

8160 Stevenson Avenue

Aquatic Resources Delineation

Prepared by:

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Prepared for:

Bumgardner Biological Consulting

Report Date:

May 29, 2022

Contents

Summary.....	iii
1 INTRODUCTION	1
1.1 Contact Information	1
1.2 Site Information	1
2 METHODS	3
2.1 Background Information.....	3
2.2 Field Methods	3
3 RESULTS.....	5
3.1 Wetland Criteria	5
3.2 Discussion of Wetland Determination Data Points	7
3.3 Observed Wetlands	7
3.4 Commerce and Recreation	7
4 REFERENCES.....	9

Figures

1. Site location	2
2. Preliminary aquatic resources delineation map	8

Tables

1. Plant species encountered at data points	5
2. Types and acreages of waters	7

Appendices

A. Wetland Determination Data Sheets	
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Summary

This report is a preliminary delineation and description of aquatic resources within the parcel at 8160 Stevenson Avenue, a study area of approximately 0.6 acres in Sacramento County, California. It includes the information needed for verification by the U.S. Army Corps of Engineers by means of either a preliminary or an approved jurisdictional determination, and for other environmental review and permitting purposes.

Determinations at possible wetland areas were carried out according to the 1987 Corps of Engineers (Corps) Wetlands Delineation Manual and 2008 Regional Supplement for the Arid West Region, Version 2.0.

The following areas of aquatic features were found within the study area:

Seasonal Wetland	0.022 acre
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1 INTRODUCTION

1.1 Contact Information

Owner: Sandale LLC
920 Intracoastal Drive #1101
Ft. Lauderdale, FL 33304
Contact: Hina Zafar
Telephone: (415) 509-0402
E-mail: sandalellc@gmail.com

Delineation: EcoSynthesis Scientific & Regulatory Services, Inc.
16173 Lancaster Place
Truckee, CA 96161

Contact: Adrian Juncosa
Telephone: (530) 412-1601
E-mail: ajuncosa@ecosynthesis.com

1.2 Site Information

Project name: 8160 Stevenson Ave.

Corps Number: no number assigned yet

APN: 115-1950-021 (Sacramento Co.)

Study Area: Approximately 0.6 acres

Location: Latitude/longitude: center of site is at approximately 38.4648 N, -121.4062W.

