland plant list is assumed to be an upland species, almost never occurring in wetlands.

A secondary hydrophytic vegetation identifier is a prevalence index of 3.0 or less. The prevalence index is a weighted-average wetland indicator status of all plant species at the sample point, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). This method is a more comprehensive analysis of the hydrophytic status of the community than one based on just a few dominant species. The prevalence index is used as a supplement to determine whether hydrophytic vegetation is present on sites where indicators of hydric soil and wetland hydrology are present, but the vegetation initially fails the dominance test.

Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and vegetation communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by indicators, such as watermarks, surface soil cracks, sediment deposits, or a high water table.

OHWM is a line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.

Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include sulfidic odor, observations of ponding, inundation or saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), or gleying (reduced conditions indicated by a blue- or green-grey color). Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soil survey, both of which must be verified in the field.

Field indicators for hydric soils are particularly difficult to observe in sandy soils, which are often recently deposited soils of floodplains. These soils usually lack sufficient fines (clay and silt) and organic material to allow use of color as a reliable indicator of hydric soil. Hydric soil indicators in sandy soils include

accumulations of organic matter and organic pan (soil layer in which organic matter and aluminum accumulate where the top of the water table most often occurs).

2.1.2 Section 404 Jurisdictional Waters of the U.S.

The Supreme Court reached a decision on May 25, 2023 (Sackett versus EPA), which found that only wetlands that are "indistinguishable" from adjacent jurisdictional waterbodies can be covered by the Clean Water Act. On August 29, 2023, the USACE and EPA issued a final rule known as the Revised Definition of Waters of the U.S.; Conforming, which became effective on September 8, 2023 (USACE and EPA 2023). On March 12, 2025, the USACE and EPA announced a joint memorandum issuing guidance to field staff on implementation of "continuous surface connection" in light of Sackett versus EPA (USACE and EPA 2025). Under this guidance, a wetland "must have a continuous surface connection to a requisite covered water making it difficult to determine where the water ends and wetland begins" (USACE and EPA 2025). The analysis in this Report is based on the final conforming rule from August 2023 and subsequent guidance. Under the final conforming rule (33 CFR 328.3):

(a) **Waters of the U.S.** means:

(1) Waters which are:

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

(2) Impoundments of waters otherwise defined as Waters of the U.S. 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) (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)(i) of this section.

2.1.3 Areas Exempt from Section 404 Jurisdiction

Under the final Revised Definition of Waters of the U.S. rule (33 CFR 328.3):

(b) The following are not "Waters of the U.S." even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;
(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of Waters of the U.S.; and
(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

2.2 Regional Water Quality Control Board

The Dickey Water Pollution Act of 1949 and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) established the State Water Resources Control Board (SWRCB) and nine RWQCBs in California. The SWRCB and each RWQCB regulate activities in Waters of the State which include Waters of the U.S. "Waters of the State" are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." These may include intermittent or ephemeral waters as well as isolated waters. SWRCB/RWQCB jurisdiction extends to the OHWM for non-wetland Waters of the State, or for wetlands, to the limit of the wetland.

The SWRCB/RWQCB regulates the "discharge of waste," including discharges of fill and dredged material, into Waters of the State by issuing Waste Discharge Requirements (WDRs). WDRs are needed when a proposed project, or portion of a proposed project, does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State. A Clean Water Act Section 401 Water Quality Certification is necessary for all projects that require a USACE Section 404 permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State.

The SWRCB has adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures), which became effective on May 28, 2020 and was revised on April 6, 2021 (SWRCB 2021). The Procedures define an area as a wetland as follows: an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation. This definition does not affect the meaning of Waters of the State as it pertains to SWRCB/RWQCB jurisdiction pursuant to the Porter-Cologne Act, nor does it modify the current authorities of the SWRCB/RWQCB to protect water quality. In accordance with the

Procedures, the wetland delineation method outlined by the USACE has been utilized to map wetlands and Waters of the State, which extend to the limit of the wetland or to the OHWM for non-wetland waters. Jurisdiction has been evaluated in the regulatory context of the RWQCB, who may regulate intermittent or ephemeral waters as well as isolated waters.

2.2.1 Waters of the State

The SWRCB Procedures consider natural wetlands, wetlands created by modification of surface Waters of the State, and areas that meet the current or historic definitions of Waters of the U.S., to be Waters of the State (SWRCB 2021). In addition, the Procedures considers artificial wetlands (i.e., wetlands that result from human activity) that meet specific criteria to be Waters of the State (SWRCB 2021). The Procedures incorporate the established wetland delineation procedures set forth by the USACE (USACE 2008), which were used to map wetlands and Waters of the State. However, contrary to the USACE wetland definition, the State's wetland definition also protects non-vegetated wetlands. In addition, Waters of the State may also include intermittent or ephemeral waters as well as isolated waters that are not under federal jurisdiction.

2.2.2 Areas Exempt from State Jurisdiction

Areas exempt from SWRCB/RWQCB jurisdiction include all artificial wetlands that are less than 1 acre in size and do not satisfy the following criteria: (1) created by modification of a surface Water of the State; (2) approved by an agency as compensatory mitigation for impacts to other Waters of the State, except where the approving agency explicitly identifies the mitigation as being of limited duration; (3) specifically identified in a water quality control plan as a wetland or other Water of the State; or (4) resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape.

In addition, artificial wetlands greater than or equal to one acre in size are exempt from SWRCB/RWQCB jurisdiction if the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes: (1) industrial or municipal wastewater treatment or disposal; (2) settling of sediment; (3) detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program; (4) treatment of surface waters; (5) agricultural crop irrigation or stock watering; (6) fire suppression; (7) industrial processing or cooling; (8) active surface mining – even if the site is managed for interim wetlands functions and values; (9) log storage; (10) treatment, storage, or distribution of recycled water; (11) maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or (12) fields flooded for rice growing.

2.3 California Department of Fish and Wildlife

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. Streams and lakes, as habitat for fish, wildlife, and native plant species, are subject to jurisdiction by CDFW under Sections 1600-1616 of the California Fish and Game Code. Section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW before beginning any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. These regulated activities

require a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from CDFW. Removal of riparian vegetation also requires a Section 1602 LSAA.

The Fish and Game Code, Sections 1600-1616, regulates activities that would alter the flow, bed, banks, channel, or associated riparian areas of a river, stream, or lake. CDFW jurisdiction over lakes and streams is to the top of bank, or edge of riparian vegetation as determined by edge of dripline, whichever is further (CDFW 1994).

2.4 Summary of Regulations and Jurisdiction Definitions

Jurisdiction of the USACE, RWQCB, and CDFW is summarized in Table 1. Key differences are noted in the table.

