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February 28, 2022

Sheridon Evans
Buzz Oates Construction, Inc.
555 Capitol Mall, Suite 900
Sacramento, CA 98514

Raley Boulevard and Diesel Drive Aquatic Resource Delineation Report

Dear Mr. Evans:

In 2014, SWCA (formerly Sycamore Environmental Consultants) identified and delineated wetlands on the project parcel (APN 238-022-0019) located at Raley Boulevard and Diesel Drive in Sacramento, California. Results from the survey were documented in an aquatic resources delineation report (ARDR). On January 11, 2022, SWCA conducted a survey to confirm that current site conditions are consistent with the findings in the 2014 ARDR. The survey found that all wetlands mapped in the 2014 ARDR are still present and one additional wetland has formed (seasonal marsh 1). The wetland is shown in Attachment A.

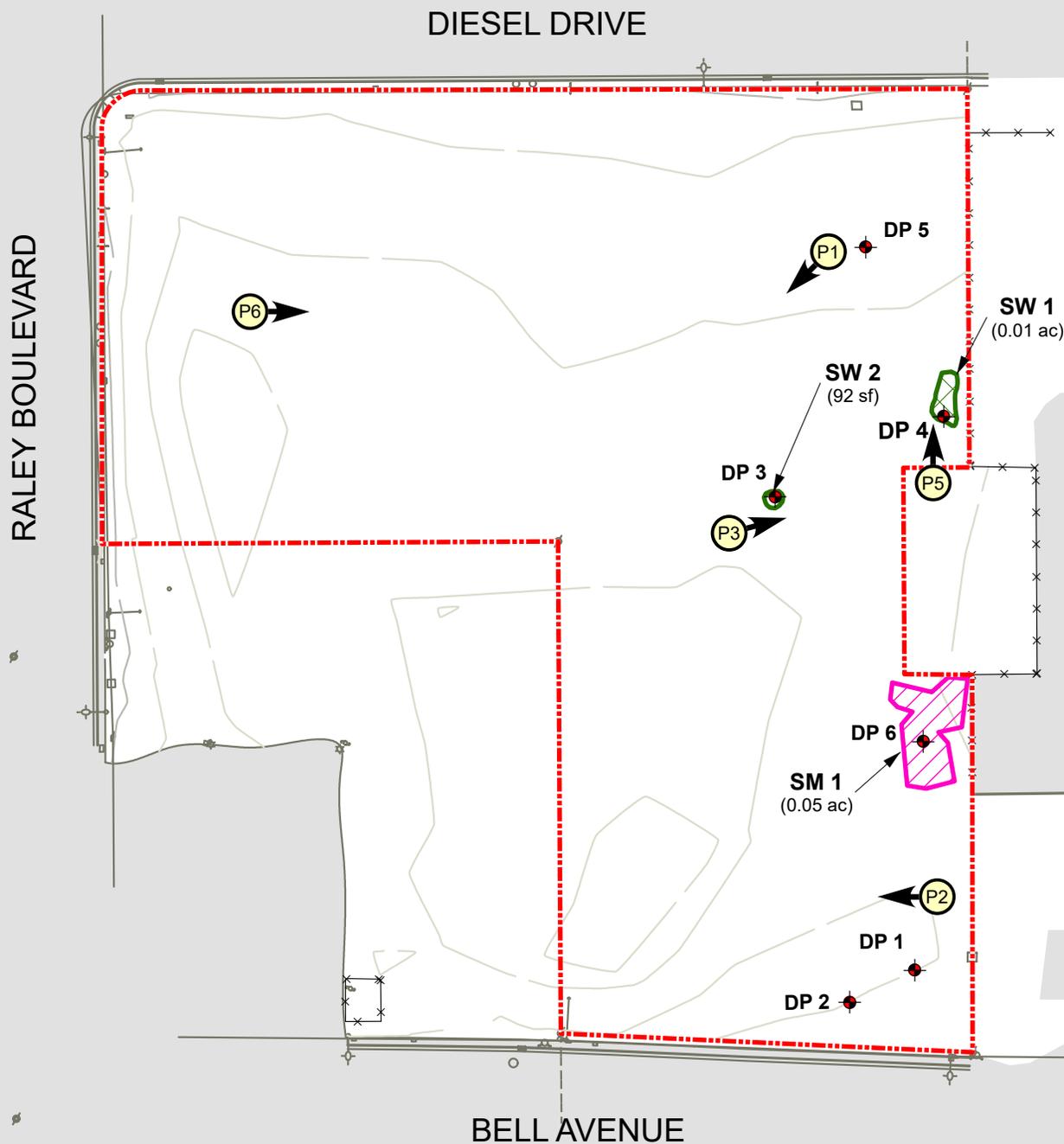
Three seasonal wetlands totaling approximately 0.06 acre occur within the boundaries of the project parcel (Attachment A). The source of inundation for seasonal marsh 1 is generally from runoff of the adjacent parcel and the vegetation is dominated by typical marsh species including nutsedge (*Cyperus eragrostis*). The three wetlands are isolated and there is no evidence that they inundate enough to overflow off-site. Isolated wetlands and waters are not subject to Clean Water Act jurisdiction. No jurisdictional wetlands or waters occur on the project parcel. Section V. of the 2014 ARDR (Attachment C) provides further analysis and discussion regarding this determination. The discussion in Section V. also applies to the seasonal marsh identified during the survey in January 2022. The 2014 ARDR in combination with the updated wetland map sufficiently identifies all wetlands and waters on the project parcel.

Sincerely,

Jeffery Little
Director, Sacramento

Attachments: A: Updated wetland map
B: Data point 6 data sheet
C: 2014 Aquatic Resource Delineation Report

Lat: 38°38'58.13"N
 Long: 121°25'35.9"W



Lat: 38°38'49.29"N
 Long: 121°25'46.06"W

APN 238-022-0019

Figure 4.
Jurisdictional
Delineation Map

DRAFT

- Biological Study Area (BSA)
- Data point and Number
- Seasonal Wetland (SW)
- Seasonal Marsh (SM)
- Photopoint Location and Direction

Feature	Area
Seasonal Wetland (SW)	
SW 1	0.01 ac
SW 2	< 0.01 ac (92 sf)
Seasonal Marsh (SM)	
SM 1	0.05 ac
Total	0.06 ac

Date	Submittal	Delineator(s)	Agency/Company
15 Jan 14	Original	C. Hughes	Sycamore Environmental
23 Feb 22	Revised	K. Derby	SWCA - Sacramento

Sacramento County, CA
 NAD 1983 StatePlane California
 II FIPS 0402 Feet
 38.6483°N 121.428°W

Topographic Basemap: Tentative,
 Parcel Map Parcel 4, I-80 Industrial
 Park, 130022-S1-TB01.dwg (July 2013)
 by Morton & Pitalo, Inc.

