7446 8th Street Parcel Map

Aquatic Resources Delineation Report

September 2021 | 05047.00002.001

Prepared for:

Jerry Huffhines
7446 8th Street
Rio Linda, CA 95673

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

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TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
APN	Assessor's Parcel Number
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
FAC	Facultative Plants
FACU	Facultative upland plants
FACW	Facultative wetland plants
HELIX	HELIX Environmental Planning, Inc.
NRCS	Natural Resource Conservation Service
OHWM	ordinary high water mark
PCC	Prior Converted Cropland
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WQC	Water Quality Certification

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EXECUTIVE SUMMARY

This report presents the results of a delineation of the aquatic resources within the approximately 6.67-acre 7446 8th Street Parcel Map Project, which is located at 7446, 7510, and 7532 8th Street in the community of Rio Linda, Sacramento County, California. The presence of aquatic resources that could potentially qualify as wetlands or other waters of the U.S. and State was assessed following the technical guidelines provided in the *Corps of Engineers Wetlands Delineation Manual* (USACE Manual), the U.S. Army Corps of Engineers (USACE) *Arid West Regional Supplement* (Supplement), the USACE *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Field Guide), the 2020 Navigable Waters Protection Rule, and the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. The Supplement and Field Guide present wetland and OHWM indicators, delineation guidance, and other information that is specific to the Arid West Region.

A total of 0.208 acre of aquatic resources were mapped within the Study Area including 0.128 acre of seasonal wetland and 0.080 acre (523 linear feet) of drainage ditch. All aquatic resources in the Study Area are potential waters of the U.S. and potential waters of the State subject to regulatory jurisdiction by the USACE and the Central Valley Regional Water Quality Control Board under Sections 404 and 401 of the Clean Water Act. Some or all of the aquatic resources on the site are also subject to California Department of Fish and Wildlife Jurisdiction under Section 1600 of the Fish and Game Code.

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1.0 INTRODUCTION

On behalf of Mr. Jerry Huffhines (Property Owner), HELIX Environmental Planning, Inc. (HELIX) has prepared this aquatic resources delineation report in support of the 7446 8th Street Parcel Map Project (Project) to delineate potentially jurisdictional wetlands and other waters of the U.S. and State in the approximately 6.67-acre site (Study Area). An application for a parcel split has been submitted to the Sacramento County Office of Planning and Environmental Review (Control #PLNP2021-00129) and the County requested a jurisdictional delineation be prepared for the Project.

The purpose of our delineation was to identify aquatic resources in the Study Area that potentially qualify as waters of the U.S. and/or waters of the State. Waters of the U.S. on the site are subject to regulatory jurisdiction by both the U.S. Army Corps of Engineers (USACE) and the Central Valley Regional Water Quality Control Board (CVRWQCB). Waters of the State on the site are subject to the jurisdiction of the CVRWQCB and potentially the California Department of Fish and Wildlife (CDFW). Impacts to onsite aquatic resources may require obtaining permits from one or all of these agencies. The results presented in this document are preliminary unless and until concurrence is received from the USACE, CVRWQCB, and CDFW.

1.1 PROJECT LOCATION

The Study Area is located at 7446, 7510, and 7532 8th Street in the community of Rio Linda, which is located within an unincorporated area of Sacramento County, California (Appendix A, Figure 1). The Study Area consists of Sacramento County Assessor's Parcel Numbers (APNs) 207-0011-001-0000 (±4.27 acres) and 207-0011-003-0000 (±2.40 acres). The site is situated in the Del Paso Land Grant in an unsectioned portion of Township 10 North, Range 05 East, Mount Diablo Meridian, and is depicted on the U.S. Geological Survey (USGS) *Rio Linda, CA,* 7.5-minute topographic quadrangle maps (Appendix A, Figure 2). The approximate center of the Study Area is at latitude 38.704314 and longitude -121.446745, NAD 83, and is located at an elevation of approximately 55 feet above mean sea level (amsl).

1.2 DRIVING DIRECTIONS

From downtown Sacramento, travel north on Interstate (I-5) for 6.1 miles. At exit 525B head north on State Route 99 for 4.4 miles. At exit 309 turn right onto West Elverta Road and travel 4.4 miles to Rio Linda Boulevard. Turn right onto Rio Linda Boulevard for 0.7 mile and turn left onto U Street. Travel 0.5 mile to the intersection of U Street and 8th Street. Parking is available on either U Street or 8th Street.

1.3 AGENT CONTACT INFORMATION

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1.4 REGULATORY SETTING

1.4.1 Waters of the U.S.

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

On April 21, 2020, the Environmental Protection Agency (EPA) and USACE published the Navigable Waters Protection Rule to define "Waters of the United States" in the Federal Register (USACE 2020). On June 22, 2020, the *Navigable Waters Protection Rule: Definition of "Waters of the United States"* (NWPR) became effective in 49 states, including California, and in all US territories.

The NWPR regulates traditional navigable waters and perennial or intermittent tributary systems, and defines four categories of regulated waters including:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries to those waters;
- Certain lakes, ponds, and impoundments; and
- Wetlands adjacent to jurisdictional waters.

The NWPR also defines 12 categories of exempted aquatic resources:

- Waters not listed as waters of the U.S.
- Groundwater
- Ephemeral features
- Diffuse stormwater run-off
- Ditches not identified as waters of the U.S.
- Prior converted cropland (PCC)
- Artificially irrigated areas
- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

> "those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

The CWA (33 USC 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

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

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

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

1.4.2 Waters of the State

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

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

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

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

More specifically, a wetland is defined as: "*An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation*." The wetland definition encompasses the full range of wetland types commonly recognized in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands (SWRCB 2019).

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

2.0 ENVIRONMENTAL SETTING

2.1 LOCATION DESCRIPTION

The Study Area is located in a rural residential area of northern Sacramento County, which is developing rapidly overall with suburban residential, commercial, and light industrial uses. Land uses surrounding the Study Area are rural residential single-family residences, newly developed single-family residences, light industrial, and agriculture, such as livestock grazing. Terrain in the immediate vicinity of the Study Area is generally flat. The elevation on the site is approximately 55 feet amsl. Appendix A, Figure 3 is an aerial photograph of the Study Area and vicinity.