Address: 8160 Stevenson Ave., Sacramento, CA 96161

Study dates: April 6, 2022

Report date: May 29, 2022

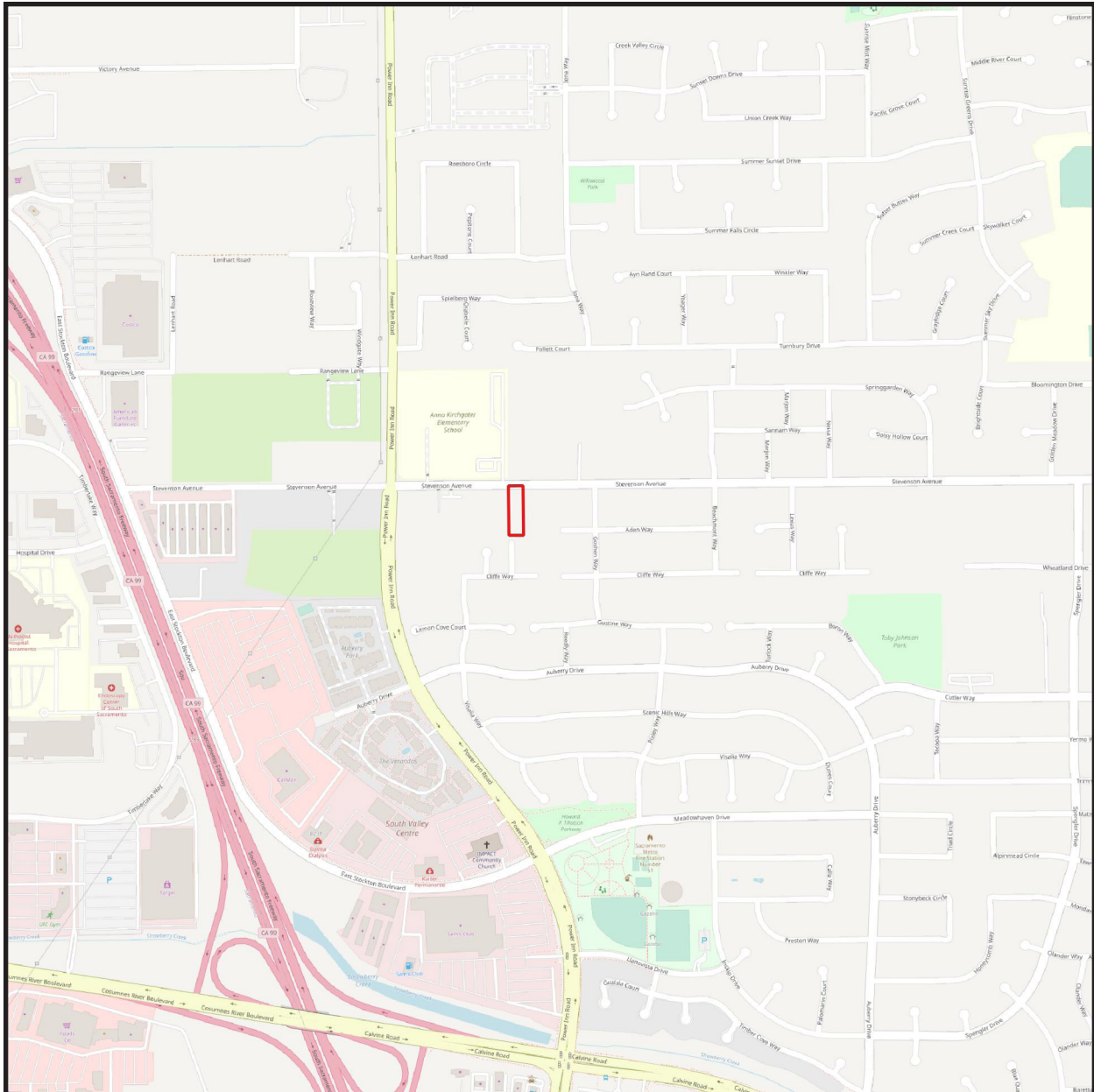
Driving Directions from (Downtown) Sacramento:

Travel south on Highway 99, exit at Mack Road, turn left (east), then right onto Stockton Blvd, then left onto Stevenson Ave.

Site Description

The Stevenson Ave. study area is approximately 0.6 acres, nearly level, at an elevation of about 33 feet above mean sea level.

About half of the site is developed with pavement, structures, and continually maintained landscaping. The undeveloped part of the site is annual/perennial non-native grassland.



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Scale: 1:10,000 (1"=833')

North



Sandale LLC Property 8160 Stevenson Avenue

Biological Resources Technical Memorandum

Figure 1. Site Location



Parcel boundary

2 METHODS

2.1 Background Information

Preliminary wetland mapping was obtained from the US Fish and Wildlife Service National Wetlands Inventory (NWI) via the on-line Wetlands Mapper application (USFWS, 2021). Information on soils was obtained from the Web Soil Survey on-line application (NRCS, 2021). Climatic information was obtained from the Western Regional Climate Center (WRCC, 2021) and from the National Oceanic and Atmospheric Administration (NOAA, 2021).

2.2 Field Methods

Field work was carried out according to the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) and Regional Supplement for the Arid West Region, Version 2.0 (ERDC, 2008).

The present study was informed by several visits to the site during the summer of 2021 and April-May 2022.

Specific field methods that were applied to the determination of each of the criteria within the study area are described below.

2.2.1 *VEGETATION*

Plant species were identified on sight based on extensive (33 years') experience with plant identification within the Sacramento region.

The generic names of some plants that are on the national wetland plant list are different from the ones that are found in The Jepson Manual, 2nd Edition (Baldwin et al., 2012), and the Flora of North America North of Mexico (which references do not always agree with one another either). Scientific names provided in this report include synonymy in such cases.