Base Map: ESRI ArcGIS Online,
 accessed February 2022
 Updated: 2/28/2022
 Project No. 69489
 Aprx: 69489_raleYBlvdDieselDr
 Layout:
 69489RaleyBlvdDieselDr_DelinMap



1:1,200



SWCA
 ENVIRONMENTAL CONSULTANTS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: _____ City/County: _____ Sampling Date: _____
 Applicant/Owner: _____ State: _____ Sampling Point: _____
 Investigator(s): _____ Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: _____ Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				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. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
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 _____ % Cover of Biotic Crust _____				

Remarks: _____

Jurisdictional Delineation Report

for

APN 238-022-0019

City of Sacramento, CA

Prepared by:

Sycamore Environmental Consultants, Inc.

6355 Riverside Blvd., Suite C

Sacramento, CA 95831

Phone: 916/ 427-0703

Contact: Chuck Hughes, M.S.

Prepared for:

The Buzz Oates Group of Companies

8615 Elder Creek Road

Sacramento, CA 95828

Phone: 916/ 379-3827

Contact: Mr. Jacob Lares, Development Project Manager

15 January 2014

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Jurisdictional Delineation Report
for
APN 238-022-0019

City of Sacramento, CA

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I. INTRODUCTION

A. Purpose

Sycamore Environmental Consultants, Inc., conducted a jurisdictional delineation of Assessor's Parcel Number (APN) 238-022-0019, at the intersection of Raley Boulevard and Diesel Drive, in the City of Sacramento, CA. The purpose of the delineation was to identify wetlands and waters. The U.S. Army Corps of Engineers (Corps) verifies delineations of wetlands and waters.

B. Project Location

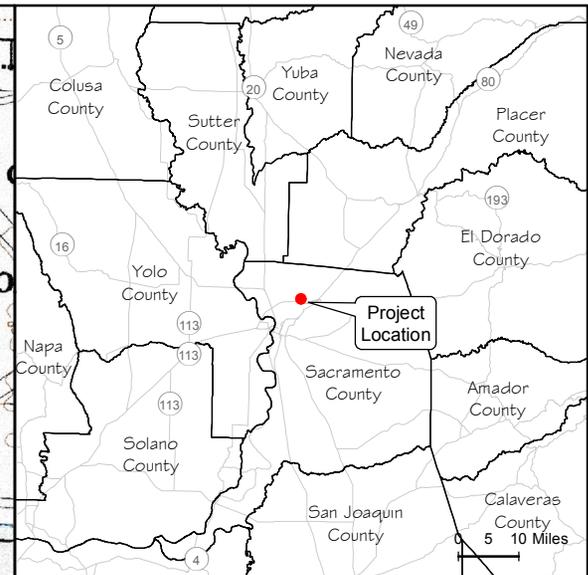
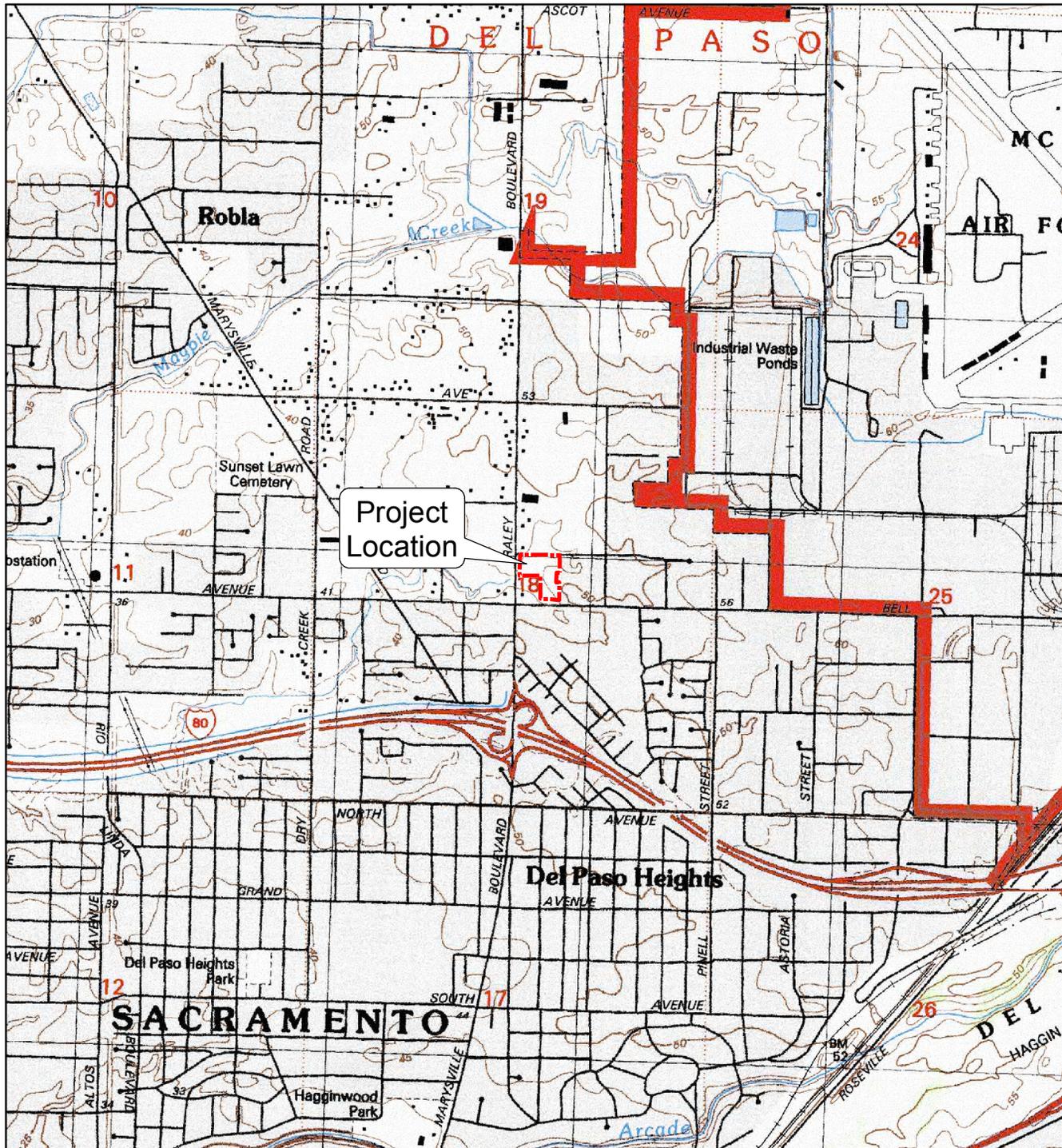
The biological study area (BSA) is assessor's parcel number APN 238-022-0019. The approximately 4.94 acre BSA is bordered by Diesel Drive on the north, Raley Boulevard on the west, Bell Avenue on the south, and light industrial development on the east. A vacant parcel on the east property line is a planned SMUD substation. A gas station is located on the northeast corner of Raley Boulevard and Bell Avenue. The BSA is on the Rio Linda USGS topographic quad (T9N, R5E, Section 10; Figure 1) and is in the Lower American hydrologic unit (hydrologic unit code 18020111). The approximate center is 38.6484° north, 121.4279° west (WGS84), and the UTM coordinates are 636,904 meters E, 4,278,736 meters N, Zone 10S (WGS84). Figure 2 is an aerial photograph of the BSA.