2.2 EXISTING CONDITIONS

At the time of the delineation the Study Area supported three residences, with most of the property consisting of undeveloped and minimally disturbed non-native annual grassland. The site has changed little since the last house was developed in 1966 as evidenced by historical aerial imagery dating back to 1947 (NETR Online 2021). The house in the northwestern corner of the Study Area has been on site prior to 1947 (NETR Online 2021). There is a drainage ditch in the Study Area that has been present since prior to 1947. The drainage ditch has been rerouted, but still enters and exits the property through culverts at the same locations. Most currently, the drainage ditch was rerouted in 2018 as evidenced by aerial imagery (NETR Online 2021).

2.3 FIELD CONDITIONS

Fieldwork for the aquatic resource delineation was conducted on August 23, 2021. The weather during the site visits was generally warm and varied from hazy to sunny.

2.4 INTERSTATE OR FOREIGN COMMERCE CONNECTION

The drainage ditch in the Study Area is tributary to another unnamed drainage or series of drainages that appear to eventually flow into Steelhead Creek. Steelhead Creek drains directly to the Sacramento

River, a traditional navigable water used in interstate and foreign commerce. There is no interstate or foreign commerce associated with the aquatic resources that are found on the site.

3.0 METHODS

3.1 DATA GATHERING

The following sources were used in preparation of this jurisdictional delineation:

- Aerial photography taken June 3, 2021 downloaded from Esri®,
- U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory online wetland mapper (USFWS 2021),
- Natural Resources Conservation Service (NRCS) web soil survey (NRCS 2021b),
- Corps of Engineers *Wetlands Delineation Manual* (USACE 1987),
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a),
- *A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States* (USACE 2008b),
- *Field Indicators of Hydric Soils in the United States (Version 8.2)* (NRCS 2018), and
- USACE 2018 *National Wetland Plant List for the Arid West* (USACE 2018).

3.2 BOUNDARIES OF THE DELINEATION

The delineation area includes the entire approximately 6.67-acre Study Area. Refer to the Aquatic Resources Delineation Map in Appendix B for the limits of the delineation.

3.3 DETERMINATION PROCEDURES

3.3.1 Delineation Methods

Fieldwork for the jurisdictional delineation was conducted by HELIX biologists Patrick Martin and Stephanie McLaughlin on August 23, 2021. The fieldwork was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008a), and the USACE *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b). Vegetation, soils, and hydrologic characteristics were assessed by conducting meandering transects through the entire Study Area to obtain 100 percent visual coverage. The plant species identifiable at the time of the survey were recorded (refer to Appendix C for the list of plants observed with the wetland indicator status for each species). Representative photographs are included as Appendix D.

The three-parameter method was used to determine the presence/absence of wetlands, which involves identifying indicators of hydrophytic vegetation, hydric soils, and wetland hydrology according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a) and the *Arid West 2018 Regional Wetland Plant List* (USACE 2018; NRCS 2021c). In the field, a Munsell Color (Gregtag Macbeth 2000) chart was used to determine moist soil colors. A total of 10 data points were taken throughout the Study Area to classify the site's soils, vegetation, and hydrologic characteristics and the accompanying data forms are included in Appendix E. The extent of wetlands and other waters within the Study Area were mapped in the field with a tablet wirelessly connected to an Arrow™ Global Navigation Satellite System (GNSS) receiver with sub-meter accuracy. These data were exported into ArcMap 10.7.1® and used to produce the Aquatic Resources Delineation Map included as Appendix B.

3.3.2 Determination of Potential Jurisdiction

Waters of the U.S.

Under the NWPR, the USACE and EPA regulate traditional navigable waters and perennial or intermittent tributary systems. The four categories of regulated waters include:

I. The territorial seas and traditional navigable waters;
II. Perennial and intermittent tributaries to those waters;
III. Certain lakes, ponds, and impoundments; and
IV. Wetlands adjacent to jurisdictional waters.

The NWPR excludes from the definition of ''waters of the United States'' all waters or features not mentioned above. In addition to this general exclusion, the NWPR clarifies that waters of the U.S. do not include the following:

- Groundwater, including groundwater drained through subsurface drainage systems;
- Ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse stormwater runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

- Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;

- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and

- Waste treatment systems.

Waters of the State

The RWQCB will assert jurisdiction over any waters of the State, including wetlands, regardless of whether or not the feature qualifies as waters of the U.S. Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the State" includes all "waters of the U.S." The following wetlands are waters of the State:

1. Natural wetlands,
2. Wetlands created by modification of a surface water of the state,
3. Artificial wetlands that meet any of the following criteria:
    a. 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;
    b. Specifically identified in a water quality control plan as a wetland or other water of the state;
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
    d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not Waters of the State unless they also satisfy the criteria set forth in 2, 3a, or 3b):
        i. Industrial or municipal wastewater treatment or disposal,
        ii. Settling of sediment,
        iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial 58 stormwater permitting program,
        iv. Treatment of surface waters,
        v. Agricultural crop irrigation or stock watering,
        vi. Fire suppression,
        vii. Industrial processing or cooling,
        viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
        ix. Log storage,
        x. Treatment, storage, or distribution of recycled water,
        xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits), or
        xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not Waters of the State.

3.3.3 Plant/Habitat Nomenclature

Habitat nomenclature is generally derived from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988). Plant nomenclature is taken from *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al. 2012) or the Jepson eFlora (available online at: https:// /ucjeps.berkeley.edu/eflora/).

4.0 RESULTS

4.1 VEGETATION COMMUNITIES/HABITAT TYPES

There are two types of upland habitats in the Study Area: non-native annual grassland and developed. Upland habitats are discussed in the following sections. Aquatic resources are described in Section 5.0.

4.1.1 Non-native Annual Grassland

Non-native annual grassland comprises most of the upland land cover in the Study Area and primarily includes fields used for livestock grazing. Agricultural operations observed within the annual grassland in the central project consist of cattle and sheep grazing, which were both actively grazing the Study Area during the surveys. Annual grassland in the Study Area is dominated by wild oats (*Avena fatua*) (--), soft brome (*Bromus hordeaceus*) (FACU), Italian rye grass (*Festuca perennis*) (FAC) and ripgut brome (*Bromus diandrus*) (--). Some trees occur in the grassland which include valley oak (*Quercus lobata*) (FACU) and Fremont cottonwood (*Populus fremontii*) (FAC). The non-native annual grassland seems to have remained relatively unchanged back to at least 1947 based on aerial imagery (NETR Online 2021).