Table 1. USACE, RWQCB, and CDFW Jurisdiction

Agency (Regulation)	Jurisdiction Type	Jurisdiction Extent	Notes
USACE (Section 404 of Clean Water Act)	Wetlands, non-wetland Waters of the U.S.	Boundary of wetland, or OHWM for non-wetland Waters of the U.S.	The feature must be either relatively permanent, standing, or continuously flowing, and if adjacent, must also have a continuous surface connection to Waters of the U.S. to be considered jurisdictional.
RWQCB (Section 401 of Clean Water Act – Waters of the U.S./State) (Porter-Cologne Act – Waters of the State)	Wetlands, non-wetland Waters of the State (includes all Waters of the U.S.)	Boundary of wetland, or OHWM for non-wetland Waters of the State (includes all Waters of the U.S.)	Waters of the State include all Waters of the U.S. (Section 404). Jurisdiction also includes ephemeral waters and isolated waters that may not be under USACE jurisdiction (Porter-Cologne Act).
CDFW (Section 1600-1616 of California Fish and Game Code)	River, stream, or lake	Top of bank or edge of riparian vegetation (whichever is further)	Requires bed, banks, or channel or riparian vegetation.

Notes:
CDFW: California Department of Fish and Wildlife
OHWM: Ordinary high water mark
RWQCB: Regional Water Quality Control Board
USACE: U.S. Army Corps of Engineers

3 METHODS

3.1 Literature Review

Prior to the field survey, a literature review was conducted to evaluate potential jurisdictional areas within the Project site. The USGS 7.5-Minute *Huron* Topographic Quadrangle Map, aerial and historical imagery (Google Earth©), the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) database (USFWS 2025), and the U.S. Department of Agriculture National Resources Conservation Service (USDA NRCS) Web Soil Survey (USDA NRCS 2025) were reviewed.

3.2 Jurisdictional Waters and Wetlands Delineation

A jurisdictional waters and wetlands delineation was performed in the eastern portion of Parcel 5 on April 27, 2021 and in the original parcels within the Project site on April 17, 2023. A jurisdictional waters and wetlands delineation was performed in the Califland Corp parcels within the Project site on January 10, 2024. A general biological survey, including an assessment of any potential jurisdictional features, was performed in the Woolf Parcel South Addition in July 2025. These delineations were conducted at any potential jurisdictional wetlands, Waters of the U.S. and State, and areas potentially under CDFW jurisdiction. The procedures described in the *Interim Regional Supplement to the Corps of Engineering Wetland Delineation Manual: Arid West Region* (USACE 2008) were used to identify wetlands and Waters of the U.S. in the site that are potentially subject to regulation under Section 404 of the Clean Water Act. Any potential jurisdictional features were also examined for an OHWM. The USACE delineation methodology was also used to map potential Waters of the State that were evaluated for RWQCB jurisdiction. Areas of CDFW jurisdiction were determined by the presence of defined bed, banks, and channel, or presence of a lake or pool, and were measured to the top of bank or the edge of riparian vegetation.

Sample points were taken to determine areas of potential jurisdiction and were mapped in the field using a Global Positioning System receiver with sub-meter accuracy. Field indicators were examined, and wetland data reporting forms were used to record three parameters: hydrophytic vegetation, wetland hydrology, and hydric soils. Completed wetland determination data forms are provided in Appendix A. Photographs taken during the field surveys are provided in Appendix B.

Plant species present and the presence or absence of hydrophytic vegetation was recorded. Hydrophytic vegetation was determined to be present if greater than 50 percent of the dominant species at the sample point were OBL, FACW, or FAC (USACE 2022). If the hydrophytic vegetation dominance test was not greater than 50 percent, then the prevalence index was conducted if both hydric soils and hydrology were met unless disturbed or problematic. If the prevalence index was less than or equal to 3.0 then the vegetation was considered hydrophytic. Soil pits were excavated to a depth of at least 14 inches when feasible to examine soils for evidence of hydric indicators or saturation at the sample points. Soil pit locations are synonymous with sample points. Hydric soils and wetland hydrology were determined based on the presence of one or more of the applicable indicators.

Sample points were collected in each potential jurisdictional feature and as needed at paired upland points to determine the extent of the feature. A sample point is considered to be within a USACE wetland if the area met all three wetland parameters. If one or more of these parameters was not met in a typical situation, the point was considered to not be within a USACE wetland. In atypical or problematic

situations (i.e., when vegetation, soil, or hydrology indicators are absent due to recent human disturbance or natural causes), all three parameters are not required to designate a feature as a USACE wetland.

4 RESULTS

4.1 Literature Review

The Project site does not contain any ephemeral/intermittent blue-line streams as shown in the USGS topographic map (Figure 3). Blue-line streams are shown as either broken or solid blue lines and are defined as flowing waters that are ephemeral (broken lines) or perennial (solid lines). One NWI riverine feature is mapped within the northwestern corner of the Woolf Parcel North portion of the Project site (USFWS 2025). This riverine feature, mapped using infrared imagery from 1987, could not be located during surveys within the Project site. In addition, a freshwater emergent wetland consisting of a man-made excavated wetland basin is present within the eastern portion of Parcel 5 (USFWS 2025). All potential features were assessed during the jurisdictional delineation. Soils mapped by the U.S. Department of Agriculture National Resources Conservation Service at the sample locations are Westhaven loam, which consists of well drained soils with 0-5 percent slope that are slightly to moderately alkaline (USDA NRCS 2025).

4.2 Jurisdictional Delineation

A total of seven jurisdictional features were identified and mapped within the original parcels in the Project site, and one jurisdictional feature was identified and mapped within the California Corps parcels (Figures 4a, 4b, and 4c). Out of these eight features, only one (Feature W4 in Woolf Parcel North) was located within the Project Footprint. The Project site features consisted of seven agricultural retention basins and one ditch. A description of each feature is provided below. Surface water was observed at five of the seven basins from agricultural irrigation or stormwater runoff. The feature within the Califland Corp parcels (Feature W5) and Features W6 to W8 exhibited wetland hydrology, hydric soil, and hydrophytic vegetation. Results of the jurisdictional delineation conducted at these features are provided in Table 2.