Determinations of plant cover were visual estimates, aided where necessary by cover percentage diagrams originally provided in Forest Service (2001) and also distributed by other entities.

Wetland indicator status assignments were made according to current National Wetland Plant List (USACE, 2020). This delineation report uses the standard abbreviations as defined below:

- OBL obligate (almost always found within wetlands)
- FACW facultative-wetland (generally, but not always, found within wetlands)
- FAC facultative (found equally within and outside wetlands)
- FACU facultative-upland (generally not, but may be, found within wetlands)
- UPL upland (rarely found within wetlands)

2.2.2 *SOILS*

Wetland determination soil test pits were excavated with hand tools to depths of 5 to 13 inches. The shallow pit was where an exceptionally hard, cemented duripan was encountered at a depth of four inches. Determination of the presence or absence of hydric soils field indicators was made

on the basis of Field Indicators of Hydric Soils in the United States (NRCS, 2017; Version 8.1) and the Arid West Regional Supplement (ERDC, 2008). Due to updates in the names and numbers of hydric soils indicators, there are minor discrepancies between the indicators in NRCS (2017) and those listed on the Arid West data form, but in no case did this impair the hydric soils determination.

2.2.3 HYDROLOGY

Determinations of wetland hydrology or absence thereof were made by means of field indicators described in the Regional Supplement (ERDC, 2008).

2.2.4 BOUNDARIES

The limits of delineated wetlands were determined at the point where one or more mandatory criteria were no longer met.

2.2.5 SURVEY AND MAPPING TECHNOLOGY

Boundaries and data point locations were surveyed with a Trimble GeoXH 6000 GNSS ("GPS") unit. The resulting data were then differentially post-processed using publicly available base station data. Given the open terrain, with no woody overstory or nearby buildings to create multipath signal reception, satellite reception was excellent and the post-processed points were overwhelmingly determined by the Trimble Pathfinder Office software to be within the 5-15 cm accuracy range. Field work was exported in California State Plane zone 2, US survey feet.

3 RESULTS

This section includes information on the site's environmental setting and specific information on each of the mandatory wetland criteria (vegetation, soils, and hydrology) and observations at the data points, followed by a description of the wetlands that were delineated.

The NWI mapping from Wetlands Mapper shows no aquatic features within or abutting the site (or anywhere nearby either). Only one NRCS soil map unit is found at the site, so a figure is not provided. The aquatic resources mapping is provided in Figure 2 (page 8). A list of plant species relevant to the determination of wetlands and other waters is provided in Table 1, and acreages of delineated features are summarized in Table 2. Wetland determination data forms are found in Appendix A.

3.1 Wetland Criteria

3.1.1 VEGETATION

Vegetation at areas studied by means of three-parameter wetland determination data points is described on the data sheets (Appendix A) and in Section 3.2, which discusses the reasons for non-wetland determinations. Plant species observed at data points are listed in Table 1.

Although data points were studied in August, all plant species that remained evident at the data point locations were definitively identified to genus or species, including some that are widely regarded as winter and spring ephemerals.

Table 1. Plant species that were commonly observed at and near wetland determination data points. Nomenclature follows Baldwin et al. (2012). Wetland indicator status is from Lichvar et al. (2016).

Scientific Name	Common Name	Wetland Status
<i>Avena fatua</i>	wild oats	UPL
<i>Bromus diandrus</i>	ripgut brome	UPL
<i>Bromus hordeaceus</i>	soft chess	FACU
<i>Erodium cicutarium</i>	crane's-bill	UPL
<i>Festuca (Lolium) perennis</i>	perennial rye-grass	FAC
<i>Geranium dissectum</i>	cut-leaf geranium	UPL
<i>Lactuca serriola</i>	prickly lettuce	FACU
<i>Lepidium latifolium</i>	tall whitetop	FAC
<i>Ranunculus muricatus</i>	buttercup	FAC
<i>Rumex crispus</i>	curly dock	FAC
<i>Vicia sativa</i>	vetch	FACU

3.1.2 SOILS

Results from Soil Survey

The site includes only one soil map unit, San Joaquin-Galt complex, leveled, 0 to 1 percent slopes. Eighty-five percent of this map unit is San Joaquin series.