C. Applicant

The Buzz Oates Group of Companies
8615 Elder Creek Road
Sacramento, CA 95828
Phone: 916/ 379-3827
Contact: Mr. Jacob Lares, Development Project Manager

D. Project Description

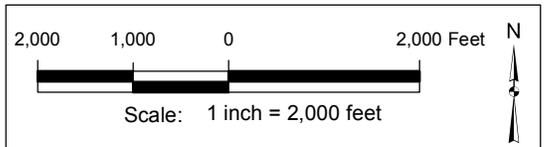
The applicant intends to develop this parcel for industrial or commercial use. The project design is not finalized.



APN 238-022-0019
 City of Sacramento, CA
 18 December 2013

Figure 1. Location Map

 Project Location



Rio Linda, CA (1992)
 USGS 7.5' Quadrangle Topographic DRG
 7.5 Minute (C) Series, Albers Nad83 Mosaics (MrSID)
 CA Spatial Library (CASIL)

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APN 238-022-0019
 City of Sacramento, CA
 18 December 2013

 Project Location



Aerial Photograph:
 2 February 2012, UC-G
 US-CA-Sacramento
 ESRI ArcGIS Basemap Layer
 Road Centerline (12 Oct. 2009)
 Sac County Road GIS

Figure 2. Aerial Photograph

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II. STUDY METHODS

A. Data Sources

Table 1 is a list of data sources compiled for this report and utilized by the Corps and EPA for determinations of jurisdiction (May 2007; “Data Sources” section of the Approved Jurisdictional Determination Form).

Table 1. Data sources

Data Source	Data Location/Results
1. Maps, plans, plots or plat submitted by or on behalf of the applicant	See Figures 1 through 4.
2. Data sheets prepared/submitted by or on behalf of the applicant	See Appendix A.
3. Corps navigable waters study	None known
4. USGS Hydrologic Atlas <ul style="list-style-type: none"> • USGS NHD data • USGS 8- and 12-digit HUC maps 	Lower American (18020111) Lower Steelhead Creek (180201110303)
5. USGS 7.5 minute quad map(s)	Rio Linda, 1992
6. USDA-NRCS Soil Survey	NRCS 1993, Figure 3
7. National wetlands inventory map(s)	USFWS 2013
8. State/Local wetland inventory map(s)	None known
9. FEMA/FIRM maps	06067C0068H (Appendix D)
10. 100-year Floodplain Elevation is:	None
11. Photographs: <ul style="list-style-type: none"> • Aerial (Name & Date): • Other (Name & Date): 	Figure 2: 2 February 2012 Appendix B: 14 February & 7 November 2013
12. Previous determination(s). File no. and date of response letter	None known

B. Survey Dates and Personnel

An initial reconnaissance visit of the BSA by Chuck Hughes and Jeffery Little occurred on 11 January 2013. Fieldwork for the jurisdictional delineation was conducted by Chuck Hughes and Noosheen Pouya on 14 February 2013 and 7 November 2013.

C. Survey Methods

This jurisdictional delineation report has been prepared in accordance with the Sacramento District minimum standards for delineations (Corps November 2001), U.S. Army Corps of Engineers Wetland Delineation Manual (Corps 1987), Regulatory Guidance Letter 05-05

(Corps 2005), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West region (the supplement; Corps 2008). The supplement is intended to bring the Corps Manual (Corps 1987) up to date with current knowledge and practice in the region. Use of the Corps Manual in combination with the supplement is intended to improve the accuracy and efficiency of wetland delineation procedures in the Arid West Region. The Arid West Supplement is applicable because the BSA experiences hot, dry summers typical of Mediterranean California, virtually all of the precipitation falls as rain, and dominant vegetation types in the local area are grassland and oak woodland. Wetland and channel features in the BSA were identified and mapped.

The jurisdictional delineation was conducted using the Routine On-Site Determination Method (Corps 1987). Jurisdictional data were recorded using the Wetland Determination Data Form for the Arid West Region (Corps 2008). Soil, vegetation, and hydrology data were recorded at the data points. Wetland data sheets are in Appendix A. Photographs are in Appendix B. Appendix C is a list of plant species recorded at the data points. Hydrophytic classifications of plants were determined from Lichvar and Kartesz (2012).