4.1.2 Developed

The developed habitat in the Study Area supports three single-family residences with ornamental landscaping and paved surfaces.

4.2 CLIMATE AND ANNUAL RAINFALL

The climate of Sacramento County is Mediterranean, characterized by wet, cool winters and dry, hot summers. The nearest weather station is the Sacramento Metropolitan Airport weather station in Sacramento, California, located approximately seven miles west of the Study Area. Average daily maximum and minimum temperatures are 94° and 60° Fahrenheit (F) in July and 56° and 38° F in January (NRCS 2021a). The mean annual precipitation is 16.84 inches, with 100 percent occurring as rain from September through May. The weather station received approximately 6.62 inches of rainfall this rain season starting in October (NRCS 2021a), which is well below normal rainfall, or 39% of normal. In the previous year, the weather station received 10.07 inches, which is 60% of normal (NRCS 2021a).

4.3 SOILS

One soil type is mapped within the Study Area: San Joaquin fine sandy loam, 0 to 3 percent slopes (NRCS 2021b), which is not rated as a hydric soil (NRCS 2021c). A soil map is included as Figure 4 in Appendix A.

San Joaquin fine sandy loam, 0 to 3 percent slopes, occurs on terraces between 20 and 500 feet amsl and consists of alluvium derived from granite parent material. A typical soil profile is fine sandy loam from 0 to 13 inches, sandy clay loam from 13 to 30 inches, clay loam from 30 to 35 inches, indurated from 35 to 60 inches, and stratified sandy loam to loam from 60 to 67 inches. San Joaquin fine sandy loam, 0 to 3 percent slopes is a moderately well-drained soil with a frequency of ponding of "none" and a depth to water table of more than 80 inches, with a duripan located 35 to 60 inches from the mineral soil surface (NRCS 2021b).

4.4 HYDROLOGY

The Study Area is located within the Lower American watershed (USGS Hydrologic Unit Code (HUC 8) 18020111). The Study Area drains generally to the southwest. A drainage ditch occurs on the northern parcel and generally flows in a southwesterly direction through the Study Area. After leaving the Study Area, the drainage ditch appears to drain into another drainage ditch or series of ditches eventually emptying into Steelhead Creek. The drainage ditch collects sheet flow from Seasonal Wetland 1 as well as surrounding uplands in the Study Area. A second seasonal wetland on the site (Seasonal Wetland 2) collects sheet flow from the surrounding uplands, which is primarily the result of direct precipitation.

4.5 USFWS NATIONAL WETLANDS INVENTORY

The USFWS National Wetlands Inventory online database was reviewed to determine if there are any wetlands mapped by the USFWS in the Study Area or vicinity. The National Wetlands Inventory identifies an unnamed drainage south of the Study Area as a riverine feature with freshwater emergent wetlands. The National Wetlands Inventory does not identify any other aquatic features in or adjacent to the Study Area (Appendix A, Figure 5).

5.0 AQUATIC RESOURCES

Aquatic habitats present in the Study Area include seasonal wetland and drainage ditch. Aquatic resources are depicted on the Aquatic Resources Delineation Map in Appendix B and summarized in Table 1 at the end of this section.

5.1 SEASONAL WETLAND

There are two seasonal wetlands (SW-1 and SW-2) (0.128 acre) in the Study Area. SW-1 is adjacent to the current alignment of the drainage ditch on the property. SW-2 is located roughly 75 feet east of SW-1 and roughly 130 feet east of the drainage ditch but was adjacent to the drainage ditch prior to the ditch being rerouted in 2018. These seasonal wetlands are shallow depressions that sit slightly lower than the surrounding topography in the non-native annual grassland and collect precipitation and surface runoff from the surrounding uplands and overflow from the drainage ditch. The seasonal wetland boundaries are characterized by a shift in vegetation between upland annual grasses to a dominance of hydrophytes. Hydric soil indicators in seasonal wetlands were typically met by redox in a

closed depression or redox dark surface with prominent redoximorphic features located along root channels of living roots and as concentrations in the matrix. Wetland hydrology in the seasonal wetlands is evidenced by oxidized rhizospheres. The seasonal wetlands support a predominance of hydrophytic herbaceous plant species such as Italian ryegrass and Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*) (FAC) as well as upland grasses such as soft brome.

5.2 DRAINAGE DITCH

One drainage ditch that totals 0.080 acre occurs in the Study Area. The drainage ditch contains wetland vegetation along much of its length in the Study Area but the central portion of the ditch is devoid of wetlands and consists entirely of upland vegetation. Water flows into the drainage ditch from double culverts under U Street and exits the property at double culverts under 8th Street. The ditch appears to be a rerouted or modified natural waterway that carries water from wetlands north of U Street to a drainage west of 8th Street and is tributary to Steelhead Creek via another unnamed drainage or series of drainages. The ditch was most recently rerouted around 2018 (Google Earth 2021) and previously followed a different path on the property, which has since been filled in with dirt. Prior to the drainage ditch being rerouted, SW 1 and SW 2 were both adjacent to it.

The drainage ditch exhibits bed and bank and has an ordinary high water mark. The drainage ditch supports hydrophytic herbaceous plant species such as Italian ryegrass, prostrate knotweed (*Polygonum aviculare*) (FAC), and broad leaf pepperweed (*Lepidium latifolium*) (FAC) as well as vegetation consistent with non-native annual grassland described in Section 4.1.1 in the central portion.

Table 1
AQUATIC RESOURCES IN THE STUDY AREA

Feature	Lat./Long.	Cowardin Classification[1]	Area (ac.)	Area (sq. ft.)	Length (ft.)	Avg. Width (ft.)
Wetlands						
SW-1	38.704498/ - 121.446582	PEM2	0.120	5,227.20	--	--
SW-2	38.704241/ - 121.446286	PEM2	0.008	348.48	--	--
Seasonal Wetlands Subtotal			***0.128***			
DD-1	38.704447/ - 121. 446907	REM2	0.080	3,484.80	523	6.7
Drainage Ditch Subtotal			***0.080***			
TOTAL AQUATIC RESOURCES			**0.208**	**9,060.48**	**523**	**--**

[1] Cowardin Codes for Wetlands: System (P = Palustrine; R = Riverine) –Class (EM = Emergent) – Subclass (2 = Non-persistent).