San Joaquin soils are Abruptic Durixeralfs that are moderately well drained, with a thin (six inches in the reference pedon) Ap (plow) horizon, a clay-rich Bt horizon approximately 20 inches thick (reference pedon), and a duripan at about 20-40 inches depth (range stated in the official series description). Although neither the series nor any noted inclusion is listed as hydric, even a cursory examination of aerial or satellite imagery reveals vernal pools scattered throughout parts of the map unit. Presumably these result from shallower duripan depths than normal, whether due to leveling or natural variation in its depth.

Galt soils are Typic Durixeralfs and are listed as hydric soils, underlying vernal pools (Duripan Vernal Pools ecological site).

3.1.3 HYDRIC SOILS LIST

Galt soils are listed as hydric soils.

Field Observations

Hydric soils determinations were made in the field in accordance with NRCS (2017).

Based on field observations, the soils at the site were all San Joaquin soils, with hydric indicators at the two wetland data points. Unusually, the soil at one shallow excavated depression exhibited no hydric indicators at all despite the presence of clay and FAC plant species. This is not uncommon in this region, where the variation between hydric and non-hydric San Joaquin silt loam is quite subtle and may be based on either topography or subsoil conditions.

3.1.4 HYDROLOGY

The study site is in hydrologic unit 180201630404, which drains westward in the direction of the Sacramento River.

Average annual precipitation at a nearby station (Sacramento 5 ESE, COOP 047633, located about 5.64 miles northwest of the site) was 18.15 inches of rainfall for the period 1877 to 2016 (WRCC, 2021). Precipitation at this same station from August 1, 2020, through July 31, 2021, totaled only 7.75 inches (NOAA, 2021), which is less than half of the long term average. In contrast, rainfall in October 2022 was 6.72 inches (5.44 inches on a single date), and rainfall in December 2022 was even higher (about seven inches). Just these two months were sufficient to fill wetland depressions to the point of overtopping the lip, and to provide a sufficient duration of inundation to constitute wetland hydrology. Total rainfall from October 1, 2021, through May 24, 2022, was 16.50, well into a "normal" range even if the rain did arrive in huge amounts separated by long dry periods.

Nearby and Downstream Waters

The nearest blue line water body on the USGS map is Beacon Creek, which flows westward in channelized drainage courses passing within about 2,500 feet of the northwest corner of the site.

3.2 Discussion of Wetland Determination Data Points

Three-parameter wetland determination data points were studied at five locations (see Figure 2, Aquatic Resources Delineation Map). Data forms for the wetland determination data points that were studied are included in Appendix A.

The site shows signs of slight soil surface disturbance, seemingly in connection with long-ago burning of small amounts of debris and use of soil to ensure that the fire was fully extinguished. Bits of charcoal were found within one soils test pit, several inches below the surface.

At one data point (DP-3), at a shallow excavated depression, vegetation was marginally hydrophytic (FAC dominated, but with some FACU species also), but the soil exhibited no hydric indicators at all; likewise, indicators of wetland hydrology were entirely absent. Given the torrential winter rains that supported luxuriant vernal pool and seasonal wetland vegetation at another site that I also studied in April 2022, the lack of these mandatory indicators clearly demonstrates sufficient internal soil drainage to prevent the development of wetland conditions.