D. Mapping of Data and Calculation of Acreages

The locations and boundaries of wetland and water features in the BSA were mapped with a sub-meter accurate global positioning system (GPS). The GPS data were exported to AutoCAD[®] and overlaid onto a 1-foot contour interval topographic basemap to create Figure 4. Acreages were calculated using AutoCAD[®] functions.

E. Definitions

The U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency regulate the discharge of dredge and fill material into “waters of the United States” under Section 404 of the Clean Water Act (33 U.S.C. 1344). The Corps issues permits for certain dredge and fill activities in waters of the U.S. pursuant to the regulations in 33 CFR 320-330. The lateral limits of jurisdiction in those waters may be divided into three categories. The categories include the territorial seas, tidal waters, and non-tidal waters (see 33 CFR 328.4 (a), (b), and (c), respectively). The term “waters of the U.S.” is defined at 33 CFR 328.3(a) as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - iii. Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.

8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

The term "adjacent" is defined at 33 CFR 328.3(c):

The term *adjacent* means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

The limits of jurisdiction are identified in 33 CFR 328.4 as:

- a. Territorial Seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)
- b. Tidal Waters of the United States. The landward limits of jurisdiction in tidal waters:
 1. Extends to the high tide line, or
 2. When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.
- c. Non-Tidal Waters of the United States. The limits of jurisdiction in non-tidal waters:
 1. In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
 2. When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
 3. When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

The term "ordinary high water mark" is defined at 33 CFR 328.3(e):

The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Wetlands, as defined by the Corps for regulatory purposes, are identified using a three-parameter test that considers whether hydrophytic vegetation, hydric soils, and hydrology are present (Corps 1987). Wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3, 40 CFR 230.3). Wetlands also include less conspicuous wetland types such as vernal pools and other seasonal wetlands.

An ephemeral stream has flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow. An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow (66 FR 42099).

III. SETTING

The BSA is in the City of Sacramento near the intersection of Raley Boulevard and Diesel Drive. The area surrounding the BSA is partially developed, mostly to commercial or light industrial uses, with several vacant parcels similar to the BSA.

A. Topography

Elevation in the BSA is approximately 50 feet above sea level. The topography is a nearly level field with elevation varying by about 3 feet. Historically, the surrounding landscape supported vernal pools.

B. Weather and Climate Conditions

Most fieldwork for the jurisdictional delineation was conducted on 14 February 2013. The nearest National Weather Service (NWS) station is in downtown Sacramento, approximately 6 miles southwest of the BSA. NWS uses a rain year beginning 1 July and ending 30 June. The downtown Sacramento station received 13.13 inches of precipitation from 1 July 2012 through 14 February 2013 (NWS 2013). Normal for that period is 13.16 inches. However, most of the precipitation fell in November and December 2012. Only 1.06 inches were recorded from 1 January through 14 February 2013. The conditions at the site were drier than normal when the fieldwork was conducted in February 2013. The BSA had normal dry autumn conditions during the fieldwork in November 2013.

C. Vegetation

The BSA consists of weedy, ruderal vegetation, with a few piles of dumped asphalt, concrete, and brick. The site is routinely disked. The vegetation is dominated by the nonnative annual grasses Italian ryegrass (*Lolium perenne*), wild oat (*Avena* sp.), and bromes (*Bromus* sp.). Vegetation in the wetlands is described in section IV.B below.

D. Existing Level of Disturbance

The BSA is a routinely disked vacant lot in a partially developed area, with several spoils piles. The BSA does not appear to have been leveled in the past and small topographic features remain. There is landscaping irrigation runoff from a lawn on the adjacent property in the southeast corner of the parcel. The southeast corner was dry during the February fieldwork, but wet during the November fieldwork prior to any substantial precipitation. Runoff from the lawn into the BSA was directly observed during the November 2013 fieldwork. The Corps (2012) generally does not consider artificially irrigated areas which would revert to uplands if the irrigation ceased to be waters of the United States. The normal circumstances on irrigated lands are represented by the vegetation and hydrology that would occur on the site during a normal rainfall year in the absence of irrigation (Corps 2012).