5.3 POTENTIAL WATERS OF THE U.S.

A total of 0.208 acres of aquatic resources were mapped within the Study Area consisting of two seasonal wetlands (0.128 acre), and one drainage ditch (0.080 acre, 523 linear feet). Although the hydrology of the area has been disrupted due to anthropogenic disturbance and the drainage ditch has been rerouted and/or modified, it is a modified natural waterway that is tributary to a traditional navigable water and is assumed to be intermittent. The drainage ditch is tributary to Steelhead Creek, and thence the Sacramento River, which is a traditional navigable waters of the U.S. Seasonal wetland 1 is adjacent to the drainage ditch and appears to have a direct hydrologic connection to the drainage ditch. Seasonal wetland 2 does not have a direct hydrologic connection to the ditch in its present alignment but was adjacent to the ditch in its prior alignment and may still receive runoff from the drainage ditch as it is in a low point that collects water along the ditch's prior alignment. For this reason,

SW-2 is considered an adjacent wetland. All aquatic resources in the Study Area are presumed to be waters of the U.S.

5.4 POTENTIAL WATERS OF THE STATE

A total of 0.208 acres of aquatic resources were mapped within the Study Area. Waters of the State include natural and artificial ponds, and wetlands. The Study Area supports two seasonal wetlands (0.128 acre), and one drainage ditch (0.080 acre, 523 linear feet) that would qualify as potential Waters of the State. The drainage ditch is a modified waters of the State that conveys flow from natural wetlands upstream and is tributary to Steelhead Creek and thence the Sacramento River. SW-1 and SW-2 are believed to be natural wetlands. Potential waters of the State in the Study Area are subject to CVRWQCB and potentially CDFW jurisdiction.

6.0 SUMMARY

HELIX conducted an aquatic resources delineation of the approximately 6.67-acre Study Area for the 7446 8th Street Parcel Map Project located in Rio Linda, Sacramento County, California. A total of 0.208 acres of aquatic resources were mapped within the Study Area. All aquatic resources are presumed to be waters of the U.S. and potential waters of the State. This aquatic resource delineation is preliminary and subject to verification.

7.0 REFERENCES

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Appendix A

Figures

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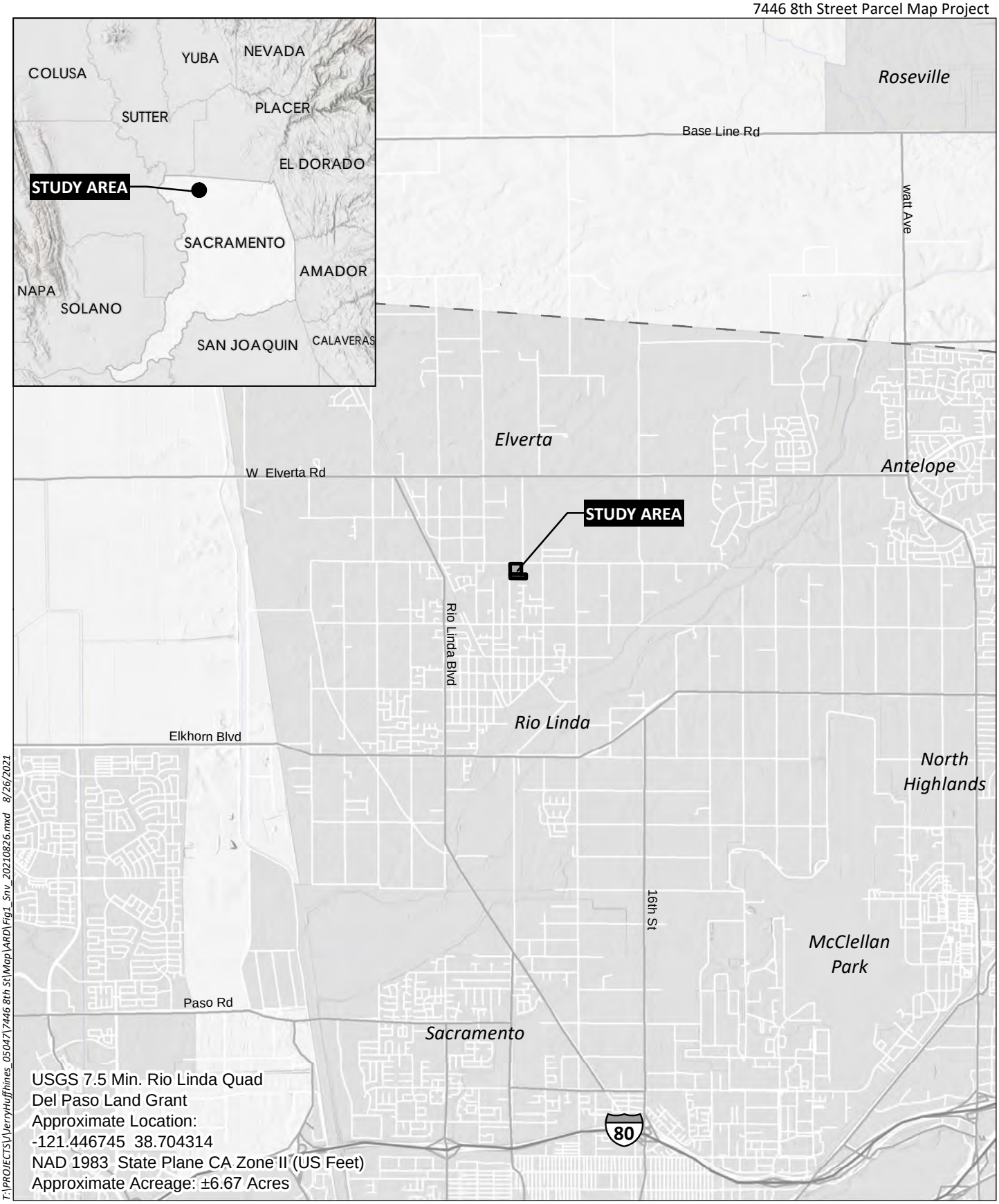
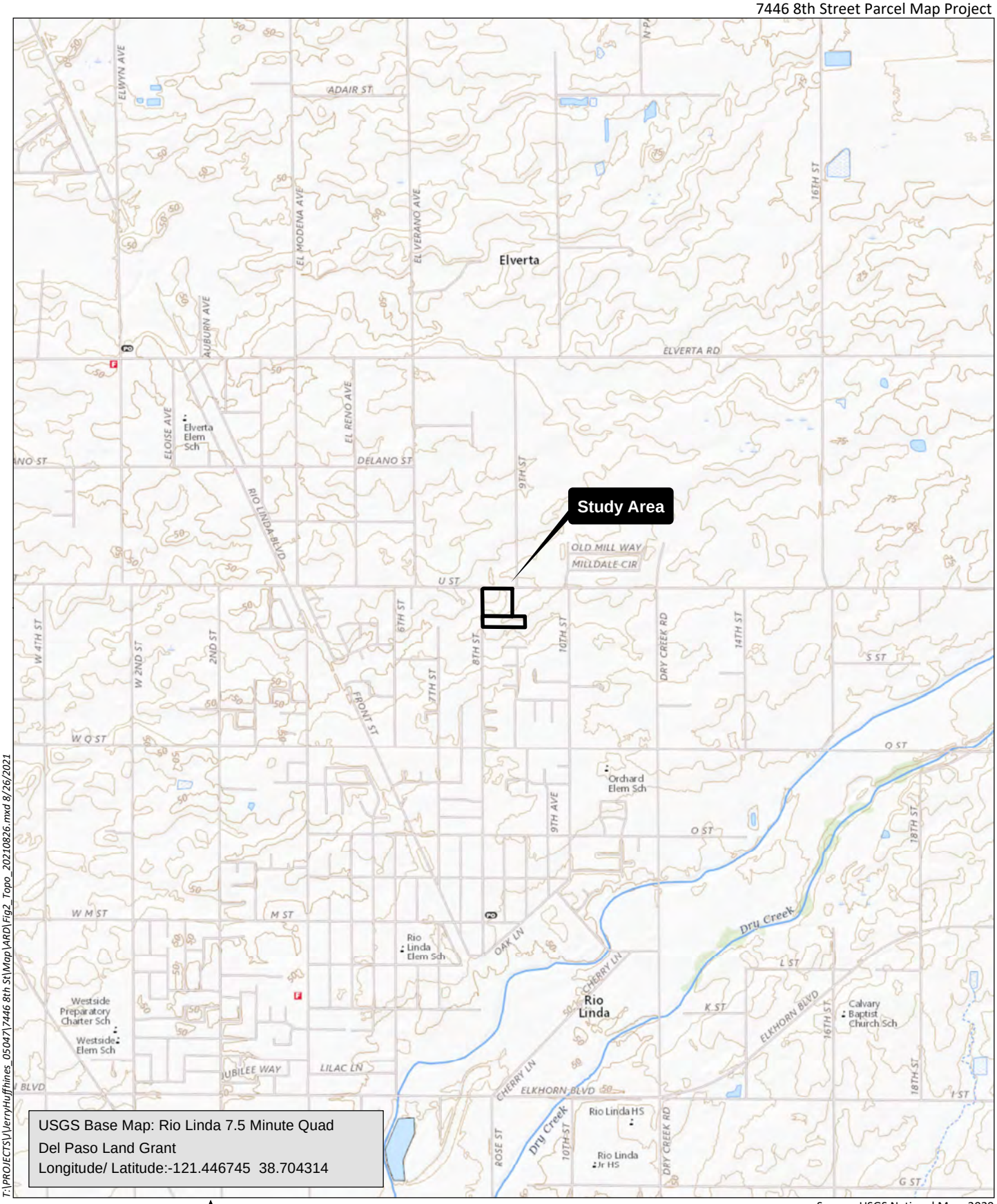