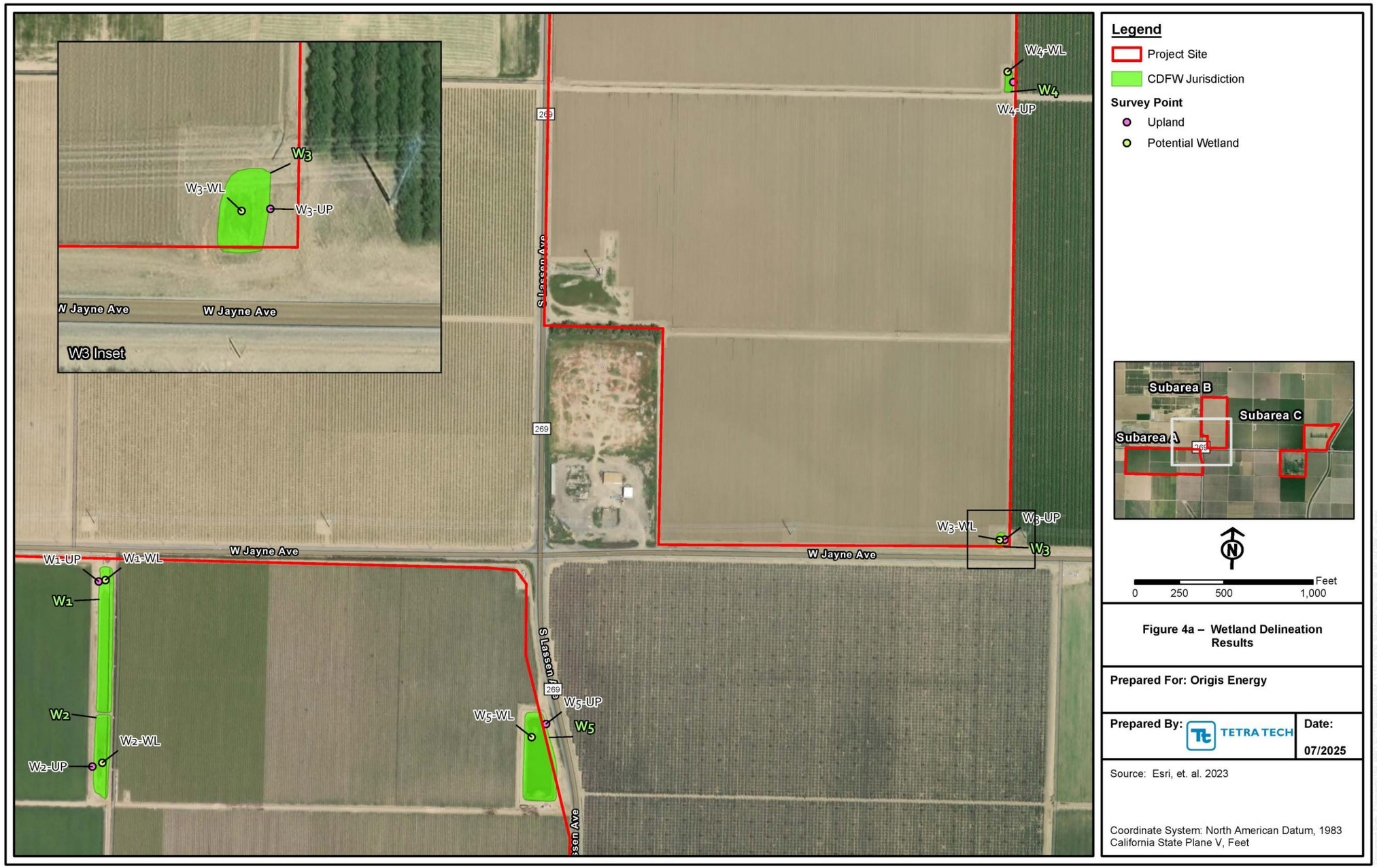


Figure 4a – Wetland Delineation Results

Prepared For: Origis Energy

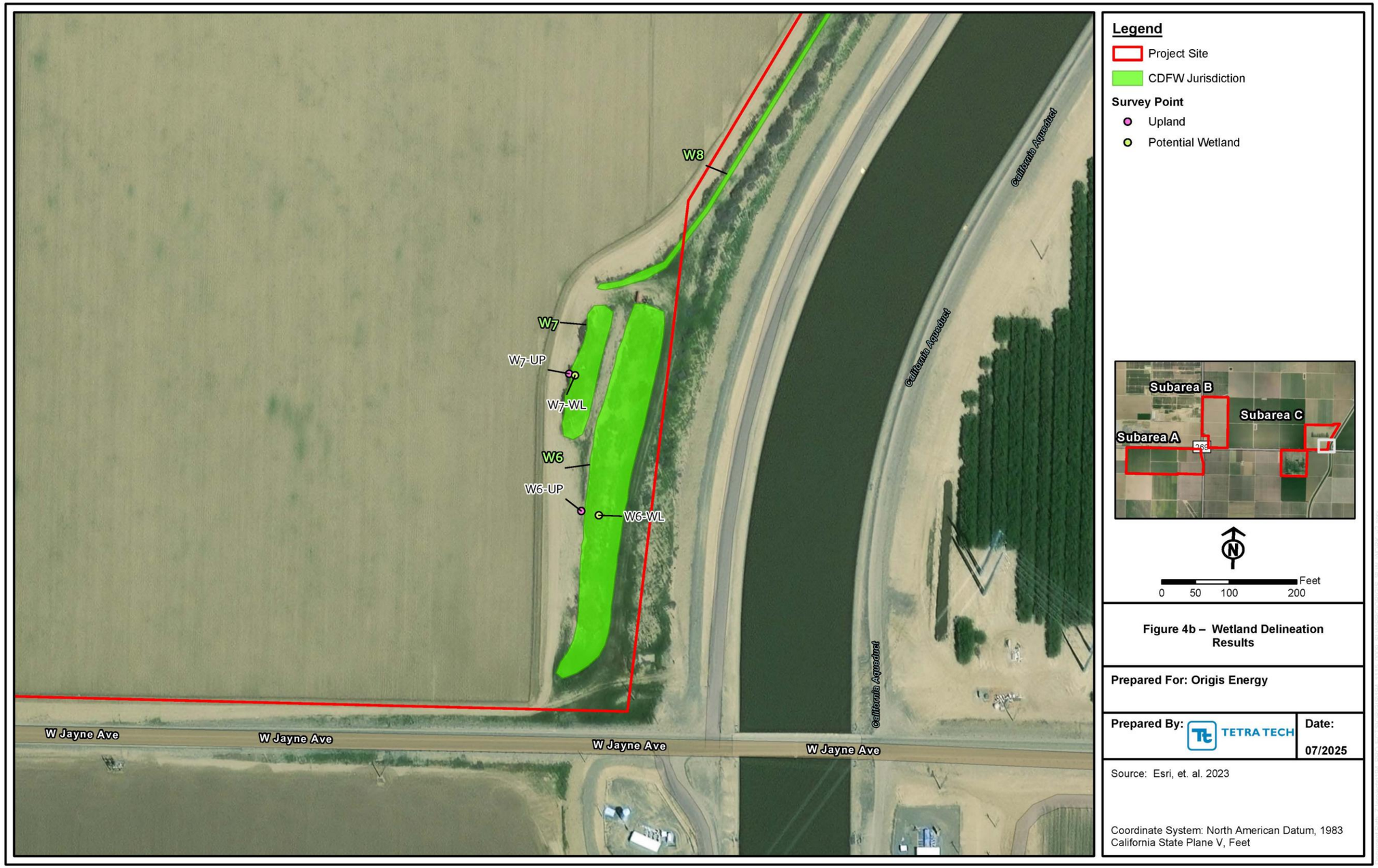
Prepared By: TETRA TECH

Date: 07/2025

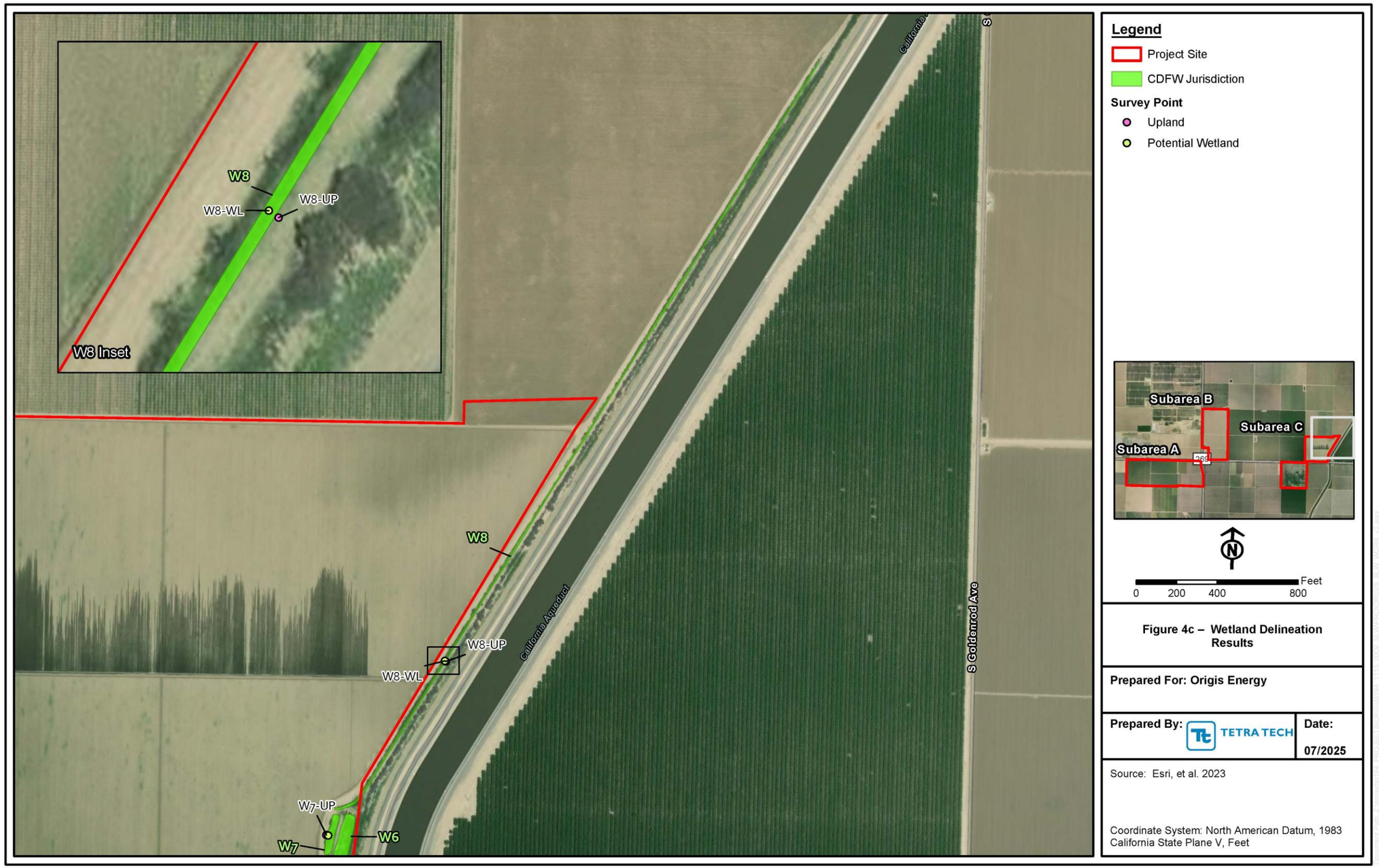
Source: Esri, et. al. 2023

Coordinate System: North American Datum, 1983 California State Plane V, Feet

Not for Construction



Not for Construction



Not for Construction

Table 2. Jurisdictional Delineation Results

Feature Number	Sample Point	Hydrophytic Vegetation	Hydric Soil	Wetland Hydrology	USACE Wetlands / Waters of the U.S.	RWQCB Waters of the State	CDFW Jurisdiction	Notes
W1	W1-UP	-	-	-	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Feature W2 via a metal culvert but is isolated from other aquatic features. Standing water was present during the 2023 survey. Feature W1 is located within the Project site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
	W1-WL	-	X	X				
W2	W2-UP	-	-	-	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Feature W1 via a metal culvert but is isolated from other aquatic features. Standing water was present during the 2023 survey. Feature W2 is located within the Project site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
	W2-WL	-	-	X				
W3	W3-UP	-	-	-	No	No	Yes	Soft bottom retention basin that is isolated from other aquatic features. This feature was dry during the 2023 survey. Feature W3 is located within the Project site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
	W3-WL	-	-	X				