3.3 Observed Wetlands

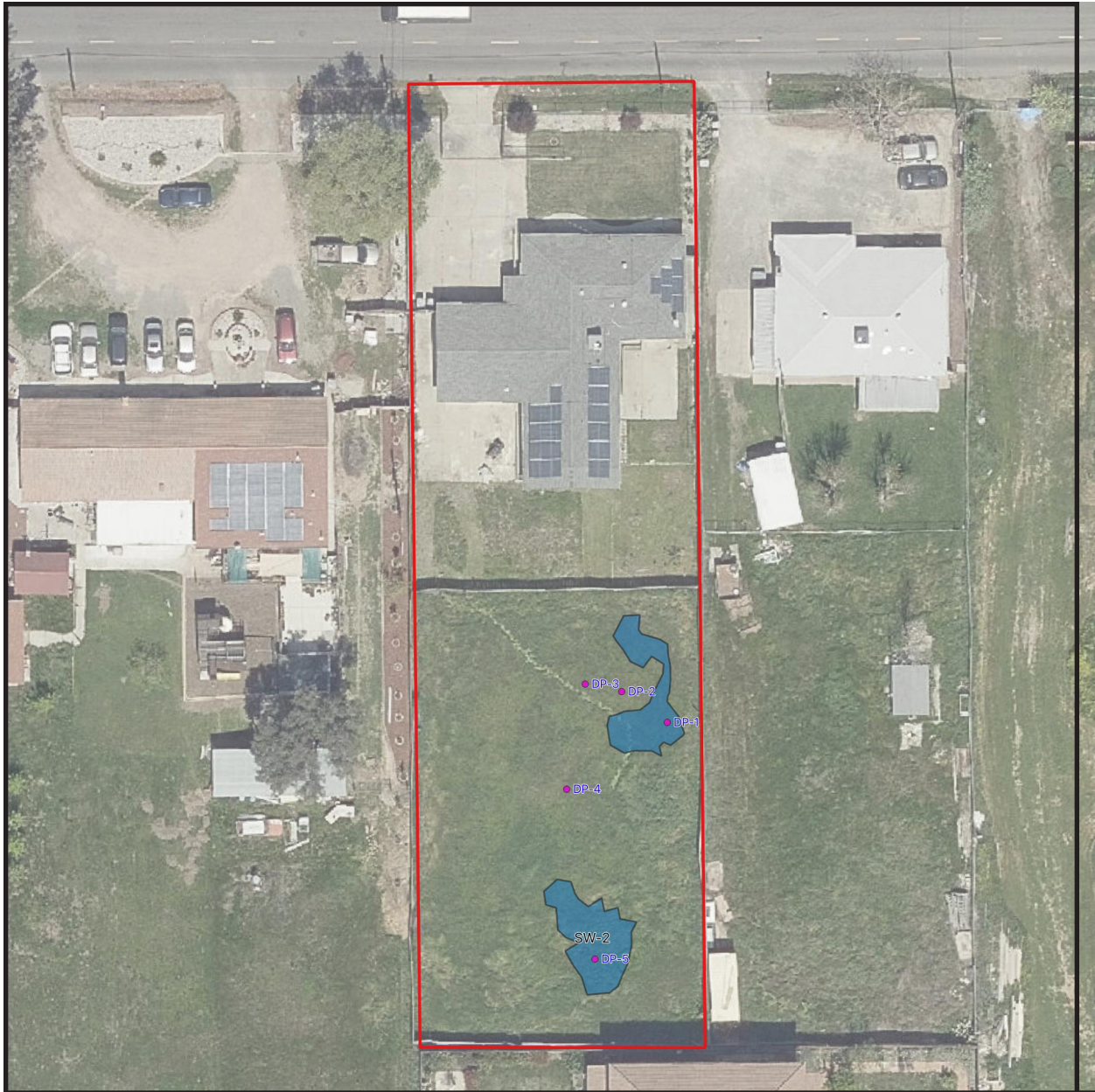
Wetlands observed on the 8160 Stevenson Ave. site are summarized in Table 2, with the applicable FGDC (2013) categories of wetlands and deepwater habitats of the U.S. Acreages of individual features are presented on the ARD map, Figure 3.

Table 2. Summary of wetlands delineated at the 9535 Florin Road site.

DESCRIPTION	MAP IDENTIFIER	AREA (acres)	FGDC (COWARDIN) CATEGORY AND DOMINANT SUBSTRATE
Seasonal Wetland	SW-1 and -2	0.022	Palustrine emergent wetland persistent
Total:	Freshwater Emergent Wetland	0.022 acre	Palustrine emergent wetland persistent

3.4 Commerce and Recreation

The site described in this report is private land with no known current commercial or recreational use.