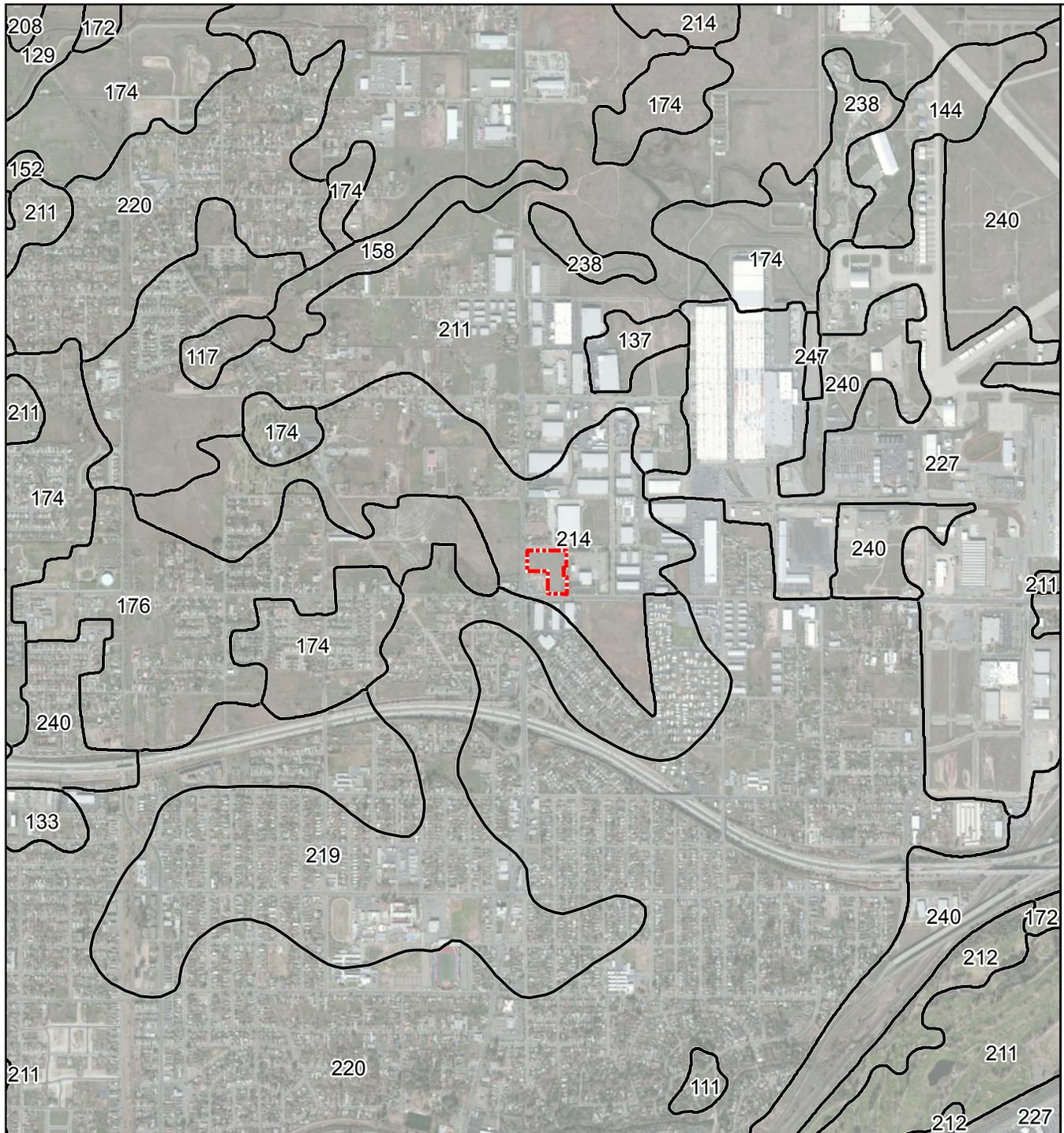
E. Soils

Soil pits were dug to observe the chroma, texture, degree of saturation, and other characteristics. The soil mapping unit in the BSA is San Joaquin silt loam, 0-3% slopes (NRCS 1993; Figure 3). About 4% of the mapping unit consists of hydric Galt series soils in depressions (USDA 2012). The following description is summarized from NRCS (1993). Reported colors are for moist soil.

San Joaquin silt loam, 0-3% slopes: San Joaquin silt loam, 0-3% slopes, is a moderately deep, moderately well-drained soil on low terraces. This soil formed in alluvium derived from dominantly granitic rocks. A typical profile has moderately to slightly acid brown (7.5YR 4/4) silt loam from 0 to 23 inches, neutral yellowish red (5YR 4/6) clay loam from 23 to 28 inches, neutral yellowish red (5YR 4/6) indurated duripan from 28 to 39 inches, mildly alkaline dark yellowish brown (10YR 4/4) strongly cemented duripan from 39 to 54 inches, and mildly alkaline dark yellowish brown (10YR 4/4) loam from 54 to 60 inches. Permeability is very slow and water may perch above the claypan for short periods after heavy rainfall in winter and early spring and when the soil is over irrigated. Runoff is slow, the erosion hazard is slight, and the shrink-swell potential is high.

F. National Wetlands Inventory Map

The National Wetlands Inventory (NWI) does not identify any features in the BSA (USFWS 2013).

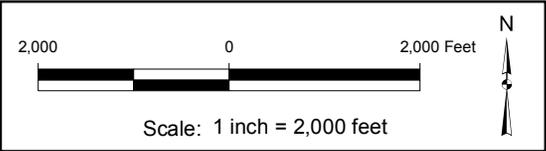


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Figure 3. Soils Map

 Project Location

214: San Joaquin fine silt loam,
 0 to 3 percent slopes



Aerial Photograph:
 2 February 2012, UC-G
 US-CA-Sacramento
 ESRI ArcGIS Basemap Layer
 Soil data:
 Soil Survey Geographic (SSURGO) database
 for Sacramento County, Ca. (8 Jan. 2007)
 U.S.D.A., N.R.C.S.
<http://SoilDataMart.nrcs.usda.gov/>

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IV. WETLANDS AND WATERS

Wetlands and waters are shown in Figure 4. On 2 December 2008, the Corps issued a memorandum providing guidance on implementation of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Corps December 2008). An evaluation of wetlands relative to their potential jurisdiction under Section 404 of the Clean Water Act (33 U.S.C. 1344) in light of the 2008 Rapanos guidance, is in Section V.