W4	W4-UP	-	-	-	No	No	Yes	Soft bottom retention basin that is isolated from other aquatic features. Standing water was present during the 2023 survey. Feature W4 is located within the Project site and the Project Footprint. Ground disturbance is anticipated at this feature.
	W4-WL	-	-	X				
W5	W5-UP	-	-	-	No	No	Yes	Soft bottom retention basin that is isolated from other aquatic features. Standing water was present during 2023 and 2024. Feature W5 is located within the Project
	W5-WL	X	X	X				

Feature Number	Sample Point	Hydrophytic Vegetation	Hydric Soil	Wetland Hydrology	USACE Wetlands / Waters of the U.S.	RWQCB Waters of the State	CDFW Jurisdiction	Notes
								site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
W6	W6-UP	-	-	-*	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Features W7 and W8 via metal culverts. No standing water was present during the April 2021 survey. Feature W6 is located within the Project site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
	W6-WL	X	X	X				
W7	W7-UP	-	-	-*	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Features W6 and W8 via metal culverts. No standing water was present during the April 2021 survey. Feature W7 is located within the Project site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
	W7-WL	X	X	X				
W8	W8-UP	-	-	-*	No	No	Yes	Drainage ditch with a defined bed, bank, and channel. Standing water was present in one small area of this feature during the April 2021 survey. Feature W8 is located within the Project site but not within the Project Footprint. No ground disturbance is anticipated at this feature.
	W8-WL	X	X	X				

Note: "X" = indicator met; "-" = indicator not met.