HELIX Environmental Planning

Vicinity Map

Figure 1



USGS Base Map: Rio Linda 7.5 Minute Quad
Del Paso Land Grant
Longitude/ Latitude:-121.446745 38.704314

T:\PROJECTS\V\VerryHuffhines_05047\7446 8th St\Map\ARD\Fig2_Topo_20210826.mxd 8/26/2021

0 2,000 Feet

Source: USGS National Map, 2020

HELIX Environmental Planning

Topographic Map

Figure 2

T:\PROJECTS\V\VerryHuffhines_05047\7446 8th St\Map\ARD\Fig3_Aerial_20210826.mxd 8/26/2021

0 100 Feet

Source: Sacramento County, 3/26/2018

HELIX Environmental Planning

Aerial Map

Figure 3

T:\PROJECTS\V\VerryHuffhines_05047\7446 8th St\Map\ARD\Fig4_Soils_20210826.mxd 8/26/2021

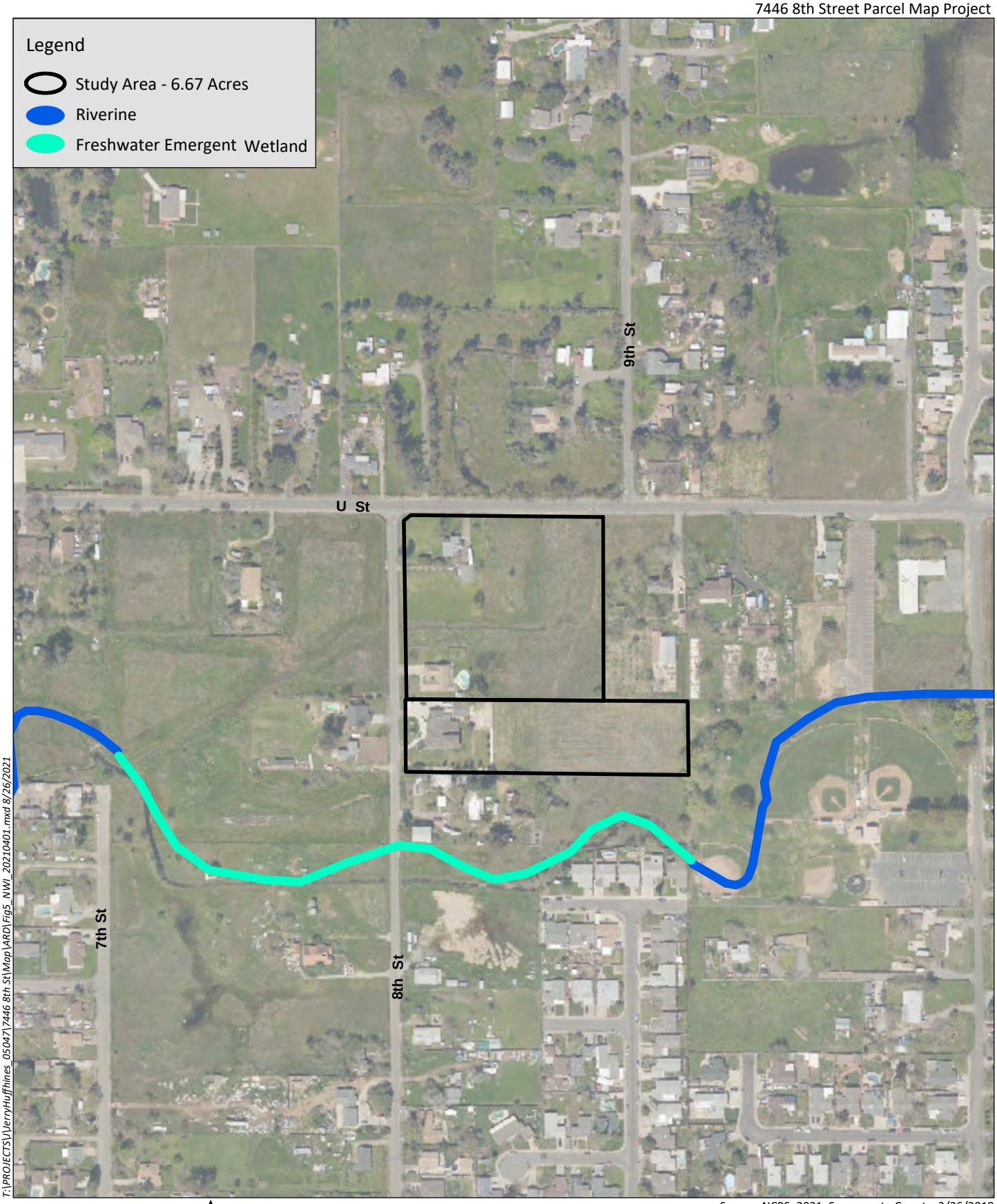
0 100 Feet

Source: NRCS, 2021;Sacramento County, 3/26/2018

HELIX Environmental Planning

Soils Map

Figure 4



Source: NCRS, 2021; Sacramento County, 3/26/2018

HELIX Environmental Planning

National Wetland Inventory Map

Figure 5

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Appendix B

Aquatic Resources Delineation Map

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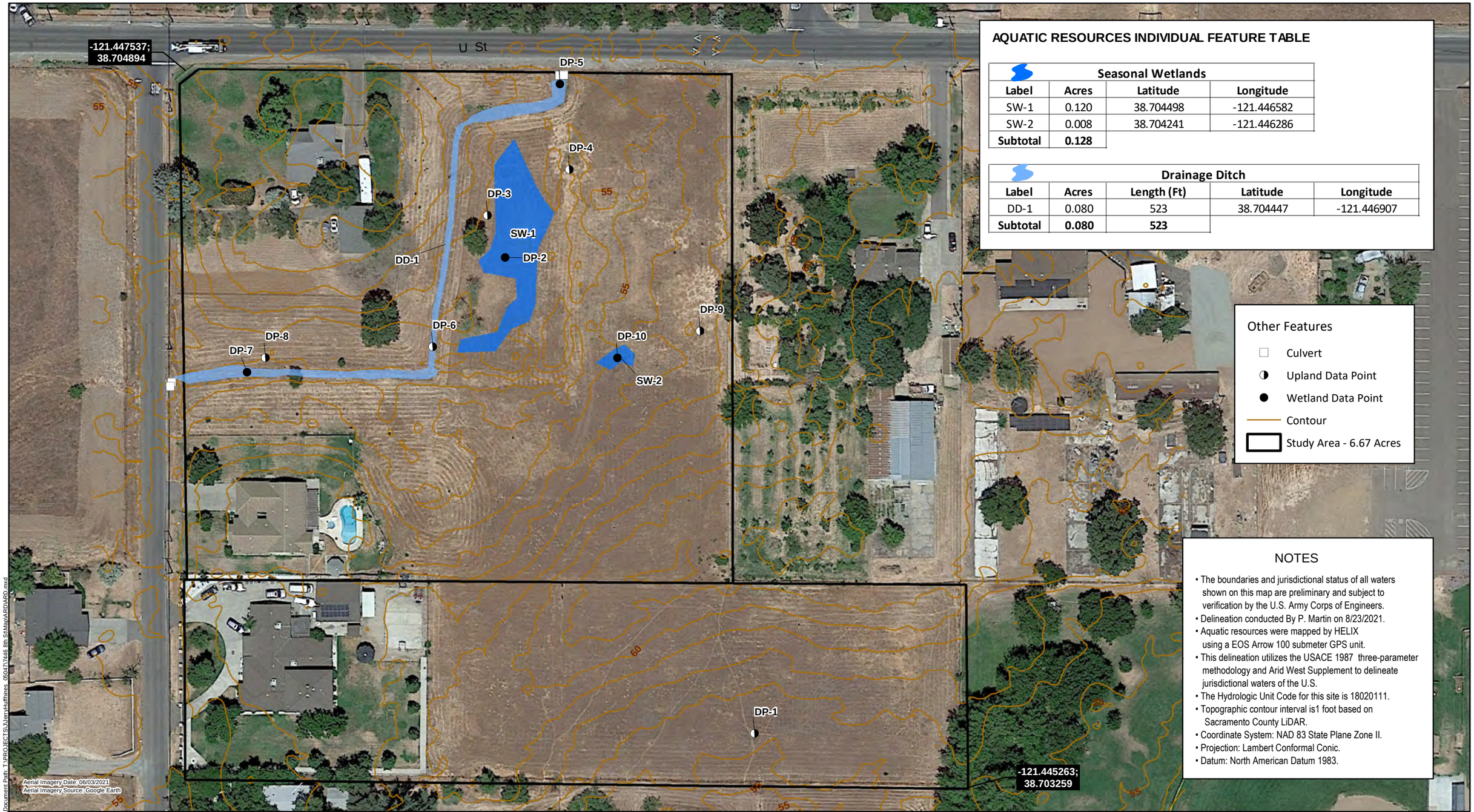