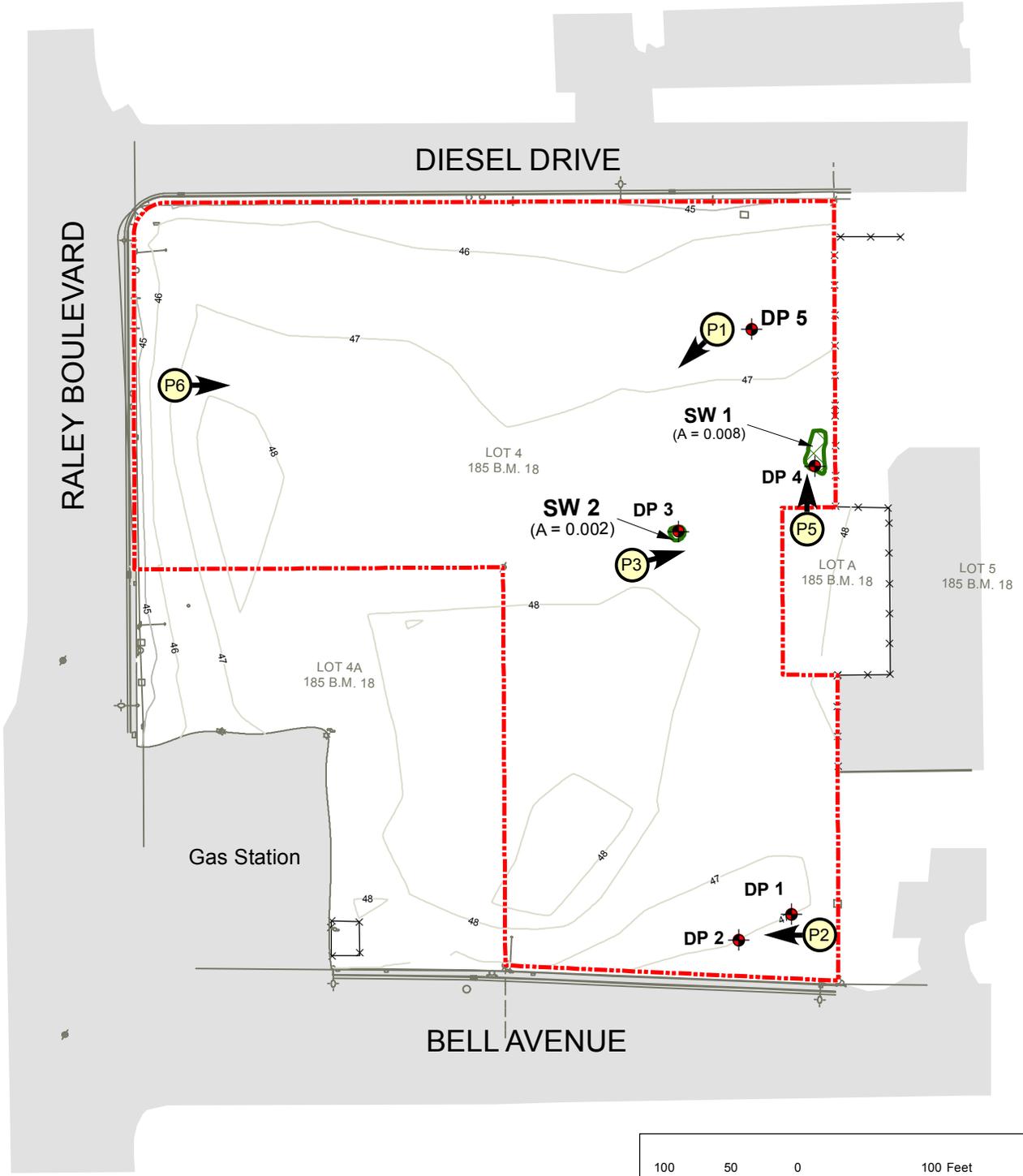
A. Waters

No jurisdictional waters exist in the BSA.

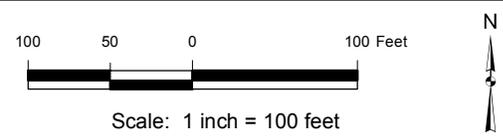
B. Wetlands

Seasonal Wetlands 1 and 2: Two small areas, totaling approximately 0.01 acre, met the Corps' 3-parameter criteria for wetlands. Both seasonal wetlands are dominated by Italian rye grass, a facultative species. The wetlands receive hydrology only from direct precipitation and runoff from surrounding uplands, there is no other water source. The soil has a dark grayish brown (10YR 4/2) matrix with 4-7% yellowish red (5YR 4/6) redoximorphic concentrations in the matrix and along pore linings. The soil met two hydric soil indicators, depleted matrix and vernal pools. Oxidized rhizospheres along living roots are evidence of saturated soil conditions during the growing season. The wetlands were completely dry during the November fieldwork, which is normal for seasonal features in Mediterranean-climate California. Soil was moist but not saturated during the February fieldwork, although a few soil peds were saturated in the interior. The January-February 2013 time period was unusually dry, and the seasonal wetlands had not likely contained saturated soils since heavy rains in November-December 2012.

Lat: 38°38'58.55"N
 Long: 121°25'35.54"W



Lat: 38°38'48.86"N
 Long: 121°25'46.29"W



APN 238-022-0019
 City of Sacramento, CA
 18 December 2013

-  Biological Study Area (BSA)
-  Seasonal Wetland (SW)
-  Data point and Number
-  Photopoint Location and Direction



Date	Submittal	Delineator(s)	Agency/Company
18 Dec 13	Original	C. Hughes	Sycamore Environmental

Figure 4.
 Jurisdictional Delineation Map

Topographic Basemap: Tentative Parcel Map
 Parcel 4, I-80 Industrial Park
 130022-S1-TB01.dwg (July 2013) by Morton & Pitalo, Inc.
 13001RaleyBellNorthSite_Fig4DelinMap.mxd

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V. REGULATORY ANALYSIS AND DISCUSSION

On 5 June 2007, the Corps issued a memorandum providing guidance on implementation of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Corps December 2008). The guidance distinguishes among traditional navigable waters (TNW), relatively permanent waters (RPW), and non-relatively permanent waters (non-RPW). The Corps will routinely exercise jurisdiction over traditional navigable waters, relatively permanent waters, and wetlands adjacent to those waters. The jurisdictional determination for non-relatively permanent waters and their adjacent wetlands (if any) will be based on whether there exists a significant nexus with a traditional navigable water. Factors evaluated by the Corps during the significant nexus evaluation will include ecology, hydrology, and the influence of the water on the "chemical, physical, and biological integrity of downstream traditional navigable waters" (Corps December 2008). The Corps may exert jurisdiction if the findings of the significant nexus evaluation indicate that "the tributary and its adjacent wetlands are likely to have an effect [on downstream traditional navigable waters] that is more than speculative or insubstantial" (Corps December 2008).

The Rapanos memorandum (Corps December 2008) does not affect the Court's decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, No. 99-1178 (January 2001; "SWANCC"), which involved statutory and constitutional challenges to the assertion of CWA jurisdiction over isolated, non-navigable, intrastate waters used as habitat by migratory birds. Isolated wetlands and waters are not subject to Clean Water Act jurisdiction. Table 3 applies the "significant nexus" status of waters in the BSA.

Wetlands and waters not subject to the Corps' jurisdiction may come under the jurisdiction of DFG and/or the RWQCB. For example, "isolated" wetlands not subject to Section 404 in accordance with the SWANCC decision are subject to regulation by the RWQCB.

A. TNWs and Adjacent Wetlands

No TNWs or wetlands adjacent to TNWs occur in the BSA.

B. RPWs that flow directly or indirectly into TNWs

No RPWs that flow directly or indirectly into TNWs occur in the BSA.

C. Non-RPWs that flow directly or indirectly into TNWs

No Non-RPWs that flow directly or indirectly into TNWs occur in the BSA.

D. Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

No wetlands directly abutting RPWs that flow directly or indirectly into TNWs occur in the BSA.

E. Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

No wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs occur in the BSA.

F. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

No wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs occur in the BSA.

G. Impoundments of waters

There are no impoundments of water in the BSA.

H. Isolated (interstate or intrastate) waters, including isolated wetlands

Both seasonal wetlands in the BSA are isolated. There are no swales draining the seasonal wetlands, and no evidence that they inundate enough to overflow off-site. The watersheds of both are smaller than the BSA. Water that does drain off-site elsewhere in the BSA is collected by the City stormwater system.

I. Non-jurisdictional waters

There is 0.01 acre of isolated, non-jurisdictional wetlands in the BSA.

J. Summary of Jurisdictional Acreages

There are no jurisdictional wetlands in the BSA.

VI. LITERATURE CITED

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VII. REPORT PREPARERS

Chuck Hughes, M.S., Plant Biology, Michigan State University, East Lansing, MI. Ten years experience preparing biological/botanical resource evaluations, wetland delineations, arborist reports, impact analyses, and mitigation and restoration plans. Serves as assistant project manager. He is a Professional Wetland Scientist (#2029), an ISA Certified Arborist (WE-6885A), and is listed on a USFWS recovery permit for listed fairy and tadpole shrimp (TE799564-3). His B.S. degree from UC Davis is in environmental horticulture and urban forestry, with an emphasis in plant biodiversity. Responsibilities: Field work and report preparation.

Noosheen Pouya, B.S., Environmental Science and Management, University of California, Davis. Conducts plant and wildlife surveys, provides technical support for wetland delineations, biological resource evaluations, mitigation plans, and other documents used in the CEQA/NEPA process, queries the CNDDDB, and researches special-status species for projects. Responsibilities: Field work and report preparation.

Aramis Respall, Over 19 years experience in drafting and spatial analysis using AutoCAD map and ArcGIS for public and private projects. Prepares CAD/ GIS maps and ArcView® figures depicting project locations, waters and wetland locations, project impacts, aerial views of projects, tree locations, and other functions. Responsibilities: Figure preparation and spatial analysis.

Cynthia Little, Principal, Sycamore Environmental. Responsibilities: Senior editor, quality control.

Appendix A.

Wetland Data Sheets

APN 238-022-0019

DRAFT

WETLAND DETERMINATION DATA FORM – Arid West Region
 Routine Wetland Determination
 (September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 238-022-0019 City/County: City of Sacramento Sampling Date: 14 Feb 2013
 Applicant/Owner: Buzz Oates State: CA Sampling Point: 1
 Investigator(s): Chuck Hughes Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Disked field Local relief (concave, convex, none): Concave-concave Slope (%): 0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Micro depression of a few square feet.				

VEGETATION

<u>Tree Stratum:</u> (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:	<u>0</u>				
<u>Sapling/Shrub Stratum:</u> (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL Species: _____ x 1 = _____	
3. _____	_____	_____	_____	FACW Species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC Species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU Species _____ x 4 = _____	
Total Cover:	<u>0</u>			UPL Species _____ x 5 = _____	
				Column Totals: _____ (A) _____ (B)	
<u>Herb Stratum:</u> (Plot size: 1m radius)				Prevalence Index = B/A = _____	
1. <u>Lolium perenne</u>	<u>40</u>	<u>D</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2. <u>Hordeum marinum ssp. gussoneanum</u>	<u>20</u>	<u>D</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <u>Avena fatua</u>	<u>5</u>		<u>--</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
4. <u>Medicago polymorpha</u>	<u>5</u>		<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Cyperus eragrostis</u>	<u>1</u>		<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. <u>Geranium dissectum</u>	<u>5</u>		<u>--</u>		
7. <u>Polygonum aviculare</u>	<u>1</u>		<u>FACW</u>		
8. _____	_____	_____	_____		
Total Cover:	<u>77</u>				
<u>Woody Vine Stratum:</u> (Plot size: _____)				¹ Indicators of Hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover:	<u>0</u>				
% Bare Ground in Herb Stratum	<u>20</u>	% Cover of Biotic Crust	<u>0</u>		

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region
 Routine Wetland Determination
 (September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 238-022-0019 City/County: City of Sacramento Sampling Date: 14 Feb 2013
 Applicant/Owner: Buzz Oates State: CA Sampling Point: 2
 Investigator(s): Chuck Hughes Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Disked field Local relief (concave, convex, none): Concave-concave Slope (%): 0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area		
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: Low spot in field					

VEGETATION

<u>Tree Stratum:</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
4. _____	_____	_____	_____		
Total Cover:	<u>0</u>				
<u>Sapling/Shrub Stratum:</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL Species: _____ x 1 = _____	
3. _____	_____	_____	_____	FACW Species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC Species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU Species _____ x 4 = _____	
Total Cover:	<u>0</u>			UPL Species _____ x 5 = _____	
				Column Totals: _____ (A) _____ (B)	
				Prevalence Index = B/A = _____	
<u>Herb Stratum:</u> (Plot size: 1m radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <i>Lolium perenne</i>	60	D	FAC	<input type="checkbox"/> Dominance Test is >50%	
2. <i>Cynodon dactylon</i>	20	D	FACU	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <i>Avena fatua</i>	3		--	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <i>Medicago polymorpha</i>	2		FACU	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. <i>Hordeum marinum ssp. gussoneanum</i>	2		FAC		
6. <i>Lythrum hyssopifolia</i>	<1		OBL		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover:	<u>87</u>				
<u>Woody Vine Stratum:</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover:	<u>0</u>				
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust <u>0</u>			

Remarks:

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	--				Clay loam	

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.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks: Site has been disked in the past year.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2or more required)	
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available): _____ _____			
Remarks: _____ _____			

WETLAND DETERMINATION DATA FORM – Arid West Region
 Routine Wetland Determination
 (September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 238-022-0019 City/County: City of Sacramento Sampling Date: 14 Feb 2013
 Applicant/Owner: Buzz Oates State: CA Sampling Point: 3
 Investigator(s): Chuck Hughes Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Disked field Local relief (concave, convex, none): Concave-concave Slope (%): 0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks:			

VEGETATION

<u>Tree Stratum:</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>1</u> (A) 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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	<u>0</u>			
Sapling/Shrub Stratum: (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species: _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species _____ x 3 = _____ FACU Species _____ x 4 = _____ UPL Species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover:	<u>0</u>			
Herb Stratum: (Plot size: 1m radius)				
1. <i>Lolium perenne</i>	40	D	FAC	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Spergula arvensis</i>	5		--	
3. <i>Erodium botrys</i>	5		FACU	
4. <i>Avena fatua</i>	1		--	
5. <i>Erodium moschatum</i>	<1		--	
6. <i>Geranium dissectum</i>	<1		--	
7. <i>Lupinus</i> sp. (annual)	<1		--	
8. _____	_____	_____	_____	
Total Cover:	<u>51</u>			
Woody Vine Stratum: (Plot size: _____)				
1. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____	
Total Cover:	<u>0</u>			
% Bare Ground in Herb Stratum <u>50</u>		% Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region
 Routine Wetland Determination
 (September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 238-022-0019 City/County: City of Sacramento Sampling Date: 14 Feb 2013
 Applicant/Owner: Buzz Oates State: CA Sampling Point: 4
 Investigator(s): Chuck Hughes Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Disked field Local relief (concave, convex, none): Concave-concave Slope (%): 0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks:					

VEGETATION

<u>Tree Stratum:</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____		
Total Cover:	<u>0</u>				
<u>Sapling/Shrub Stratum:</u> (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL Species: _____	x 1 = _____
3. _____	_____	_____	_____	FACW Species _____	x 2 = _____
4. _____	_____	_____	_____	FAC Species _____	x 3 = _____
5. _____	_____	_____	_____	FACU Species _____	x 4 = _____
Total Cover:	<u>0</u>			UPL Species _____	x 5 = _____
<u>Herb Stratum:</u> (Plot size: <u>1m radius</u>)				Column Totals: _____	(A) _____ (B)
1. <u>Lolium perenne</u>	<u>25</u>	<u>D</u>	<u>FAC</u>	Prevalence Index = B/A =	
2. <u>Spergula arvensis</u>	<u><1</u>		<u>--</u>	Hydrophytic Vegetation Indicators:	
3. <u>Juncus bufonius</u>	<u><1</u>		<u>--</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover:	<u>25</u>			¹ Indicators of Hydric soil and wetland hydrology must be present.	
<u>Woody Vine Stratum:</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover:	<u>0</u>				
% Bare Ground in Herb Stratum	<u>70</u>	% Cover of Biotic Crust	<u>0</u>		
Remarks:					

WETLAND DETERMINATION DATA FORM – Arid West Region
 Routine Wetland Determination
 (September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 238-022-0019 City/County: City of Sacramento Sampling Date: 07 Nov 2013
 Applicant/Owner: Buzz Oates State: CA Sampling Point: 5
 Investigator(s): Charles Hughes, IV, Noosheen Pouya Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Disked field Local relief (concave, convex, none): none Slope (%): ~0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks:			

VEGETATION

<u>Tree Stratum:</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	<u>0</u>			
Sapling/Shrub Stratum: (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species: _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species _____ x 3 = _____ FACU Species _____ x 4 = _____ UPL Species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover:	<u>0</u>			
Herb Stratum: (Plot size: 6ft radius)				
1. <u>Avena sp.</u>	<u>40</u>	<u>D</u>	<u>--</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Lactuca serriola</u>	<u>5</u>		<u>FACU</u>	
3. <u>Vicia sp.</u>	<u>25</u>	<u>D</u>	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>3</u>		<u>--</u>	
5. <u>Cynodon dactylon</u>	<u>25</u>	<u>D</u>	<u>FACU</u>	
6. <u>Festuca perennis</u>	<u>5</u>		<u>FAC</u>	
7. <u>Hordeum marinum ssp. gussoneanum</u>	<u>3</u>		<u>FAC</u>	
8. _____	_____	_____	_____	
Total Cover:	<u>106</u>			
Woody Vine Stratum: (Plot size: _____)				
1. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____	
Total Cover:	<u>0</u>			
% Bare Ground in Herb Stratum <u>5</u>		% Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks: Datapoint near an old spoils pile that has not been disked.

Appendix B.

Photographs

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Photo 1. View looking southwest across the BSA from data point 5 (14 February 2013).



Photo 2. View looking west across the south end of the BSA. Bell Avenue is on the left. The shovel is at data point 1 (14 February 2013).



Photo 3. Data point 3. Seasonal wetland 2 is a small depression (14 February 2013).



Photo 4. Redoximorphic concentrations at data point 3 (14 February 2013).



Photo 5. View looking north seasonal wetland 1. The shovel is at data point 4 (14 February 2013).



Photo 6. View looking east from near Raley Boulevard (7 November 2013).

Appendix C.

Plant Species Recorded at Data Points

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Species	Common Name	Stratum ¹	Indicator
<i>Avena fatua</i>	Common wild oat	H	--
<i>Bromus diandrus</i>	Ripgut grass	H	--
<i>Cynodon dactylon</i>	Bermuda grass	H	FACU
<i>Cyperus eragrostis</i>	Tall cyperus	H	FACW
<i>Erodium botrys</i>	Stork's bill	H	FACU
<i>Erodium moschatum</i>	Musky stork's bill	H	--
<i>Festuca perennis</i> (= <i>Lolium perenne</i>)	Italian ryegrass	H	FAC
<i>Geranium dissectum</i>	Cranesbill	H	--
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	H	FAC
<i>Juncus bufonius</i>	Common toad rush	H	--
<i>Lactuca serriola</i>	Prickly lettuce	H	FACU
<i>Lupinus</i> sp.	Lupines	H	--
<i>Lythrum hyssopifolia</i>	Hyssop	H	OBL
<i>Medicago polymorpha</i>	Bur clover	H	FACU
<i>Polygonum aviculare</i>	Prostrate knotweed	H	FACW
<i>Spergula arvensis</i>	Corn spurry	H	--
<i>Vicia</i> sp.	Vetch	H	FACU

¹ H=herb; S=shrub; T=tree.

Appendix D.

Flood Insurance Rate Maps (FIRM)

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DRAFT