* Surface soil cracks were present, but the sample location was within a heavily used dirt road and soil cracks may be a result of compaction and ponding of irrigation water. Therefore, wetland hydrology was not met.

Feature W1. This feature is a soft bottom retention basin that is hydrologically connected to Feature W2 via a metal culvert but isolated from other aquatic features. The banks of the basin were steep. This feature was dominated by low cover of non-native grasses and weeds such as wall barley (*Hordeum murinum*) and cheeseweed (*Malva parviflora*). This feature had about 12 inches of standing water during the 2023 survey. All of this feature, except one small portion, is within the Project site. This feature is not within the Project Footprint.

Feature W2. This feature is a soft bottom retention basin that is hydrologically connected to Feature W1 via a metal culvert but isolated from other aquatic features. The banks of the basin were steep. This feature was dominated by low cover of non-native cheeseweed. This feature had about 6 inches of standing water during the 2023 survey. All of this feature except one small portion is within the Project site. This feature is not within the Project Footprint.

Feature W3. This feature is a soft bottom retention basin that is isolated from other aquatic features. The banks of the basin were steep. This feature was dominated by non-natives such has wall barley and cheeseweed. This feature was dry and no standing water was observed during the 2023 survey. All of this feature except one small portion is within the Project site. This feature is not within the Project Footprint.

Feature W4. This feature is a soft bottom retention basin that is isolated from other aquatic features. The banks of the basin were steep. This feature was dominated by lamb's quarters (*Chenopodium album*) and bristly fiddleneck (*Amsinckia tessellata*). This feature had about 12 inches of standing water during the 2023 survey. The entirety of this feature is within the Project site and Project Footprint.

Feature W5. This feature is a soft bottom retention basin located within the Califland Corp parcels that is isolated from other aquatic features. It is fed by a water pipe. The banks of the basin were steep. This feature had hydrophytic vegetation dominated by broad-leaved cattail (*Typha latifolia*) that was located entirely within the boundary of the basin. Although only one small pool of water (about 0.5 inches deep) was observed in the basin during the survey in January 2024, standing water about 3 feet deep was observed in the basin during a site visit in July 2023. All of this feature except one small portion is within the Project site. This feature is not within the Project Footprint.

Feature W6. This feature is a soft bottom retention basin located within Parcel 5 that is approximately 12 feet deep. This feature had hydrophytic vegetation, dominated by narrowleaf willow (*Salix exigua*), dead narrow-leaved cattail (*Typha angustifolia*), and telegraph weed (*Heterotheca* sp.). This feature is hydrologically connected to Features W7 and W8 through metal culverts. This feature was dry and no standing water was observed during the 2021 survey. This feature is not within the Project Footprint.

Feature W7. This feature is a soft bottom retention basin located within Parcel 5 that is approximately 12 feet deep. This feature had hydrophytic vegetation, dominated by narrowleaf willow (*Salix exigua*) and tamarisk (*Tamarix* sp.). This feature is hydrologically connected to Features W6 and W8 through metal culverts. This feature was dry and no standing water was observed during the 2021 survey. This feature is not within the Project Footprint.

Feature W8. This feature is a long drainage ditch with a defined bed, bank, and channel located within Parcel 5 that had standing water in small areas. This feature had hydrophytic vegetation, which consisted of sparse tamarisk. This feature is hydrologically connected to Features W6 and W7 through metal

culverts. One small area of this feature had standing water during the 2021 survey. Most of this feature occurs outside of the Project site. This feature is not within the Project Footprint.

Four features (W5, W6, W7, and W8) met all three USACE wetland parameters required to be a wetland. All features (W1-8) met the wetland hydrology parameter, and Features W1, W5, W6, W7, and W8 also met the hydric soil parameter. All eight of these are isolated features that are not jurisdictional to the USACE. In addition, these features are exempt from RWQCB jurisdiction and are not Waters of the State. Areas of CDFW jurisdiction were found on-site, which includes all eight of the features (W1-8). Table 3 provides total acres of jurisdictional areas within the Project site. Results of the delineation in the context of the USACE, RWQCB, and CDFW are discussed in Sections 4.2.1 to 4.2.3.

Table 3. Jurisdictional Areas within Project Site

Feature Number	USACE Wetlands / Waters of the U.S. (acres) within Project Site	RWQCB Waters of the State (acres) within Project Site	CDFW Jurisdiction (acres) within Project Site
W1	0	0	1.13
W2	0	0	0.72
W3	0	0	0.08
W4	0	0	0.11
W5	0	0	2.78
W6	0	0	0.73
W7	0	0	0.17
W8	0	0	0.04
Total	**0**	**0**	**4.82**

The only feature located within the Project Footprint is Feature W4. Table 4 provides total acres of jurisdictional area within the Project Footprint.

Table 4. Jurisdictional Areas within Project Footprint

Feature Number	USACE Wetlands / Waters of the U.S. (acres) within Project Site	RWQCB Waters of the State (acres) within Project Site	CDFW Jurisdiction (acres) within Project Site
W1	0	0	0
W2	0	0	0
W3	0	0	0
W4	0	0	0.11
W5	0	0	0
W6	0	0	0
W7	0	0	0
W8	0	0	0
Total	**0**	**0**	**0.11**

4.2.1 U.S. Army Corps of Engineers

Section 404 Jurisdictional Wetlands

As shown in Table 2, four features met all three wetland parameters required to be a USACE Wetland (Features W5-8). No atypical or problematic situations were encountered. Wetland hydrology was found at all features in the form of surface soil cracks, surface water, and/or saturation. Feature W5 also exhibited water-stained leaves, aquatic invertebrates in the form of snail shells, and a thin muck surface. Features W1 and W5 had hydric soil and met the redox depressions indicator and 1 centimeter muck indicator, respectively. Features W6-8 also had hydric soil, all of which met the depleted matrix indicator. Feature W5 supported hydrophytic vegetation in the form of broad-leaved cattail. Feature W6 had hydrophytic vegetation dominated by narrowleaved willow and narrow-leaved cattail. Hydrophytic vegetation at W7 was dominated by narrowleaved willow and tamarisk, while the hydrophytic vegetation at W8 was dominated by sparse tamarisk. However, as discussed in the sections below, none of these features are jurisdictional to the USACE since they do not connect to traditional navigable waters and are also artificial ponds used for agricultural irrigation that are exempt from jurisdiction. Data on vegetation, hydrology, and soils collected at sample points for each feature during the jurisdictional delineation are provided on the USACE wetland determination data forms in Appendix A. All sample points are shown in Figure 4.

Section 404 Jurisdictional Waters of the U.S.

Features W1 to W8 are isolated features that do not connect to any other off-site aquatic features. In absence of agricultural irrigation, these features would be considered ephemeral and likely receive water only in response to rainfall; thus, they are not considered relatively permanent waters. Relatively permanent waters either flow year-round or have continuous flow at least seasonally, which is typically quantified as three months or more. In addition, these features are isolated and are not tributaries of or adjacent to Waters of the U.S. or traditional navigable waters. Therefore, these features are not Section 404 Waters of the U.S.