AQUATIC RESOURCES INDIVIDUAL FEATURE TABLE

Seasonal Wetlands

Label	Acres	Latitude	Longitude
SW-1	0.120	38.704498	-121.446582
SW-2	0.008	38.704241	-121.446286
Subtotal	**0.128**		

Drainage Ditch

Label	Acres	Length (Ft)	Latitude	Longitude
DD-1	0.080	523	38.704447	-121.446907
Subtotal	**0.080**	**523**		

NOTES

- The boundaries and jurisdictional status of all waters shown on this map are preliminary and subject to verification by the U.S. Army Corps of Engineers.
- Delineation conducted By P. Martin on 8/23/2021.
- Aquatic resources were mapped by HELIX using a EOS Arrow 100 submeter GPS unit.
- This delineation utilizes the USACE 1987 three-parameter methodology and Arid West Supplement to delineate jurisdictional waters of the U.S.
- The Hydrologic Unit Code for this site is 18020111.
- Topographic contour interval is1 foot based on Sacramento County LiDAR.
- Coordinate System: NAD 83 State Plane Zone II.
- Projection: Lambert Conformal Conic.
- Datum: North American Datum 1983.

Document Path: T:\PROJECTS\JJ\JerryHuffhines_050417\7446 8th St\Map\ARD\ARD.mxd

HELIX Environmental Planning

USACE REGULATORY FILE #:
VERIFIED BY: TBD
DATE OF VERIFICATION: TBD

REVISIONS

DATE	DESCRIPTION	BY

0 75 150
Feet
1 inch = 75 feet

N

AQUATIC RESOURCES DELINEATION MAP

7446 8th Street Parcel Map Application Project

Sacramento County, California

September 2, 2021

APPENDIX B

Drawn By: JCD

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Appendix C

Plant Species Observed in the Study Area

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Appendix C
Plant Species Observed in the Study Area

Family	Species Name	Common Name	Rating*
Native			
Apocynaceae	*Asclepias fascicularis*	Narrow leaf milkweed	FAC
Asteraceae	*Holocarpha virgata*	narrow tarplant	--
Boraginaceae	*Amsinckia intermedia*	Common fiddleneck	--
Cyperaceae	*Cyperus eragrostis*	Tall flatsedge	FACW
Euphorbiaceae	*Croton setiger*	turkey-mullein	--
Fagaceae	*Quercus lobata*	Valley oak	FACU
Poaceae	*Festuca microstachys*	Small fescue	--
	Muhlenbergia rigens	Deergrass	FAC
Salicaceae	*Populus fremontii*	Fremont cottonwood	FAC
Themidaceae	*Dichelostemma volubile*	Twining snakelily	--
Non-native			
Asteraceae	*Carduus pycnocephalus*	Italian thistle	--
	Centaurea solstitialis	yellow-star thistle	--
	Cichorium intybus	Chicory	FACU
	Lactuca serriola	prickly lettuce	FACU
	Leontodon saxatilis	Hairy hawkbit	FACU
Brassicaceae	*Brassica nigra*	black mustard	--
	Capsella bursa-pastoris	Shepherd's purse	FACU
	Lepidium latifolium	Broad leaf pepperweed	FAC
	Raphanus sativus	radish	--
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	--
Fabaceae	*Medicago polymorpha*	Bur clover	FACU
	Trifolium hirtum	Rose clover	--
Geraniaceae	*Erodium botrys*	long-beak filaree	FACU
Malvaceae	*Malva parviflora*	Cheese weed	--
Plantaginaceae	*Plantago lanceolata*	English plantain	FAC
Poaceae	*Avena fatua*	Wild oats	--
	Bromus diandrus	common ripgut grass	--
	Bromus hordeaceus	soft brome	FACU
	Cynodon dactylon	Bermuda grass	FACU
	Elymus caput-medusae	medusahead	--
	Festuca perennis	Italian ryegrass	FAC
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	FAC
	Hordeum murinum	foxtail barley	FACU
	Paspalum dilatatum	Dallis grass	FAC
Polygonaceae	*Rumex crispus*	curly dock	FAC

Scientific and common names from:

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkley *or*

U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory, *Arid West 2018 Regional Wetland Plant List* (USACE 2018)

* FAC – facultative, FACU – facultative upland, FACW – facultative wetland, OBL – obligate, -- Not Listed, considered to be upland

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Appendix D

Representative Photographs

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Photo 1**.** Representative view of Sampling Point 1 (shovel) in uplands. Photo date 8/23/2021.

Photo 2. Representative view of Sampling Point 2 (shovel) in a seasonal wetland (SW-1). Photo date 8/23/2021.

Photo 3**.** Representative view of Sampling Point 3 (shovel) in uplands. Photo date 8/23/2021.

Photo 4. Representative view of Sampling Point 4 (shovel) in uplands. Photo date 8/23/2021.

Photo 5. Representative view of Sampling Point 6 (clipboard) in a portion of the drainage ditch that does not support wetland vegetation. Photo date 8/23/2021.

Photo 6. Representative view of Sampling Point 7 (shovel) in a portion of the drainage ditch with wetland vegetation. Photo date 8/23/2021.

Photo 7. Representative view of Sampling Point 8 (shovel) in upland annual grassland adjacent to the drainage ditch. Photo date 8/23/2021.

Photo 8. Representative view of Sampling Point 10 (shovel) in seasonal wetland (SW-2). Photo date 8/23/2021.

Appendix E

Data Sheets

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 1

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7034 Long: -121.4459 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Slight depression on a low hill. Dominated by upland vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca microstachys	20	Y	FACU
2. Erodium botrys	15	Y	FACU
3. Festuca perennis	10	N	FAC
4. Bromus hordeaceus	12	N	FACU
5. Holocarpha virgata	5	N	--
6.			
7.			
8.			
	62 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

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

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 (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:

Dominated by upland vegetation.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5 YR 4/3	90	2.5 YR 4/6	10	C	M/PL	loam	

[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: hardpan

Depth (inches): 8

Hydric Soil Present? Yes ____ No ✓

Remarks:

No closed depression.

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:

Oxidized rhizospheres are present along root channels of roots that were likely alive during the growing season.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 2

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7045 Long: -121.4466 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Large seasonal wetland dominated by facultative wetland vegetation. Appears to receive water from ditch when ditch floods. There is no other apparent source of water.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	50	Y	FAC
2. Hordeum marinum	20	Y	FAC
3. Bromus hordeaceus	20	N	FACU
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

Dominated by wetland vegetation.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 3/2	90	5 YR 4/6	5	C	M/PL	loam	

[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: hardpan

Depth (inches): 10

Hydric Soil Present? Yes ✓ **No** ___

Remarks:

Prominent redoximorphic features on a dark surface fulfills hydric soil indicator for Redox Dark Surface.