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Scale: 1:600 (1"=50')



Sandale LLC Property 8160 Stevenson Avenue
Figure 2. Aquatic Resources Delineation Map
Revision date May 29, 2022



Parcel boundary



Seasonal Wetland



Wetland study data points

Acreage Table

SW-1 0.010 acre

SW-2 0.012 acre

Total Wetland 0.022 acre

Parcel area (net) 0.561 acre

4 REFERENCES

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Forest Service, 2001: see under USDA Forest Service.

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US Fish and Wildlife Service (USFWS). 2021. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Downloaded from the Wetlands Mapper at <http://www.fws.gov/wetlands/>.

Western Regional Climate Center (WRCC). 2021. Period of Record Monthly Climate Summary for COOP station 049043. Downloaded from <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9043>.

Appendix A:

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 8160 Stevenson Ave City/County: Sacramento Sampling Date: 4/6/2022
 Applicant/Owner: Sandale LLC State: CA Sampling Point: 1
 Investigator(s): Adrian Juncosa Section, Township, Range: Section 14, T. 7N, R. 5E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <1
 Subregion (LRR): C Lat: 38.46473 Long: -121.40613 Datum: WGS 84
 Soil Map Unit Name: San Joaquin-Galt complex, leveled, 0 to 1 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒	No _____	Is the Sampled Area within a Wetland?	Yes ☒ No _____
Hydric Soil Present?	Yes ☒	No _____		
Wetland Hydrology Present?	Yes ☒	No _____		
Remarks: Wetland boundary determined at edge between FAC-dominated vegetation and FAC-FACU dominated.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ _____ = Total Cover Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover Herb Stratum (Plot size: <u>100</u>) 1. <u>Festuca perennis</u> <u>70</u> <u>Y</u> <u>FAC</u> 2. <u>Hordeum marinum</u> <u>8</u> <u>N</u> <u>FAC</u> 3. <u>Bromus hordeaceus</u> <u>5</u> <u>N</u> <u>FACU</u> 4. <u>Ranunculus muricatus</u> <u>3</u> <u>N</u> <u>FAC</u> 5. <u>Rumex crispus</u> <u>1</u> <u>N</u> <u>FAC</u> 6. <u>Lepidium latifolium</u> <u>1</u> <u>N</u> <u>FAC</u> 7. <u>Vicia sativa</u> <u>1</u> <u>N</u> <u>UPL</u> 8. _____ <u>89</u> = Total Cover Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum <u>6</u> % Cover of Biotic Crust <u>5</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) 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:	

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100					C	
2-7	10YR 3/2	95	7.5YR 3/4	5	C	M	C	
7-10	10YR 3/2	80	10YR 5/4	20	C	M	C	
10-14	10YR 3/1	100					C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

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

- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 8160 Stevenson Ave City/County: Sacramento Sampling Date: 4/6/2022
 Applicant/Owner: Sandale LLC State: CA Sampling Point: 2
 Investigator(s): Adrian Juncosa Section, Township, Range: Section 14, T. 7N, R. 5E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <1
 Subregion (LRR): C Lat: 38.46475 Long: -121.40617 Datum: WGS 84
 Soil Map Unit Name: San Joaquin-Galt complex, leveled, 0 to 1 percent slopes NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks: Apparent burn site buried with other soil including 10YR 3/1 clay seen elsewhere. This data point is at a slight high point between DP-1 and DP-3.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>12</u> x 3 = <u>36</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>77</u> x 5 = <u>385</u> Column Totals: <u>94</u> (A) <u>441</u> (B) Prevalence Index = B/A = <u>4.7</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>100</u>)				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bromus diandrus</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Avena fatua</u>	<u>45</u>	<u>Y</u>	<u>UPL</u>	
3. <u>Festuca perennis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Vicia sativa</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Geranium dissectum</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
6. <u>Lepidium latifolium</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>6</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes _____ No ☒

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					C	
2-5	10YR 2/2	100					C	
5-13	10YR 3/2	70	7.5YR 4/4	20	C	M	C	
			5YR 3/4	5	C	M	C	
			charcoal	5				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