Areas Exempt from Section 404 Jurisdiction

Features W1 to W7 are exempt from USACE Section 404 jurisdiction since these features are artificial ponds created by excavating dry land to collect and retain water and which are used for agricultural irrigation purposes. Feature W8 is exempt from USACE Section 404 jurisdiction since this feature is a ditch excavated in and draining only dry land, and that does not carry a permanent flow of water.

4.2.2 Regional Water Quality Control Board

Waters of the State

RWQCB Waters of the State include USACE Section 404 jurisdictional wetlands and Waters of the U.S. No Waters of the U.S. were found on the Project site and all eight features (W1 to W8) are isolated, artificial retention basins as well as a ditch, all of which are exempt from RWQCB jurisdiction. Although four features met all three USACE wetland parameters (Features W5 to W8), these features are exempt from RWQCB jurisdiction as discussed below. Therefore, no Waters of the State were found on the Project site.

Areas Exempt from State Jurisdiction

Features W1 to W8 were determined to be exempt from RWQCB jurisdiction under the Procedures for Waters of the State (SWRCB 2021). Features W1 to W8 are exempt since they are currently used and maintained strictly for agricultural crop irrigation, were created for the purposes of irrigation water catchment, storage, and distribution, and are not part of the natural landscape.

4.2.3 California Department of Fish and Wildlife

Features W1 to W8 have defined bed and banks and/or are basins/ponds. Since CDFW does not differentiate lakes from smaller ponds, these basins are jurisdictional to CDFW (Figure 4). No riparian or wetland vegetation extended beyond the edges of the basins.

5 CONCLUSION

Eight features under CDFW jurisdiction were identified within the Project site, which includes Features W1 to W8. Only one feature, W4, is within the Project Footprint. No features under USACE or RWQCB jurisdiction were identified on the Project site. As design of the proposed Project continues, coordination with the CDFW will be required if impacts to these areas are anticipated during any phase of the Project (construction, operation, or decommissioning). Avoidance or minimization of impacts to features with potential CDFW jurisdiction is recommended if feasible. A Lake and Streambed Alteration Agreement from the CDFW would be required if these areas cannot be avoided, in which case early coordination with the CDFW is recommended. The jurisdictional determinations for features described in this report are subject to verification by the USACE, RWQCB, and CDFW.

6 REFERENCES

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Appendix A: Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W1-UP

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Upland | Local relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 36.137385 | Long: -120.11116 | Datum: WGS1984

Soil Map Unit Name: Westhaven loam | 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks: Sample point is in a dirt access road.

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. *Capsella bursa-pastoris*	3	Yes	FACU
2. *Salsola tragus*	2	Yes	FACU
3. *Amaranthus sp.*	3	Yes	Not Listed
4. *Chenopodium album*	1	No	FACU
5.			
6.			
7.			
8.			
Total Cover:	9 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 81 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	6	x 4 =	24
UPL species	3	x 5 =	15
Column Totals:	9 (A)		39 (B)

Prevalence Index = B/A = 4.33

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: Vegetation is sprouting.

SOIL

Sampling Point: W1-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5Y 4/3	98	7.5YR 3/4	2	C	M	Silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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: Minor surface soil cracks exist in the hard pan next to the road.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/ Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W1-WL

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Retention basin | Local relief (concave, convex, none): Concave | Slope (%): 1

Subregion (LRR): C - Mediterranean California | Lat: 36.137409 | Long: -120.111037 | Datum: WGS1984

Soil Map Unit Name: Westhaven loam | 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 ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tamarix ramosissima*	1	Yes	Not Listed
2.			
3.			
4.			
Total Cover:	1 %		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Hordeum murinum*	3	Yes	FACU
2. *Salsola tragus*	2	No	FACU
3. *Malva parviflora*	3	Yes	Not Listed
4. *Amsinckia tessellata*	2	No	Not Listed
5. *Chenopodium album*	2	No	FACU
6. *Senecio vulgaris*	1	No	FACU
7.			
8.			
Total Cover:	13 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 87 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	8	x 4 =	32
UPL species	6	x 5 =	30
Column Totals:	14 (A)		62 (B)

Prevalence Index = B/A = 4.43

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W1-WL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5Y 4/3	92	2.5 YR 3/6	8	C	M	Silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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): 12

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: Snail shells present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W2-UP

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Upland | Local relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 36.137409 | Long: -120.111211 | Datum: WGS 1984

Soil Map Unit Name: Westhaven loam | 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Capsella bursa-pastoris*	3	Yes	FACU
2. *Amaranthus sp.*	3	Yes	Not Listed
3. *Salsola tragus*	1	No	FACU
4.			
5.			
Total Cover:	7 %		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 93 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	4	x 4 =	16
UPL species	3	x 5 =	15
Column Totals:	7 (A)		31 (B)

Prevalence Index = B/A = 4.43

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W2-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5Y 4/3	99	2.5YR 3/6	1	C	M	Silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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: Minor surface soil cracks in upland due to hard pan in dirt road.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W2-WL

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Retention basin | Local relief (concave, convex, none): Concave | Slope (%): 1

Subregion (LRR): C - Mediterranean California | Lat: 36.13459 | Long: -120.11102 | Datum: WGS1984

Soil Map Unit Name: Westhaven loam | 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: This retention basin (WL2) is hydrologically connected to WL1 (Wetland 1) via metal culvert. WL2 drains into WL1.

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. *Malva parviflora*	15	Yes	Not Listed
2. *Capsella bursa-pastoris*	5	No	FACU
3. *Salsola tragus*	1	No	FACU
4.			
5.			
6.			
7.			
8.			
Total Cover:	21 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 79 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	6	x 4 =	24
UPL species	15	x 5 =	75
Column Totals:	21 (A)		99 (B)

Prevalence Index = B/A = 4.71

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W2-WL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-6	2.5 YR 4/3	100		0			Silty clay loam	
6-16	2.5 YR 4/3	97	2.5 YR 3/6	3	C	M	Silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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): 6

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

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W3-UP

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Upland | Local relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 36.138322 | Long: -120.093957 | Datum: WGS1984

Soil Map Unit Name: Westhaven loam | 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	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. *Malva parviflora*	5	Yes	Not Listed
2. *Chenopodium album*	3	No	FACU
3. *Capsella bursa-pastoris*	3	No	FACU
4. *Hordeum murinum*	5	Yes	FACU
5. *Montrichardia sp.*	1	No	Not Listed
6. *Senecio vulgaris*	1	No	FACU
7. *Amaranthus sp.*	1	No	Not Listed
8.			
Total Cover:	19 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 81 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	12	x 4 =	48
UPL species	7	x 5 =	35
Column Totals:	19 (A)		83 (B)

Prevalence Index = B/A = 4.37

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W3-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5YR 4/3	100		0			Silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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: Minor surface soil cracks exist in the hard pan next to the road.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W3-WL

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Retention basin | Local relief (concave, convex, none): Concave | Slope (%): 1

Subregion (LRR): C - Mediterranean California | Lat: 36.138315 | Long: -120.09405 | Datum: WGS1984

Soil Map Unit Name: Westhaven loam | 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	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. *Hordeum murinum*	8	Yes	FACU
2. *Capsella bursa-pastoris*	3	No	FACU
3. *Montrichardia sp.*	3	No	Not Listed
4. *Senecio vulgaris*	2	No	FACU
5. *Malva parviflora*	8	Yes	Not Listed
6.			
7.			
8.			
Total Cover:	24 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 76 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	13	x 4 =	52
UPL species	11	x 5 =	55
Column Totals:	24 (A)		107 (B)

Prevalence Index = B/A = 4.46

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W3-WL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5 Y 4/3	100		0			silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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: Deep surface soil cracks in the retention basin.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W4-UP

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Upland | Local relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 36.14538 | Long: -120.093977 | Datum: WGS1984

Soil Map Unit Name: Westhaven loam | 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	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. *Capsella bursa-pastoris*	1	No	FACU
2. *Malva parviflora*	3	Yes	Not Listed
3. *Hordeum murinum*	3	Yes	FACU
4. *Sisymbrium irio*	1	No	Not Listed
5.			
6.			
7.			
8.			
Total Cover:	8 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 92 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	4	x 4 =	16
UPL species	4	x 5 =	20
Column Totals:	8 (A)		36 (B)

Prevalence Index = B/A = 4.50

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W4-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5 Y 4/3	100		0			silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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: Minor surface soil cracks present in upland.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: San Luis West | City/County: Huron/Fresno | Sampling Date: 04/17/2023

Applicant/Owner: Origis | State: CA | Sampling Point: W4-WL

Investigator(s): Daniel Berg | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Retention basin | Local relief (concave, convex, none): Concave | Slope (%): 1

Subregion (LRR): C - Mediterranean California | Lat: 36.14554 | Long: -120.09409 | Datum: WGS 1984

Soil Map Unit Name: Westhaven loam | NWI classification: Freshwater pond

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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	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. *Chenopodium album*	3	Yes	FACU
2. *Amsinckia tessellata*	2	Yes	Not Listed
3. *Amaranthus sp.*	1	No	Not Listed
4. *Malva parviflora*	1	No	Not Listed
5. *Brassica oleracea*	1	No	Not Listed
6.			
7.			
8.			
Total Cover:	8 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 92 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	3	x 4 =	12
UPL species	5	x 5 =	25
Column Totals:	8 (A)		37 (B)

Prevalence Index = B/A = 4.62

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: The retention basin banks are vegetated above the water line.

SOIL

Sampling Point: W4-WL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16	2.5Y 4/3	100		0			Silty clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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): 12

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 14

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: San Louis West Solar Project | City/County: Huron/Fresno | Sampling Date: 01/10/2024

Applicant/Owner: Origis | State: CA | Sampling Point: W5-UP

Investigator(s): Daniel Berg, Lauren Jennings | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Upland | Local relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 36.135332 | Long: -120.102605 | Datum: WGS 1984

Soil Map Unit Name: Westhaven loam, 0-2% 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 (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks: Sample Point taken in berm.

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. *Bromus spp.*	2	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	2 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 98 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	2	x 5 =	10
Column Totals:	2 (A)		10 (B)

Prevalence Index = B/A = 5.00

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.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: W5-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-14	2.5Y 4/4	100		0			Loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: High level of soil compaction on berm from vehicle use.

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):

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

Project/Site: San Louis West Solar Project | City/County: Huron/Fresno | Sampling Date: 01/10/2024

Applicant/Owner: Origis | State: CA | Sampling Point: W5-WL

Investigator(s): Daniel Berg, Lauren Jennings | Section, Township, Range: S19, T20S, R18E

Landform (hillslope, terrace, etc.): Retention basin | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 36.135125 | Long: -120.102873 | Datum: WGS 1984

Soil Map Unit Name: Westhaven loam, 0-2% 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 ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Man-made retention basin fed by water pipe.

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. *Typha latifolia*	30	Yes	OBL
2. *Sonchus oleraceus*	5	No	UPL
3. *Erigeron canadensis*	5	No	FACU
4. *Bromus spp.*	5	No	UPL
5. *Malva parviflora*	2	No	Not Listed
6. *Senecio vulgaris*	1	No	FACU
7. *Amaranthus blitoides*	1	No	FACU
8.			
Total Cover:	49 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 51 % | % 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: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	7	x 4 =	28
UPL species	12	x 5 =	60
Column Totals:	49 (A)		118 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] 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 (●) No ( )

Remarks:

SOIL

Sampling Point: W5-WL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-1	5Y 2.5/1	100		0			Silt loam	Muck
1-14	2.5Y 4/3	100		0			Loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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 Soils:[4]

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

[4]Indicators 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 (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: Dark muck layer about 1 inch or less thick at surface. Snail shells present. One small water pool (0.5 inches deep) filled with dead and dying small fish located near inlet pump. Standing water about 3 feet deep was observed during previous survey in July 2023.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Luis West Solar Project City/County: Fresno Sampling Date: 4/27/21

Applicant/Owner: Origis State: CA Sampling Point: W6-UP

Investigator(s): Sara Townsend Section, Township, Range: 20S 18E

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): Mediterranean California LRR C Lat: 36.13897228 Long: -120.05942376 Datum: WGS 1984

Soil Map Unit Name: Westhaven Loam, 0-2% 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
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Amsinckia menziesii	5	Y	NI
2. Sisymbrium irio	3	Y	NI
3.			
4.			
5.			
6.			
7.			
8.			
	8 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 92 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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 ≤3.0[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.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

These weedy species are generally found in upland habitats.

SOIL

Sampling Point: W6-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	2.5YR3/3	98	10YR3/6	2	RM	M	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators 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? (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:

Plot within dirt road; surface soil cracks may be resulting from compaction and ponding of irrigation water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Luis West Solar Project City/County: Fresno Sampling Date: 4/27/21

Applicant/Owner: Origis State: CA Sampling Point: W6-WL

Investigator(s): Sara Townsend Section, Township, Range: 20S 18E

Landform (hillslope, terrace, etc.): Retention basin Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Mediterranean California LRR C Lat: 36.13895462 Long: -120.05930734 Datum: WGS 1984

Soil Map Unit Name: Westhaven Loam, 0-2% Slopes NWI classification: PEM1Cx

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:

This area is a catchment basin for agricultural irrigation. It is hydrologically connected to Wetlands 2 and 3 via metal culverts.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix exigua	20	Y	FACW
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Typha angustifolia	5	Y	OBL
2. Heterotheca sp.	5	Y	NI
3. Matricaria discoidea	1	N	FACU
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 90 % 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 1	x 1 = 1
FACW species 1	x 2 = 2
FAC species	x 3 =
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = 2.333

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.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: W6-WL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	2.5Y3/2	90	10YR4/6	10	RM	PL,M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: NA

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? (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

Project/Site: San Luis West Solar Project City/County: Fresno Sampling Date: 4/27/21

Applicant/Owner: Origis State: CA Sampling Point: W7-UP

Investigator(s): Sara Townsend Section, Township, Range: 20S 18E

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): Mediterranean California LRR C Lat: 36.13957445 Long: -120.05947078 Datum: WGS 1984

Soil Map Unit Name: Westhaven Loam, 0-2% 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
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Amsinckia menziesii	1	Y	NI
2. Sisymbrium irio	3	Y	NI
3.			
4.			
5.			
6.			
7.			
8.			
	4 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 96 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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 ≤3.0[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.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

These weedy species are generally found in upland habitats.

SOIL

Sampling Point: W7-UP

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
0-14	2.5YR3/2	99	10YR3/6	1	RM	M	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators 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? (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:

Plot within dirt road; surface soil cracks may be resulting from compaction and ponding of irrigation water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Luis West Solar Project City/County: Fresno Sampling Date: 4/27/21

Applicant/Owner: Origis State: CA Sampling Point: W7-WL

Investigator(s): Sara Townsend Section, Township, Range: 20S 18E

Landform (hillslope, terrace, etc.): Retention basin Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Mediterranean California LRR C Lat: 36.13956864 Long: -120.05944098 Datum: WGS 1984

Soil Map Unit Name: Westhaven Loam, 0-2% Slopes NWI classification: PEM1Cx

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. Tamarix sp.	20	Y	FAC
2. Salix exigua	25	Y	FACW
3.			
4.			
5.			
	45 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100 % 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 _____	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 ≤3.0[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.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Senescent herbaceous plants present but unidentifiable.

SOIL

Sampling Point: W7-WL

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
0-14	2.5YR3/2	85	10YR4/6	15	RM	M, PL	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: NA

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? (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

Project/Site: San Luis West Solar Project City/County: Fresno Sampling Date: 4/27/21

Applicant/Owner: Origis State: CA Sampling Point: W8-UP

Investigator(s): Sara Townsend Section, Township, Range: 20S 18E

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): Mediterranean California LRR C Lat: 36.14196190 Long: -120.05753379 Datum: WGS 1984

Soil Map Unit Name: Westhaven Loam, 0-2% 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
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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 ≤3.0[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.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Bare ground surrounding this area.

SOIL

Sampling Point: W8-UP

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
0-14	2.5YR3/2	99	10YR3/6	1	RM	M	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators 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? (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:

Plot within dirt road; surface soil cracks may be resulting from compaction and ponding of irrigation water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Luis West Solar Project City/County: Fresno Sampling Date: 4/27/21

Applicant/Owner: Origis State: CA Sampling Point: W8-WL

Investigator(s): Sara Townsend Section, Township, Range: 20S 18E

Landform (hillslope, terrace, etc.): Drainage ditch Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Mediterranean California LRR C Lat: 36.14196945 Long: -120.05754740 Datum: WGS 1984

Soil Map Unit Name: Westhaven Loam, 0-2% 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
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Tamarix sp.	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

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 ≤3.0[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.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Senescent herbaceous plants present but unidentifiable.

SOIL

Sampling Point: W8-WL

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
0-14	2.5YR3/2	85	10YR4/6	15	RM	M, PL	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: NA

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? (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:

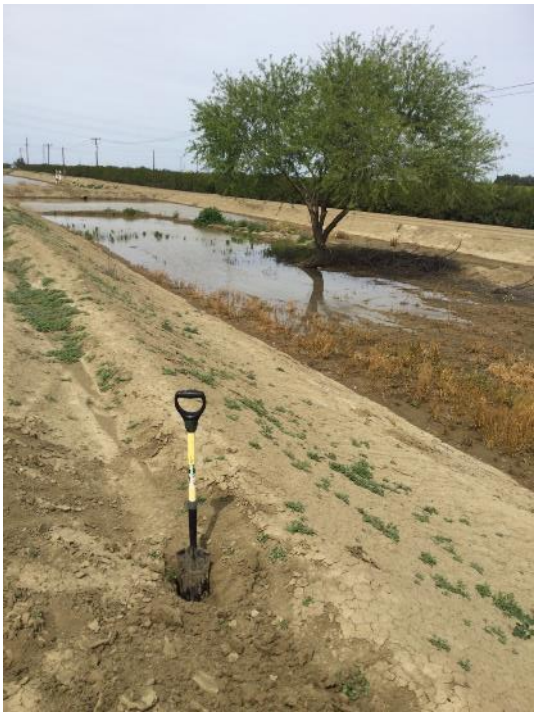
Remarks:

Appendix B: Photographs

Photograph 1	
Location: Feature W1	
Date: April 2023	
Notes: Sample point W1-WL.	

Photograph 2	
Location: Feature W1	
Date: April 2023	
Notes: Sample point W1-UP.	

Photograph 3	
Location: Feature W2	
Date: April 2023	
Notes: Sample point W2-WL.	

Photograph 4	
Location: Feature W2	
Date: April 2023	
Notes: Sample point W2-UP.	

Photograph 5	
Location: Feature W3	
Date: April 2023	
Notes: Sample point W3-WL.	

Photograph 6	
Location: Feature W3	
Date: April 2023	
Notes: Sample point W3-UP.	

Photograph 7	
Location: Feature W4	
Date: April 2023	
Notes: Sample point W4-WL.	

Photograph 8	
Location: Feature W4	
Date: April 2023	
Notes: Sample point W4-UP.	

Photograph 9	
Location: Feature W5	
Date: January 2024	
Notes: Sample point W5-WL.	

Photograph 10	
Location: Feature W5	
Date: January 2024	
Notes: Sample point W5-UP.	

Photograph 11	
Location: Feature W5	
Date: July 2023	
Notes: Photo of deep standing water within retention basin.	

Photograph 12	
Location: Feature W6	
Date: April 2021	
Notes: Sample point W6-WL.	

Photograph 13	
Location: Feature W6	
Date: April 2021	
Notes: Sample point W6-UP.	

Photograph 14	
Location: Feature W7	
Date: April 2021	
Notes: Overview of Feature W7.	

Photograph 15	
Location: Feature W7	
Date: April 2021	
Notes: Overview of Feature W8.	