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:

Oxidized rhizospheres are present along root channels of roots that were likely alive during the growing season.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 3

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7046 Long: -121.4467 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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. Quercus lobata	20	Y	FACU
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Avena fatua	30	Y	00
2. Festuca perennis	25	Y	FAC
3. Bromus diandrus	20	Y	FACU
4.			
5.			
6.			
7.			
8.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 25 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (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:

Dominated by upland vegetation.

SOIL

Sampling Point: 3

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
0-12	7.5 YR 4/3	100					loam	appears to be fill with mixed tex

[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:

No hydric soil indicators detected.

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:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 4

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7047 Long: -121.4464 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

High area with Italian rye grass in uplands. Historically, a ditch may have been located at this data point, however it appears to have been filled in and relocated.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	40	Y	FAC
2. Bromus diandrus	20	Y	--
3. Cynodon dactylon	5	N	FACU
4. Avena fatua	5	N	--
5. Bromus hordeaceus	20	Y	FACU
6. Hordeum murinum	5	N	FACU
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (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:

Dominated by upland vegetation.

SOIL

Sampling Point: 4

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
0-12	7.5 YR 4/4	100					clay loam	

[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:

No hydric soil indicators detected.

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:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 5

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7048 Long: -121.4465 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Drainage ditch with wetlands. Ditch intermittently supports uplands, but it has a defined bed and bank. Water drains from the north, and appears to support wetlands north of the property.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Polygonum aviculare	20	Y	FAC
2. Croton setiger	10	N	--
3. Festuca perennis	20	Y	FAC
4. Cynodon dactylon	10	N	FACU
5. Lepidium latifolium	20	Y	FAC
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 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:

Dominated by hydrophytic vegetation.

SOIL

Sampling Point: 5

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
0-8	7.5 YR 3/1	95	7.5 YR 5/8	5	C	PL	clay loam	

[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:

Prominent redoximorphic features on a dark surface fulfills hydric soil indicator for Redox Dark Surface.

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:

A ditch with wetland vegetation and indicators of flowing water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 6

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7043 Long: -121.4468 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Drainage ditch with uplands. Ditch intermittently supports uplands, but it has a defined bed and bank. Water drains from the north, and appears to support wetlands north of the property. Drains to Steelhead Creek.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Bromus diandrus	25	Y	FACU
2. Avena fatua	20	Y	--
3. Festuca perennis	20	Y	FAC
4. Erodium botrys	15	N	FACU
5. Bromus hordeaceus	10	N	FAC
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % 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: 33 (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:

Dominated by upland vegetation.

SOIL

Sampling Point: 6

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
								no soil pit

[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:

No soil pit.

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:

A constructed ditch with no indicators of flowing water and upland vegetation. Ditch has a well defined bed and bank.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 7

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7042 Long: -121.4474 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Drainage ditch with wetlands. Ditch intermittently supports uplands, but it has a defined bed and bank. Water drains from the north, and appears to support wetlands north of the property.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	60	Y	FAC
2. Lepidium latifolium	15	N	FAC
3. Bromus hordeaceus	10	N	FACU
4.			
5.			
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 15 % 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:

Dominated by wetland vegetation.

SOIL

Sampling Point: 7

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
0-8	7.5 YR 3/1	95	7.5 YR 5/8	5	C	PL	clay loam	

[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:

Prominent redoximorphic features on a dark surface fulfills hydric soil indicator for Redox Dark Surface.

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:

A ditch with wetland vegetation and indicators of flowing water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 8

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7042 Long: -121.4473 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Low area along margin of ditch with wetlands. This data point represents uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	20	Y	FAC
2. Bromus diandrus	30	Y	--
3. Lepidium latifolium	10	N	FAC
4. Lactuca serriola	10	N	FACU
5.			
6.			
7.			
8.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 30 % 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: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	
FACW species 0	x 2 =	
FAC species 30	x 3 =	90
FACU species 10	x 4 =	40
UPL species 30	x 5 =	150
Column Totals: 70 (A)		280 (B)

Prevalence Index = B/A = 4.0

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:

Dominated by upland vegetation. Vegetation was recently mowed, but is still discernible.

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5 YR 2.5/2	97	7.5 YR 4/6	3	C	PL	clay loam	

[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: hardpan

Depth (inches): 8

Hydric Soil Present? Yes ____ No ✓

Remarks:

Redoximorphic features present, but scarce.

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:

Oxidized rhizospheres are present along root channels of roots that were likely alive during the growing season.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 9

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7043 Long: -121.4461 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Upland area dominated by facultative wetland vegetation, but is upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	60	Y	FAC
2. Avena fatua	10	N	--
3. Bromus diandrus	10	N	--
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % 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:

Dominated by wetland vegetation.

SOIL

Sampling Point: 9

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
0-10	10 YR 3/3	100					clay loam	

[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: hardpan

Depth (inches): 10

Hydric Soil Present? Yes ____ No ✓

Remarks:

No hydric soil indicators detected.

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:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 7446 8th Street Parcel Map (PLNP2021-00129) City/County: Rio Linda/Sacramento Sampling Date: 8/23/2021

Applicant/Owner: Mr. Jerry Huffhines State: CA Sampling Point: 10

Investigator(s): P. Martin, S. McLaughlin Section, Township, Range: Township 10N, Range 05E Section 21

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

Subregion (LRR): C Lat: 38.7042 Long: -121.4463 Datum: NAD 83

Soil Map Unit Name: 211—San Joaquin fine sandy loam, 0 to 3 percent 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:

Seasonal wetland dominated by facultative wetland vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	50	Y	FAC
2. Hordeum marinum	20	Y	FAC
3. Bromus hordeaceus	20	N	FACU
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

Dominated by wetland vegetation.

SOIL

Sampling Point: 10

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
0-8	10 YR 4/3	95	7.5 YR 5/8	5	C	PL	loam	

[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:

Prominent redoximorphic features in a closed depression.

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:

Oxidized rhizospheres are present along root channels of roots that were likely alive during the growing season.