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

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No field indicators of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 8160 Stevenson Ave City/County: Sacramento Sampling Date: 4/6/2022
 Applicant/Owner: Sandale LLC State: CA Sampling Point: 3
 Investigator(s): Adrian Juncosa Section, Township, Range: Section 14, T. 7N, R. 5E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): C Lat: 38.46476 Long: -121.40621 Datum: WGS 84
 Soil Map Unit Name: San Joaquin-Galt complex, leveled, 0 to 1 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil ☒, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks: Shallow excavation, evidently the borrow site for the soil deposited at DP-2.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = <u>4.7</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>100</u>)				Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Festuca perennis</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Lepidium latifolium</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
4. <u>Vicia sativa</u>	<u>tr</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes ☒ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	_____ = Total Cover
% Bare Ground in Herb Stratum <u>54</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/1	100					C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No redox features at all at the soil test pit site. Clay was very easy to excavate.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

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

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No ☒

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

Remarks:

No field indicators of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 8160 Stevenson Ave City/County: Sacramento Sampling Date: 4/6/2022
 Applicant/Owner: Sandale LLC State: CA Sampling Point: 4
 Investigator(s): Adrian Juncosa Section, Township, Range: Section 14, T. 7N, R. 5E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <1
 Subregion (LRR): C Lat: 38.46467 Long: -121.40623 Datum: WGS 84
 Soil Map Unit Name: San Joaquin-Galt complex, leveled, 0 to 1 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>62</u> x 4 = <u>248</u> UPL species <u>12</u> x 5 = <u>60</u> Column Totals: <u>89</u> (A) <u>353</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	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 ☒
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>150</u>)				
1. <u>Vicia sativa</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Bromus diandrus</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
3. <u>Bromus hordeaceus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Lepidium latifolium</u>	<u>8</u>	<u>N</u>	<u>FAC</u>	
5. <u>Festuca perennis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Rumex crispus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7. <u>Avena fatua</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
8. <u>Lactuca serriola</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>11</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2	100					CL	
4-8	7.5YR 4/4	100					SaL	
8-12	10YR 3/1	100					C	Abrupt boundary above

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No field indicators of hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

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

☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No ☒

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

Remarks:

No field indicators of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 8160 Stevenson Ave City/County: Sacramento Sampling Date: 4/6/2022
 Applicant/Owner: Sandale LLC State: CA Sampling Point: 5
 Investigator(s): Adrian Juncosa Section, Township, Range: Section 14, T. 7N, R. 5E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38.46453 Long: -121.40620 Datum: WGS 84
 Soil Map Unit Name: San Joaquin-Galt complex, leveled, 0 to 1 percent slopes NWI classification: _____

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

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____		
				= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)					
1. _____	_____	_____	_____	Prevalence Index worksheet:	
2. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
3. _____	_____	_____	_____	OBL species _____ x 1 = _____	
4. _____	_____	_____	_____	FACW species _____ x 2 = _____	
5. _____	_____	_____	_____	FAC species _____ x 3 = _____	
				FACU species _____ x 4 = _____	
				UPL species _____ x 5 = _____	
				Column Totals: _____ (A) _____ (B)	
				Prevalence Index = B/A = <u>4.7</u>	
Herb Stratum (Plot size: <u>100</u>)					
1. <u>Festuca perennis</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2. <u>Lepidium latifolium</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	☒ Dominance Test is >50%	
3. <u>Hordeum marinum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	☐ Prevalence Index is ≤3.0 ¹	
4. <u>Vicia sativa</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Avena fatua</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
6. <u>Rumex crispus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
				= Total Cover	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____	_____	_____	_____		
				= Total Cover	
% Bare Ground in Herb Stratum <u>32</u> % Cover of Biotic Crust <u>10</u>				Hydrophytic Vegetation Present? Yes ☒ No _____	
Remarks:					

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100					CL	
3-10	10YR 3.5/1.5	60	10YR 4/4	35	C	M	C	
			7.5YR 4/4	5	C	M	C	
10-14	10YR 3.5/1	100					C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Marginally hydric soil but meets definition of F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

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

- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: