

# **APPENDIX D**

## ***Biological Resources Technical Report Part 2***



## Appendix H F

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### Aquatic Resources Delineation Report





## MEMORANDUM

**To:** South Coast Branch, Regulatory Division, U.S. Army Corps of Engineers  
**From:** Callie Amoaku, Dudek  
**Subject:** Aquatic Resources Delineation Report for Jacumba Valley Ranch Energy Park; SPL-2019-00339  
**Date:** December 2, 2019, Revised March 27, 2020  
**cc:** George Gunmoe, BayWa  
Patricia Schuyler, Dudek  
**Attachment(s):** Attachment A, Appendix 1 of Regulatory Guidance Letter 16-1, Request for Corps Jurisdictional Determination  
Attachment B, Preliminary Jurisdictional Determination Form  
Attachment C, Figures  
Attachment D, Data Station Forms and OHWM Datasheets  
Attachment E, WETS Table  
Attachment F, Review Area Photos

This memo provides the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports in support of a preliminary jurisdictional determination for the proposed Jacumba Valley Ranch Energy Park (project) in San Diego County, California.

### Item 1: Request for a Jurisdictional Determination

Attachment A contains Appendix 1 of Regulatory Guidance Letter 16-1, Request for Corps Jurisdictional Determination Form and Attachment B contains the Preliminary Jurisdictional Determination Form.

### Item 2: Contact Information

<b>Applicant:</b>	JVR Energy Park, LLC	<b>Agent:</b>	Dudek
<b>Contact Name:</b>	George Gunmoe	<b>Contact Name:</b>	Callie Amoaku/Patricia Schuyler
<b>Address:</b>	17901 Von Karman Avenue Suite 1050 Irvine, California 92614	<b>Address:</b>	605 Third Street Encinitas, California 92024
<b>Phone:</b>	832.303.2477	<b>Phone:</b>	760.479.4293
<b>Fax:</b>	N/A	<b>Fax:</b>	760.632.0164
<b>Email:</b>	George.Gunnoe@baywa-re.com	<b>Email:</b>	cford@dudek.com or pschuyler@dudek.com

## Item 3: Site Access

A site visit was conducted on January 29, 2020 with Christopher Allen from the Carlsbad Field Office. The project applicant or agent will accompany U.S. Army Corps of Engineers staff to the Review Area for site visit(s).

## Item 4: Directions to the Review Area

From the west: take Interstate 8 east toward El Centro. Take exit 73 toward Jacumba. Turn right toward Carrizo Gorge Road and then onto Carrizo Gorge Road. Turn right onto Old Highway 80 and arrive at Review Area.

From the east: take Interstate 8 west. Take exit 77 for In-Ko-Pah Park Road. Turn left onto In-Ko-Pah Park Road and left toward Old Highway 80. Turn right onto Old Highway 80 and arrive at Review Area.

## Item 5: Jurisdictional Delineation Methods

The U.S. Army Corps of Engineers wetlands delineation was performed in accordance with the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* (ACOE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008a), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (ACOE 2008b).

## Item 6: Aquatic Resources Narrative

The review area contains one aquatic feature formed from runoff from an adjacent parking lot and Carrizo Gorge Road and two borrow pits that were formed entirely in uplands. Acreages are summarized in Table 1.

**Table 1. Potential Aquatic and Upland Resources within the Review Area**

Feature ID	Resource Type	Acreage
Feature A	Isolated aquatic resource	0.15
Borrow pit 1	N/A	0.18
Borrow pit 2	N/A	1.49
Total acreage		1.76

**Note:** Total may not sum due to rounding.

These 3 features within the Review Area are shown on Figure 2, Potential Aquatic Resources (all figures are provided in Attachment C). The soils are shown on Figure 3, Soils.

Feature A is a short feature formed from runoff associated with Carrizo Gorge Road and the parking lot across the street. There is a culvert directing flow into this drainage from the opposite side of the road, just below grade from the parking lot. Also, Feature A lacks a connection to a TNW or tributaries to TNWs. This feature originates at Carrizo Gorge Road and dissipates into upland approximately 1,000 feet west of the road.

Additionally, there are two borrow pits located near the eastern side of the site that were constructed in 2013/2014 in an upland area associated with a temporary sand and gravel mine. It appears water was stored and/or drained into the borrow pit as part of the mining activities. The borrow pits were dry with little to no vegetation during the January 2019 and February 2020 site visits. The borrow pits support sparse tamarisk and cracked soil as a result of the pit's inundation from mining activities. Two sample points were taken in borrow pit 1: one next to the tamarisk and one outside of the tamarisk. While one of the sample points resulted in positive indicators of a three-parameter wetland, this human-made basin was constructed in an upland area, is considered an artificial wetland, and does not connect to waters of the United States. Borrow pit 2 had even sparser tamarisk with minimal evidence of cracked soil.

At the request of ACOE staff, upland sampling points were taken throughout the fallow agricultural field. The results of the data stations are summarized in Table 2 and included in Attachment D.

**Table 2. Data Station Results**

Data Station	Location	Hydrophytic Vegetation	Hydric Soils	Hydrology	Three-Parameter Wetland
1A	Borrow pit 1	No	No	Yes	No
1B	Borrow pit 1	Yes	Yes	Yes	Yes
2A	Ag field	No	No	No	No
2B	Ag field	No	No	No	No
3	Ag field	No	No	No	No
4	Ag field	No	No	No	No
5	Ag field	No	No	No	No
6	Ag field	No	No	No	No
7	Ag field	No	No	No	No
8	Ag field	No	No	No	No
9	Ag field	No	No	No	No
10	Ag field	No	No	No	No
11	Ag field	No	No	No	No
12	Borrow pit 2	No	No	Yes	No
13	Ag field	No	No	No	No
14	Ag field	No	No	No	No
15	Ag field	No	No	No	No
16	Ag field	No	No	No	No
17	Ag field	No	No	No	No
18	Ag field	No	No	No	No
19	Ag field	No	No	No	No
20	Ag field	No	No	No	No
21	Ag field	No	No	No	No
22	Ag field	No	No	No	No
23	Ag field	No	No	No	No
24	Ag field	No	No	No	No

## Item 7: Delineation Maps

All maps of delineated resources are provided in Attachment C.

## Item 8: Dates of Field Work

A jurisdictional delineation for the review area was conducted in August 2018 by Dudek biologists Callie Amoaku, Scott Gressard, and Lindsay Mobley (Table 3). An additional site visit was conducted in January 2019 by Dudek biologist Erin Bergman to sample locations in the borrow pit. The freshwater marsh, which was not observed during the original delineation, was evaluated in April 2019 by Dudek biologists Callie Amoaku and Patricia Schuyler. On September 24, 2019, Dudek biologist Shana Carey took some additional photos on site and looked for any changes compared to the original delineation and additional sample points were collected on February 24, 2020.

**Table 3. Schedule of the Jurisdictional Delineation Conducted for the Jacumba Valley Ranch Review Area**

Date	Hours	Personnel	Conditions
8/2/2018	0800–1640	Callie Amoaku, Scott Gressard	80°F–96°F; 0% cc; 0–4 mph wind
8/7/2018	0900–1515	Scott Gressard, Lindsay Mobley	89°F–95°F; 0%–10% cc; 1–6 mph wind
8/22/2018	0930–1430	Scott Gressard	87°F–102°F; 0%–30% cc; 1–6 mph wind
1/20/2019	0800–1000	Erin Bergman	53°F–63°F; 0%–10% cc; 0–2 mph wind
4/24/2019	1645–1743	Callie Amoaku, Patricia Schuyler	85°F–88°F; 0% cloud cover; 1–5 mph wind
9/24/2019	1200–1345	Shana Carey	81°F–84°F; 0% cloud cover; 1–5 mph wind
2/24/2020	0830–1600	Shana Carey, Cody Schaaf	54–67°F; 0–20% cloud cover; 0–8 mph wind

**Notes:** cc = cloud cover; mph = miles per hour.

## Item 9: Table of Aquatic Resources

Table 4 includes a description of each aquatic resource, its associated ordinary high water mark datasheet transect number, its Cowardin type, any ordinary high water mark indicators present, the dominant vegetation, hydric soils, the location, and the acreage/linear feet.

**Table 4. Potential Aquatic Resources and Upland Areas within the Review Area**

Feature Name	OHWB Datasheet Transect	Cowardin <sup>1</sup>	Ordinary High Water Mark Indicators	Dominant Vegetation	Hydric Soils <sup>2</sup>	Location (Lat/Long)	Acreage/ Linear Feet
Aquatic Resources							
Feature A	Transects A and B	Riverine	Drift and/or debris; presence of bed and bank; soil development; surface relief	Mostly unvegetated with some Sonoran mixed woody and succulent scrub vegetation	No	32.633619, -116.166389	0.09/790
Borrow pit 1	—	—	Mud cracks	Unvegetated with sparse tamarisk ( <i>Tamarix ramosissima</i> )	No	32.632046, -116.170317	0.18
Borrow pit 2	—	—	Minimal mud cracks	Unvegetated with sparse tamarisk ( <i>Tamarix ramosissima</i> )	Yes	32.628178, -116.176196	1.49
N/A	Transect C	—	None	Disturbed habitat	No	32.627400, -116.168333	N/A
N/A	Transect D	—	None	Disturbed habitat	Yes	32.613358, -116.176944	N/A

**Notes:** OHWM = ordinary high water mark.

<sup>1</sup> USFWS 2019.

<sup>2</sup> These soils have a hydric rating based on the State Soil Data (USDA 2020).

## Item 10: Review Area Description

The Review Area is located south of Interstate 8 within private lands located immediately east of the community of Jacumba Hot Springs and adjacent to the U.S./Mexico Border in eastern San Diego County, California (Figure 1, Project Location). The Review Area is situated south and west of Carrizo Gorge Road and immediately north of the U.S./Mexico Border. The Review Area lies within the Jacumba U.S. Geological Survey 7.5-minute quadrangle, Townships 17 South and 18 South, Range 8 East, Sections 4, 5, 8, 9, 32, and 33 (Figure 1). The elevation range within the Review Area is from 2,720 feet to 3,360 feet above mean sea level.

Portions of the site were previously used for agricultural purposes and the central areas are relatively flat. The eastern and western portions are gentle to steep hillslopes. There are numerous dirt roads traversing the site, and the San Diego and Arizona Eastern Railway is located along the western side of the site.

## Item 11: Hydrology

The proposed project falls within the Jacumba Valley hydrologic subarea of the Jacumba hydrologic area located within the Anza Borrego hydrologic unit (Figure 4, Hydrologic Setting). Table 5 shows the hydrologic unit, hydrologic area, and hydrologic subarea information based on the Water Quality Control Plan for the Colorado River Basin (Region No. 7) (RWQCB 2006).

**Table 5. Project Hydrologic Characteristics**

Hydrologic Unit	Hydrologic Area	Hydrologic Subarea
Anza Borrego (722.00)	Jacumba (722.70)	Jacumba Valley (722.72)

The Review Area is less than 1% of the area encompassed by the Jacumba Valley hydrologic subarea. The region can be characterized as relatively arid and dominated by ephemeral drainages that convey runoff during and/or shortly after rain events—there are no permanent bodies of water in or near the Review Area. Surface and subsurface water generally flows north via shallow drainages to a floodplain (named Carrizo Gorge Creek (SANGIS 2019)) that eventually flows into the northerly draining Carrizo Creek, which eventually flows into the Carrizo Wash. The Carrizo Wash drains into the San Felipe Creek. The endpoint of the watershed is the Salton Sea.

A WETS table is provided in Attachment E.

## Item 12: Remote Sensing

Remote sensing was not used for the delineation.

## Item 13: Soils

Soil types within the Review Area are shown on Figure 3. Soils mapped within the Review Area include acid igneous rock land; Carrizo very gravelly sand, 0% to 9% slopes; Indio silt loam, 0% to 2% slopes; Indio silt loam, 2% to 5% slopes; Indio silt loam, saline, 0% to 2% slopes; Ramona sandy loam, 9% to 15% slopes, eroded; Reiff fine sandy loam, 0% to 2% slopes; Rositas loamy coarse sand, 2% to 9% slopes; sloping gullied land; and stony land (USDA 2019).

## Item 14: Site Location Maps

All maps are provided in Attachment C.

## Item 15: Aquatic Features Spreadsheet

A copy of the OMBIL Regulatory Module Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this memo because Table 4, Potential Aquatic Resources and Upland Areas within the Review Area, provides all of the information requested.

## Item 16: Delineation Maps

All maps are provided in Attachment C.

## Item 17: Photographs

Photos of the Review Area are provided in Attachment F.

## Item 18: Data Forms

Completed wetland data determination forms and ordinary high water mark datasheets are provided in Attachment D.

## Item 19: Methods

Potential aquatic resources and upland areas were mapped in the field using a Trimble GeoXT GPS with submeter accuracy. The delineators determined the extent of U.S. Army Corps of Engineers jurisdiction using the ordinary high water mark as outlined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (ACOE 2008a) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (ACOE 2010). Potential wetlands were assessed using the *1987 Corps of Engineers Wetlands Delineation Manual* (ACOE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008b).

## Item 20: Digital Data

Geographic information system data is provided with this application submittal.

## References

- ACOE (U.S. Army Corps of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. <http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>.
- ACOE. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008. [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1046489.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046489.pdf).
- ACOE. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. ERDC/CRREL TR-08-12. Prepared by R.W. Lichvar and S.M. McColley. Hanover, New Hampshire: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. August 2008. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a486603.pdf>.
- ACOE. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Wetland Regulatory Assistance Program, ERDC/CRREL TN-10-1. Prepared by K.E. Curtis and R.W. Lichvar. Hanover, New Hampshire: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. July 2010.
- Historic Aerials. 2019. Viewer. Accessed September 23, 2019. [www.historicaerials.com](http://www.historicaerials.com).
- RWQCB (California Regional Water Quality Control Board). 2006. *Water Quality Control Plan – Colorado River Basin Region 7*. Adopted November 17, 1993 with amendments through June 2006. Accessed October 21, 2014. [http://www.waterboards.ca.gov/coloradoriver/publications\\_forms/publications/docs/basinplan\\_2006.pdf](http://www.waterboards.ca.gov/coloradoriver/publications_forms/publications/docs/basinplan_2006.pdf).
- USDA (U.S. Department of Agriculture). 2019. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed January 2019. <http://websoilsurvey.nrcs.usda.gov/>.
- USDA. 2020. “State Soil Data Access (SDA) Hydric Soils List.” Accessed March 25, 2020. [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd1316619.html](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html).
- USFWS (U.S. Fish and Wildlife Service). 2019. “National Wetland Inventory” [map]. Accessed January 2019. <http://www.fws.gov/data>.
- USGS (U.S. Geological Survey). 2018. “Flow lines, water points, watershed boundaries” [digital GIS data]. National Hydrography Dataset website. August 27, 2018. <http://nhd.usgs.gov/>.





# Attachment A

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Request for Corps Jurisdictional Determination Form

## **Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)**

To: District Name Here

- I am requesting a JD on property located at: Carrizo Gorge Road and Old Highway 80  
(Street Address)  
City/Township/Parish: Jacumba County: San Diego State: \_\_\_\_\_  
Acreage of Parcel/Review Area for JD: 1,340  
Section: 5 Township: 18 South Range: 8 East  
Latitude (decimal degrees): 32.63673100000 Longitude (decimal degrees): -116.17861200000  
(For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ☒ I currently own this property. ☐ I plan to purchase this property.  
☐ I am an agent/consultant acting on behalf of the requestor.  
☐ Other (please explain): \_\_\_\_\_.
- Reason for request: (check as many as applicable)  
☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.  
☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.  
☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.  
☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.  
☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.  
☐ A Corps JD is required in order to obtain my local/state authorization.  
☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.  
☐ I believe that the site may be comprised entirely of dry land.  
☐ Other: \_\_\_\_\_
- Type of determination being requested:  
☐ I am requesting an approved JD.  
☒ I am requesting a preliminary JD.  
☐ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.  
☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

\*Signature: \_\_\_\_\_

Digitally signed by Kishore Madduri  
DN: cn=Kishore Madduri, o=JACUMBA VALLEY RANCH,  
email=kishore.madduri@gmail.com,  
Date: 2019.11.25 22:11:07 -07'00'

Date: March 25, 2020

- Typed or printed name: KISHORE MADDURI

Company name: JACUMBA VALLEY RANCH LLC

Address: 2423 CAMINO DEL RIO S, STE#212

SAN DIEGO 92108

Daytime phone no.: 408-338-6052

Email address: JACUMBAVALLEYRANCH@GMAIL.COM

**\*Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

**Principal Purpose:** The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

**Routine Uses:** This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

**Disclosure:** Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.



# Attachment B

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## Preliminary Jurisdictional Determination Form

## PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office Los Angeles District File/ORM # SPL-2019-00339 PJD Date: Mar 27, 2020

State <u>CA</u>	City/County <u>Jacumba/San Diego</u>	Name/ Address of Person Requesting PJD  <u>Callie Amoaku/Patricia Schuyler</u> <u>605 Third Street</u> <u>Encinitas, California 92024</u>
Nearest Waterbody: <u>Salton Sea</u>		
Location: TRS, LatLong or UTM: <u>32.632046, -116.170317</u>		

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters:

Stream Flow:

       linear ft        width        acres       

Wetlands:        acre(s) Cowardin Class:       

Name of Any Water Bodies  
on the Site Identified as

Tidal:       

Section 10 Waters:

Non-Tidal:       

☐ Office (Desk) Determination

☒ Field Determination:

Date of Field Trip: see report

**SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):**

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas:
  - ☒ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite quad name: Jacumba
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: USDA 2019
- ☒ National wetlands inventory map(s). Cite name: USFWS 2019
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is:
- ☐ Photographs: ☐ Aerial (Name & Date):         
☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

Signature and Date of Regulatory Project Manager  
(REQUIRED)

Callie Amoaku  
Signature and Date of Person Requesting Preliminary JD  
(REQUIRED, unless obtaining the signature is impracticable)

### EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring “preconstruction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

## PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

### Appendix A - Sites

District Office  File/ORM #  PJD Date:

State  City/County  Person Requesting PJD

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Notes:

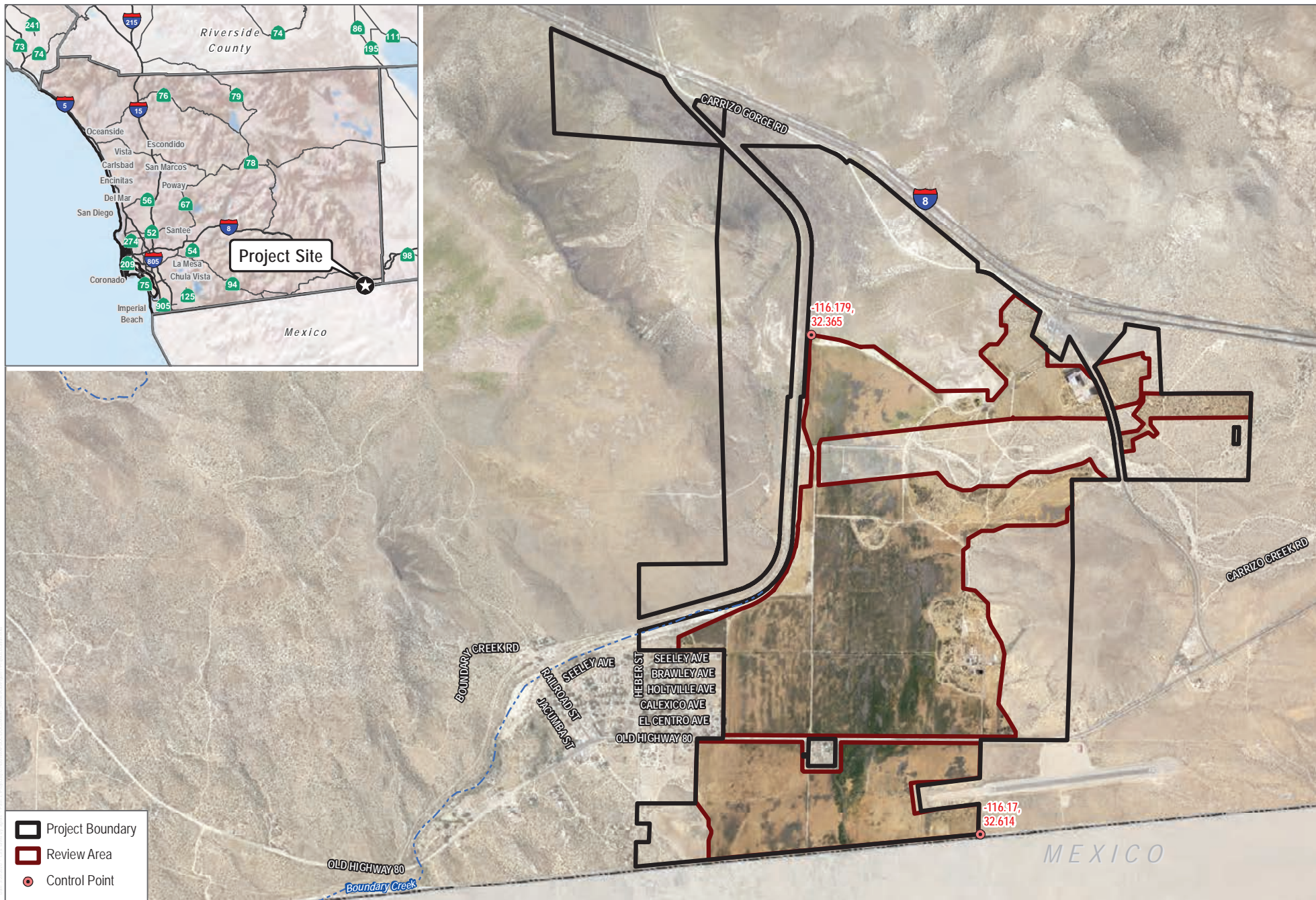


# Attachment C

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Figures





SOURCE: SANGIS 2017, 2020; ESRI 2020

**DUDEK**



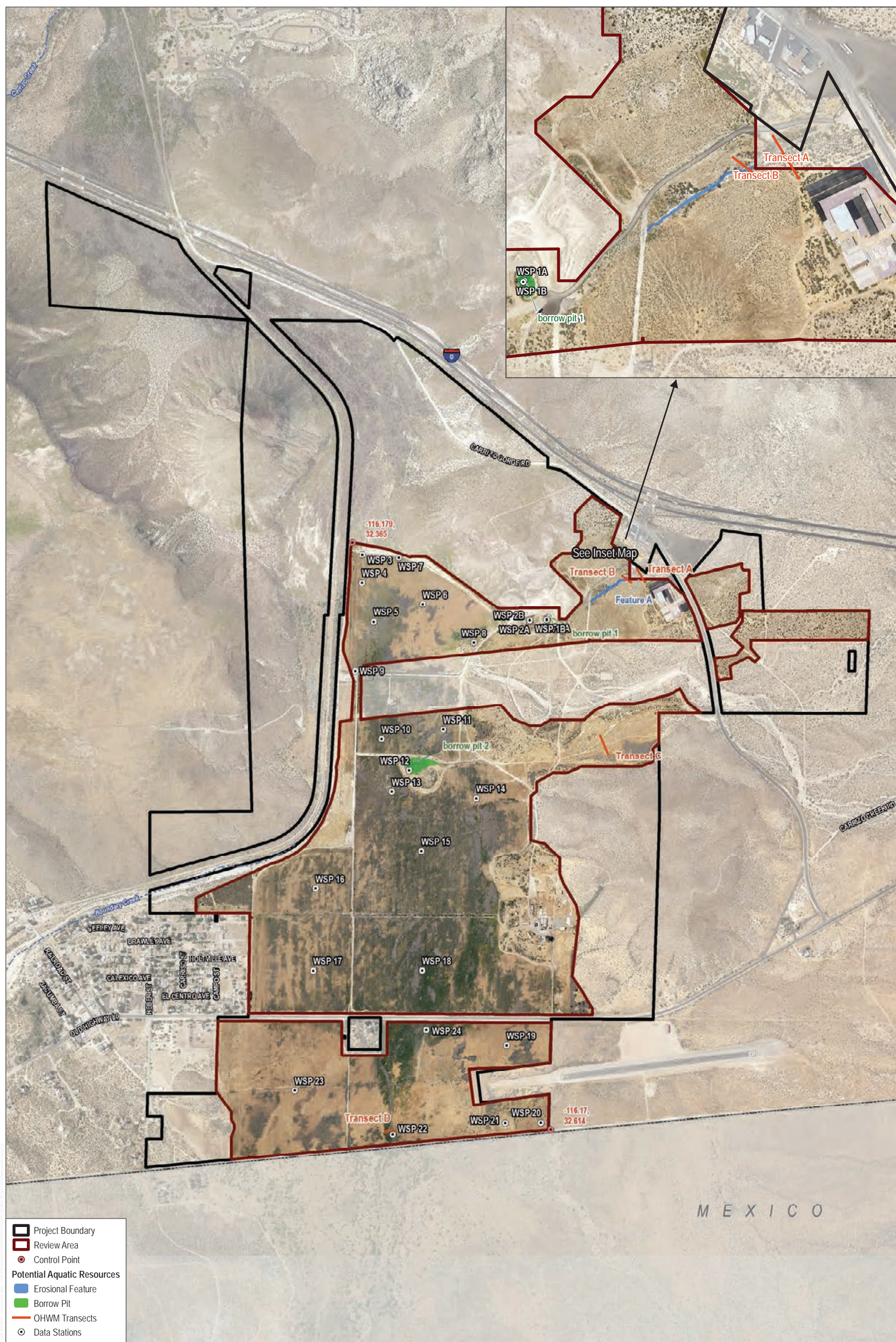
0 1,000 2,000 Feet

**FIGURE 1**

**Project Location**

Aquatic Resources Delineation Report for JVR Energy Park Project



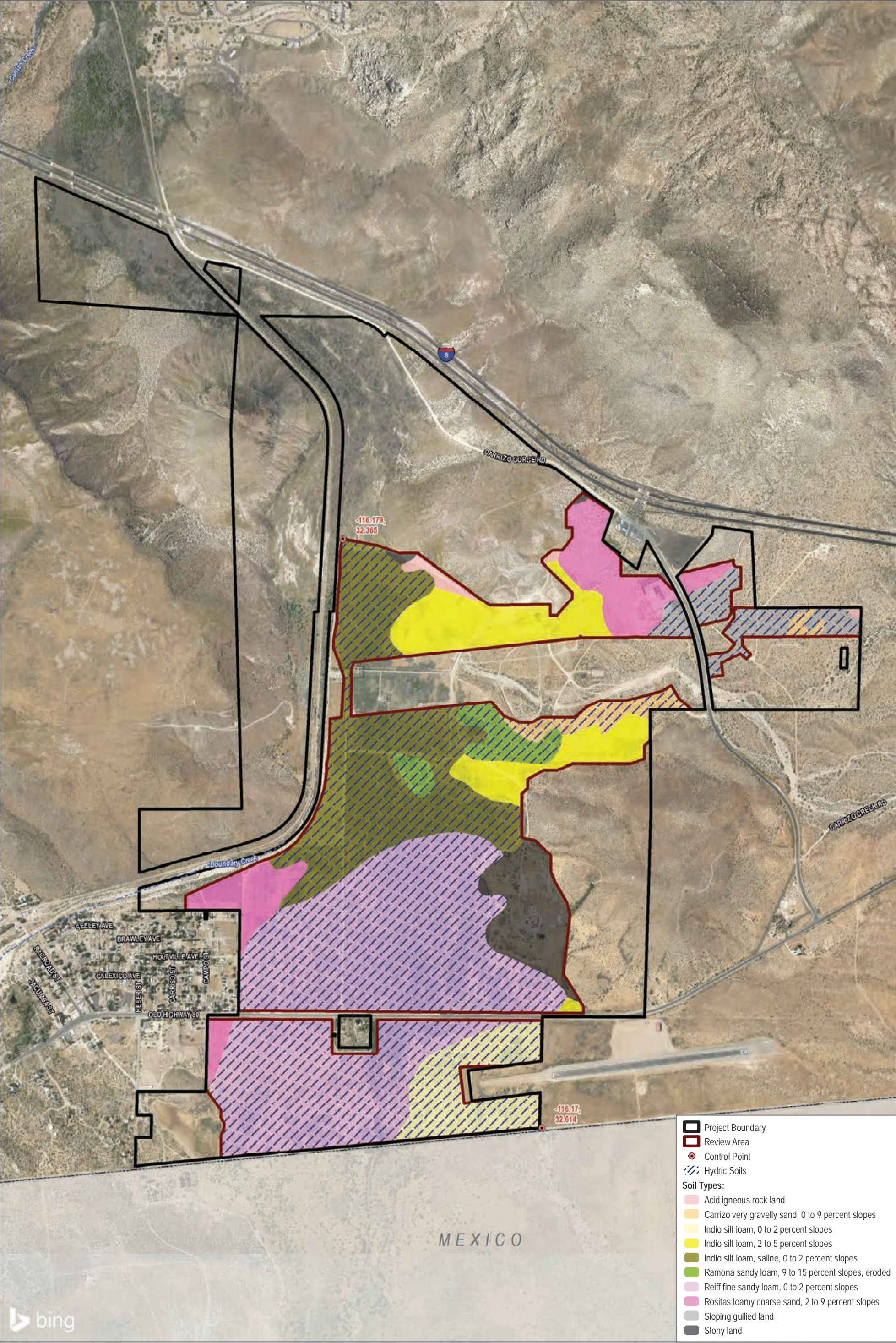


SOURCE: SANGIS 2017



FIGURE 2

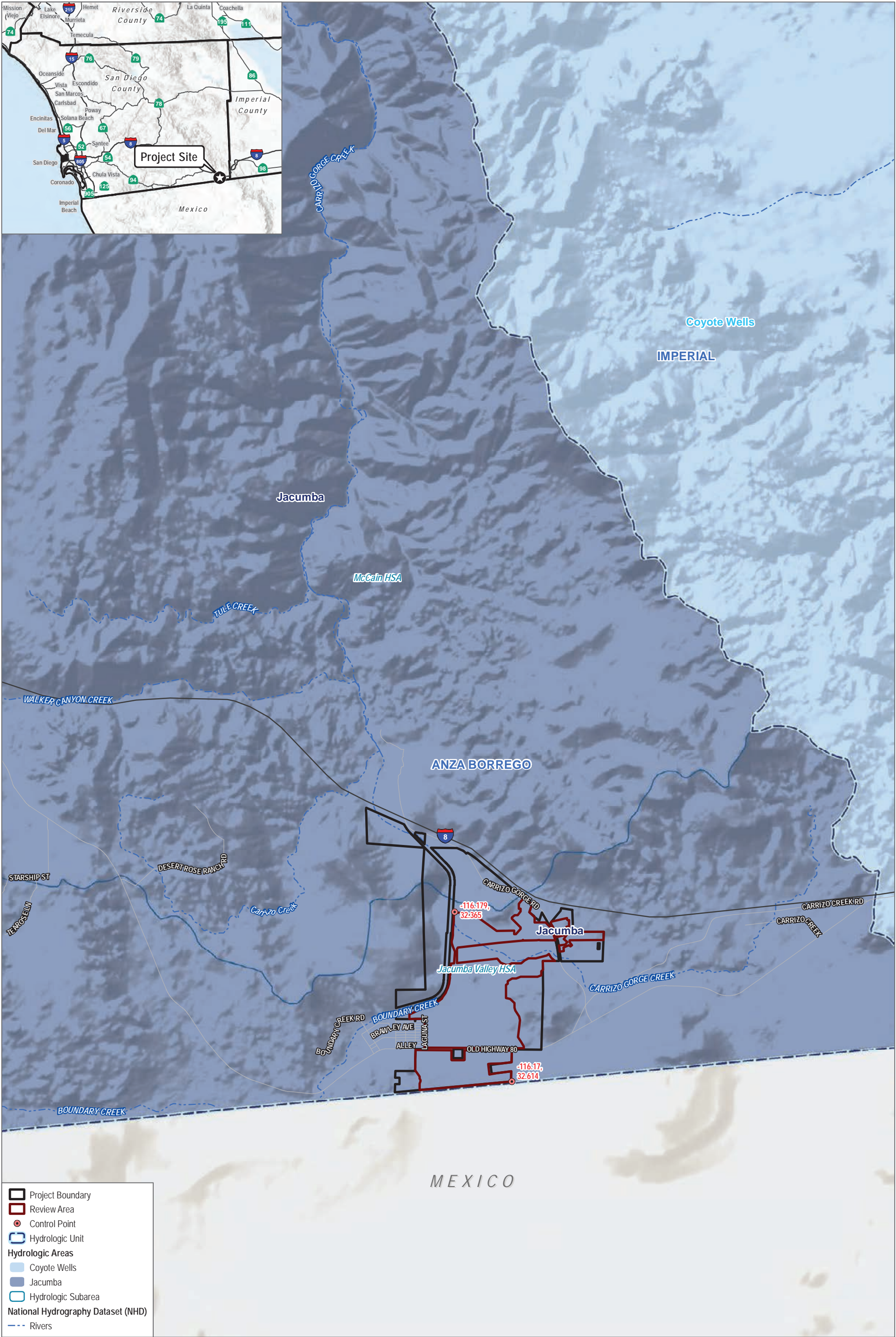




SOURCE: USDA 2019a, b; USGS 2018; SANGIS 2017, 2020

**FIGURE 3**  
Soils





SOURCE: USGS 2020; SANGIS 2017, 2020



# Attachment D

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Data Station Forms and OHWM Datasheets



## Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: <i>Jacumba Valley Ranch</i>		Date: <i>9/24/19</i>	Time:
Project Number: <i>10743</i>		Town: <i>JH S</i>	State: <i>CA</i>
Stream: <i>Feature 13</i>		Photo, begin file#:	Photo end file#:
Investigator(s): <i>Shana Carey</i>			

Y <input type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	Location Details:	
Y <input type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Projection:	Datum:
Coordinates:		

Potential anthropogenic influences on the channel system:

*Culvert directing runoff from east side of Carrizo Gorge Road and adjacent parking lot.*

Brief site description:

*Erosional feature formed in upland*

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography Dates: <i>2019</i>	<input type="checkbox"/> Stream gage data Gage number: Period of record:
<input type="checkbox"/> Topographic maps	<input type="checkbox"/> History of recent effective discharges
<input checked="" type="checkbox"/> Geologic maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Vegetation maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Rainfall/precipitation maps	
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

**Hydrogeomorphic Floodplain Units**

**Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
 

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: 10743 Cross section ID: Transcut Date: 9/24/19 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover

- ☒ Break in bank slope
- ☐ Other: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_% Tree: \_\_\_\_\_% Shrub: \_\_\_\_\_% Herb: \_\_\_\_\_%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

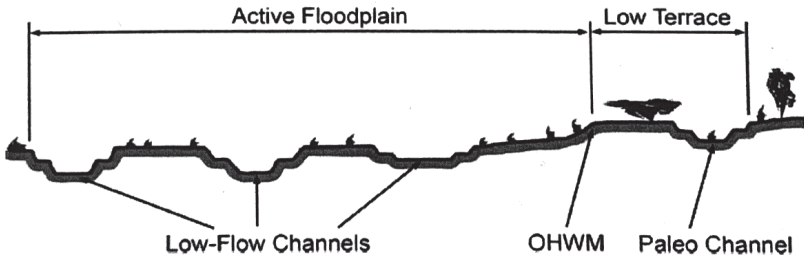
**Indicators:**

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches

- ☐ Soil development
- ☐ Surface relief
- ☐ Other: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

Comments:

## Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Project:</b> JVR <b>Project Number:</b> <b>Stream:</b> Transect 11 <b>Investigator(s):</b> Cody Schaaf, Shann Corez	<b>Date:</b> 2/24/20 <b>Town:</b> <b>Photo begin file#:</b> <b>Time:</b> n/a <b>State:</b> <b>Photo end file#:</b>				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?  Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?	<b>Location Details:</b>  <b>Projection:</b> <b>Datum:</b> <b>Coordinates:</b>				
<b>Potential anthropogenic influences on the channel system:</b> Nearby roads					
<b>Brief site description:</b> Drainage coming off Carrizo Gorge Rd. onto project site.					
<b>Checklist of resources (if available):</b> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography            Dates: 2020  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input checked="" type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input checked="" type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data            Gage number:            Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </td> </tr> </table>		<input checked="" type="checkbox"/> Aerial photography Dates: 2020 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input checked="" type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.           <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:           <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Mapping on aerial photograph</td> <td><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> </li> </ol>		<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS				
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:				

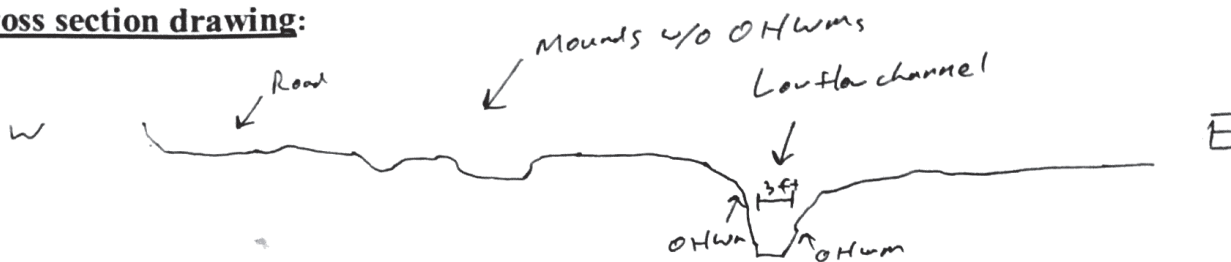
Project ID:

Cross section ID:

T11

Date: 2/24/2020 Time:

### Cross section drawing:



### OHWM

GPS point: \_\_\_\_\_

#### Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover

- ☒ Break in bank slope
- ☐ Other: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

#### Comments:

Steep, dramatic cut banks and sandy channel bottom. No OHWM indicators associated w/ mounds to W.

### Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

#### Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 0 % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

#### Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches

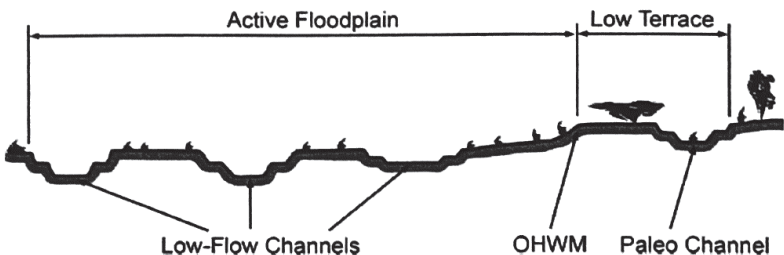
- ☒ Soil development
- ☒ Surface relief
- ☐ Other: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

#### Comments:

Drift deposits apparent on sides of channel along w/ obvious banks and bed. Channel comes from culvert fed by upstream road runoff.



## Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Project:</b> JVR <b>Project Number:</b> <b>Stream:</b> <del>TR</del> T12 <b>Investigator(s):</b> Lady Schauf + Shane Lorey	<b>Date:</b> 2/24/2020 <b>Time:</b> n/a <b>Town:</b> Jacumba <b>State:</b> <b>Photo begin file#:</b> <b>Photo end file#:</b>				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?  Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?	<b>Location Details:</b>  <b>Projection:</b> <b>Datum:</b> <b>Coordinates:</b>				
<b>Potential anthropogenic influences on the channel system:</b>					
<b>Brief site description:</b> Mounded area on eastern portion of site					
<b>Checklist of resources (if available):</b> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography            Dates: 2020  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input checked="" type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input checked="" type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data            Gage number:            Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </td> </tr> </table>		<input checked="" type="checkbox"/> Aerial photography Dates: 2020 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input checked="" type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.           <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <i>None - No OHWM</i> <table style="width: 100%; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Mapping on aerial photograph</td> <td><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> </li> </ol>		<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS				
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:				



Project ID:

Cross section ID:

T72

Date:

2/24/2020

Time:

**Cross section drawing:**



**OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- ☐ Change in average sediment texture  
☐ Change in vegetation species  
☐ Change in vegetation cover

- ☐ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments: No OHWM indicators; No signs of flow or water conveyance - only small changes in relief. Not even a consistent scale.

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

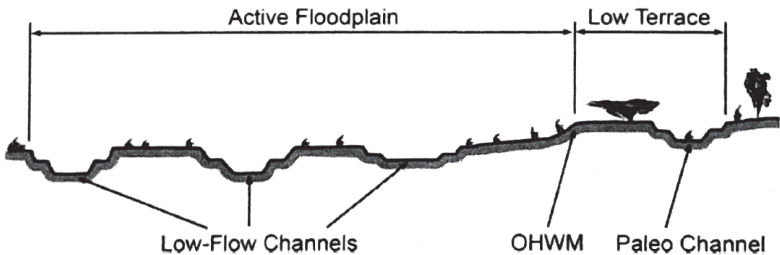
**Indicators:**

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches

- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

## Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Project:</b> JVR <b>Project Number:</b> 10743 <b>Stream:</b> TD <b>Investigator(s):</b> Cody Schaaf, S Liana Carey	<b>Date:</b> 2/24/20 <b>Town:</b> <b>State:</b> <b>Photo begin file#:</b> <b>Photo end file#:</b>				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?  Y <input type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	<b>Location Details:</b>  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>Projection:</b></td> <td style="width: 50%;"><b>Datum:</b></td> </tr> <tr> <td colspan="2"><b>Coordinates:</b></td> </tr> </table>	<b>Projection:</b>	<b>Datum:</b>	<b>Coordinates:</b>	
<b>Projection:</b>	<b>Datum:</b>				
<b>Coordinates:</b>					
<b>Potential anthropogenic influences on the channel system:</b> Nearby roads, border, and residential lots/homesteads.					
<b>Brief site description:</b> Area just north of border wall showing change in vegetation in open agricultural field					
<b>Checklist of resources (if available):</b> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography            Dates: 2020  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input checked="" type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input checked="" type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data            Gage number:            Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </td> </tr> </table>		<input checked="" type="checkbox"/> Aerial photography Dates: 2020 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input checked="" type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS				
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:				

Project ID: 10743 Cross section ID: TD

Date: 2/24/20 Time:

**Cross section drawing:**



**OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- ☐ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☐ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments:** <sup>of flow/standing water</sup>  
No indicators<sup>^</sup> observed. Mounds present in places but topography and relief do not suggest any flow or concentration of water that would lead this to be characterized as a feature. Data station rules out hydric soils/veg.

**Floodplain unit:** ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

- ☐ Mudcracks ☐ Soil development  
☐ Ripples ☐ Surface relief  
☐ Drift and/or debris ☐ Other: \_\_\_\_\_  
☐ Presence of bed and bank ☐ Other: \_\_\_\_\_  
☐ Benches ☐ Other: \_\_\_\_\_

**Comments:** No feature or hydrologic unit present.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 01/20/19  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 1a  
 Investigator(s): E. Bergman Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Artificial basin within terrace Local relief (concave, convex, none): Convex Slope (%): N/A  
 Subregion (LRR): C - Mediterranean California Lat: 32.632047 Long: -116.170317 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 2 to 5 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: Non-wetland confirmation point. Field data point is taken within the borrow pit. Floor of basin is bare to sparsely vegetated.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>0</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> % (A/B)
4.					
Total Cover: <u>0</u> %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. <u>N/A</u>				Total % Cover of:	Multiply by:
2.				OBL species	x 1 = <u>0</u>
3.				FACW species	x 2 = <u>0</u>
4.				FAC species	x 3 = <u>0</u>
5.				FACU species	x 4 = <u>0</u>
Total Cover: <u>0</u> %				UPL species	x 5 = <u>0</u>
				Column Totals:	(A) <u>0</u> (B)
				Prevalence Index = B/A = <u>0</u>	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>N/A</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
2.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3.				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5.					
6.					
7.					
8.					
Total Cover: <u>0</u> %					
<u>Woody Vine Stratum</u>				<b>Hydrophytic Vegetation Present?</b>	
1. <u>N/A</u>				Yes <input type="radio"/>	No <input checked="" type="radio"/>
2.					
Total Cover: <u>0</u> %					
% Bare Ground in Herb Stratum <u>100</u> %			% Cover of Biotic Crust <u>0</u> %		

Remarks: Point of investigation is unvegetated (majority of the basin floor of the borrow pit is unvegetated).

## SOIL

Sampling Point: 1a**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 <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 3/3	100	N/A	N/A			Silt	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

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

**Indicators for Problematic Hydric Soils:**

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

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: Soil unit mapped at the point of investigation is Indio silt loam, 2 to 5 percent slopes, which is not listed as hydric by the NRCS. No hydric indicators observed at the point of investigation. Strong odor of aerobic actinomycetes ('earthy smell') indicates inundation (anaerobic conditions) may not be long-term enough to create reducing conditions.

## HYDROLOGY

**Wetland Hydrology Indicators:****Primary Indicators (any one indicator is sufficient)**

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

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

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ 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): UnknownSaturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☒ No ☐

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

N/A. This delineation has occurred within 1-week of multiple rainfall events and within a prolonged 8-year drought.

Remarks: Basin collects and retains water from precipitation events and imported water (dewatering pipes and their small outfalls occupy upper bank area of borrow pit). It is unknown if excavation to approximately 10 feet below natural grade has resulted in basin being in contact to groundwater related to the Carrizo Creek groundwater basin.



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 01/20/19  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 1b  
 Investigator(s): E. Bergman Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Artificial basin within terrace Local relief (concave, convex, none): Convex Slope (%): N/A  
 Subregion (LRR): C - Mediterranean California Lat: 32.632063 Long: -116.170296 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 2 to 5 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="radio"/>	No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: Wetland confirmation point. Field data point is taken within the borrow pit that is occupied by a small monotypic stand of tamarisk shoots. Floor of basin is bare to sparsely vegetated.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>N/A</u>				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>100.0 %</u> (A/B)
4.					
Total Cover:	<u>    </u> %				
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. <u>Tamarix ramosissima</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:
2.				OBL species	x 1 = <u>0</u>
3.				FACW species	x 2 = <u>0</u>
4.				FAC species	x 3 = <u>105</u>
5.				FACU species	x 4 = <u>0</u>
Total Cover:	<u>35 %</u>			UPL species	x 5 = <u>0</u>
<u>Herb Stratum</u>				Column Totals:	<u>35</u> (A) <u>105</u> (B)
1. <u>N/A</u>				Prevalence Index = B/A = <u>3.00</u>	
2.				<b>Hydrophytic Vegetation Indicators:</b>	
3.				<input checked="" type="checkbox"/> Dominance Test is >50%	
4.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
5.				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
6.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
8.					
Total Cover:	<u>    </u> %			<b>Hydrophytic Vegetation Present?</b>	
<u>Woody Vine Stratum</u>				Yes <input checked="" type="radio"/> No <input type="radio"/>	
1. <u>N/A</u>					
2.					
Total Cover:	<u>    </u> %				
% Bare Ground in Herb Stratum	<u>65 %</u>	% Cover of Biotic Crust	<u>0 %</u>		
Remarks: Small stack of tamarisk scrub (in the form of developing saplings and shoots) occupies small convex spoils pile (the remaining majority of the basin floor of the borrow pit is unvegetated).					

## SOIL

Sampling Point: 1b

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 3/3	100	N/A	N/A			Silt	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

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

**Indicators for Problematic Hydric Soils:**

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

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks: Indio silt loam, 2 to 5 percent slopes is not listed as hydric by the NRCS and no hydric indicators observed. However, this soil is an entisol. Entisols rarely present hydric field indicators (as outlined by the NTCHS Field Indicators of Hydric Soils in the United States). Guidance for soil lacking hydric indicators is found in the 2008 Supplement Chapter 3, page 27 and states that 'a soil that meets the definition of a hydric soil is hydric whether or not it exhibits indicators'. Guidance used for problem wetland situations in the Arid West for a soil considered hydric (or considered "hydric by definition"), but lacking hydric indicators, is found in the 2008 Supplement: Chapter 5, page 96, which outlines that a soil can be considered hydric with faint or no hydric soil indicators. This soil can also be considered hydric by definition because it underlies an area where both hydrophytic vegetation & wetland hydrology are simultaneously present at the point of investigation. +

## HYDROLOGY

**Wetland Hydrology Indicators:****Primary Indicators (any one indicator is sufficient)**

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

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

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (Riverine)  
☐ Sediment Deposits (B2) (Riverine)  
☐ Drift Deposits (B3) (Riverine)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ 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): Unknown

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☒ No ☐

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

N/A. This delineation has occurred within I-week of multiple rainfall events and within a prolonged 8-year drought.

Remarks: Basin collects and retains water from precipitation events and imported water (dewatering pipes and their small outfalls occupy upper bank area of borrow pit). It is unknown if excavation to approximately 10 feet below natural grade has resulted in basin being in contact to groundwater related to the Carrizo Creek groundwater basin.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 2a  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Pit Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 2 to 5 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in bottom of small borrow pit with deep crevices in soil.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	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>50.0 %</u> (A/B)			
4. _____	_____	_____	_____	Total Cover: <u>_____</u> %			
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>			
1. <u>Tamarix ramosissima</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____			
2. _____	_____	_____	_____	OBL species _____ x 1 = <u>0</u>			
3. _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>			
4. _____	_____	_____	_____	FAC species <u>5</u> x 3 = <u>15</u>			
5. _____	_____	_____	_____	FACU species _____ x 4 = <u>0</u>			
Total Cover: <u>5 %</u>				UPL species <u>2</u> x 5 = <u>10</u>			
<u>Herb Stratum</u>				Column Totals: <u>7</u> (A) <u>25</u> (B)			
1. <u>Hirschfeldia incana</u>	<u>2</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>3.57</u>			
2. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>			
3. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%			
4. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
7. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
8. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b>			
Total Cover: <u>2 %</u>				Yes <input type="radio"/> No <input checked="" type="radio"/>			
<u>Woody Vine Stratum</u>							
1. _____	_____	_____	_____				
2. _____	_____	_____	_____				
Total Cover: <u>_____</u> %							
% Bare Ground in Herb Stratum <u>93 %</u> % Cover of Biotic Crust <u>_____</u> %							

Remarks:



# SOIL

Sampling Point: 2a

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/4	75					Loam	
0-14	10YR 4/3	25					Loamy sand	

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

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: \_\_\_\_\_

# HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

**Secondary Indicators (2 or more required)**

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

**Field Observations:**

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Minor soil cracking but not indicative of ponding water; soil cracking not observed at bottom of pit. Because soil cracking can occur in a variety of situations this may not be enough to serve as a primary indicator, particularly when other indicators are lacking. As noted in the Arid West Supplement, surface soil cracks "may also occur in temporary ponds and puddles in nonwetlands; these situations are easily distinguished by the absence of hydrophytic vegetation and/or hydric soils".

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 2b  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 2 to 5 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in patch of tamarisk above 2a pit.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Tamarix ramosissima</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	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>50.0 %</u> (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>25 %</u>					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species	x 1 = <u>0</u>
3. _____				FACW species	x 2 = <u>0</u>
4. _____				FAC species	<u>25</u> x 3 = <u>75</u>
5. _____				FACU species	x 4 = <u>0</u>
Total Cover: _____ %				UPL species	<u>22</u> x 5 = <u>110</u>
				Column Totals:	<u>47</u> (A) <u>185</u> (B)
				Prevalence Index = B/A = <u>3.94</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Hirschfeldia incana</u>	<u>2</u>		<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Cynosurus echinatus</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____					
6. _____					
7. _____					
8. _____					
Total Cover: <u>22 %</u>					
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>10 %</u>			% Cover of Biotic Crust _____ %	Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	

Remarks:

## SOIL

Sampling Point: 2b**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 4/3	100					Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: \_\_\_\_\_

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

**Field Observations:**Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 3  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field adjacent to dirt road near small tamarisk patch.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <u>Tamarix ramosissima</u>	<u>1</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)			
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3 %</u> (A/B)			
4. _____	_____	_____	_____				
Total Cover: <u>1 %</u>							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. _____				Total % Cover of: _____ Multiply by: _____			
2. _____				OBL species _____ x 1 = <u>0</u>			
3. _____				FACW species _____ x 2 = <u>0</u>			
4. _____				FAC species <u>1</u> x 3 = <u>3</u>			
5. _____				FACU species <u>40</u> x 4 = <u>160</u>			
Total Cover: _____ %				UPL species <u>40</u> x 5 = <u>200</u>			
				Column Totals: <u>81</u> (A) <u>363</u> (B)			
				Prevalence Index = B/A = <u>4.48</u>			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <u>Sisymbrium irio</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <u>Hordeum murinum</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
3. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. _____	_____	_____	_____				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
Total Cover: <u>80 %</u>							
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
1. _____							
2. _____							
Total Cover: _____ %				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
% Bare Ground in Herb Stratum <u>5 %</u> % Cover of Biotic Crust _____ %							

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			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR 3/2	100					Clay loam	
4-14	10YR 3/2	100					Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? 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 signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 4  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>_____</u> %				UPL species	x 5 = <u>410</u>
				Column Totals:	<u>82</u> (A) <u>410</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>5.00</u>	
1. <u>Sisymbrium irio</u>	<u>80</u>	<u>Yes</u>	<u>UPL</u>		
2. <u>Atriplex canescens</u>	<u>1</u>		<u>UPL</u>		
3. <u>Erodium cicutarium</u>	<u>1</u>		<u>UPL</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>82</u> %					
Woody Vine Stratum					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
% Bare Ground in Herb Stratum <u>10</u> %	% Cover of Biotic Crust _____ %				

**Hydrophytic Vegetation Indicators:**  
☒ Dominance Test is >50%  
☒ Prevalence Index is ≤3.0<sup>1</sup>  
☐ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.  
**Hydrophytic Vegetation Present?** Yes ☐ No ☒

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			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-16	10YR 3/2	100					Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

Project/Site: <u>Jacumba Valley Ranch</u>	City/County: <u>Jacumba/San Diego</u>	Sampling Date: <u>2/24/2020</u>
Applicant/Owner: <u>JVR Energy Park, LLC</u>	State: <u>CA</u>	Sampling Point: <u>5</u>
Investigator(s): <u>C. Schaaf, S. Carey</u>	Section, Township, Range: <u>S4 T18S R8E</u>	
Landform (hillslope, terrace, etc.): <u>Field/flat</u>	Local relief (concave, convex, none): <u>Concave</u>	Slope (%): <u>0</u>
Subregion (LRR): <u>C - Mediterranean California</u>	Lat: <u>32.63209</u>	Long: <u>-116.170712</u>
Datum: <u>NAD 83</u>		
Soil Map Unit Name: <u>Indio silt loam, saline, 0 to 2 percent slopes</u>		NWI classification:

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: Plot taken in historic ag field in dead Atriplex sp. stand.					

Tree Stratum	(Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		Total Cover:		%
Sapling/Shrub Stratum				
1.				
2.				
3.				
4.				
5.				
		Total Cover:		%
Herb Stratum				
1.	<i>Hordeum murinum</i>	1	Yes	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				
		Total Cover:	1	%
Woody Vine Stratum				
1.				
2.				
		Total Cover:		%
% Bare Ground in Herb Stratum		5	%	% Cover of Biotic Crust
			%	

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = 4.00

**Hydrophytic Vegetation Indicators:**

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0<sup>1</sup>

☐ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☐ No ☒

Remarks: Most vegetation cover is dead *Atriplex* sp.



## 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			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/2	100					Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 6  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: Plot taken in historic ag field adjacent to <i>Atriplex canescens</i> .					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)			
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)			
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> % (A/B)			
4. _____	_____	_____	_____				
Total Cover: <u>_____</u> %							
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>			
1. <i>Atriplex canescens</i>	<u>10</u>	<u>Yes</u>	<u>UPL</u>	Total % Cover of:		Multiply by:	
2. _____	_____	_____	_____	OBL species	<u>_____</u> x 1 =	<u>0</u>	
3. _____	_____	_____	_____	FACW species	<u>_____</u> x 2 =	<u>0</u>	
4. _____	_____	_____	_____	FAC species	<u>_____</u> x 3 =	<u>0</u>	
5. _____	_____	_____	_____	FACU species	<u>_____</u> x 4 =	<u>0</u>	
Total Cover: <u>10</u> %				UPL species	<u>100</u> x 5 =	<u>500</u>	
<u>Herb Stratum</u>				Column Totals:	<u>100</u> (A)	<u>500</u> (B)	
1. <i>Erodium cicutarium</i>	<u>50</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>5.00</u>			
2. <i>Sisymbrium irio</i>	<u>40</u>	<u>Yes</u>	<u>UPL</u>				
3. _____	_____	_____	_____				
4. _____	_____	_____	_____				
5. _____	_____	_____	_____				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
Total Cover: <u>90</u> %							
<u>Woody Vine Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>			
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u>_____</u> %							
% Bare Ground in Herb Stratum <u>5</u> %		% Cover of Biotic Crust <u>_____</u> %					

Remarks:

## SOIL

Sampling Point: 6

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 7  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in small low spot adjacent to dirt road showing minor soil cracking.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0.0</u> % (A/B)			
4. _____	_____	_____	_____				
Total Cover: <u>_____</u> %							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____			
2. _____	_____	_____	_____	OBL species _____ x 1 = <u>0</u>			
3. _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>			
4. _____	_____	_____	_____	FAC species _____ x 3 = <u>0</u>			
5. _____	_____	_____	_____	FACU species <u>2</u> x 4 = <u>8</u>			
Total Cover: <u>_____</u> %				UPL species <u>33</u> x 5 = <u>165</u>			
				Column Totals: <u>35</u> (A) <u>173</u> (B)			
				Prevalence Index = B/A = <u>4.94</u>			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <u>Erodium cicutarium</u>	<u>1</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <u>Sisymbrium irio</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
3. <u>Atriplex canescens</u>	<u>2</u>	<u>No</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
4. <u>Hordeum murinum</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. _____	_____	_____	_____				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
Total Cover: <u>35</u> %							
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
1. _____	_____	_____	_____				
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u>_____</u> %							
% Bare Ground in Herb Stratum <u>75</u> %			% Cover of Biotic Crust <u>_____</u> %				

Remarks:

## SOIL

Sampling Point: 7

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Minor soil surface cracking. Area shows some evidence of temporary ponding; however, as noted in the Arid West Supplement, surface soil cracks do not always indicate hydrology "as they may also occur in temporary ponds and puddles in nonwetlands; these situations are easily distinguished by the absence of hydrophytic vegetation and/or hydric soils". Given the lack of other wetland indicators, the surface soil cracks observed here are not considered a hydrology indicator.



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 8  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.63209 Long: -116.170712 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in grassy area in historic ag field adjacent to road.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0.0</u> % (A/B)			
4. _____	_____	_____	_____				
Total Cover: <u>_____</u> %							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____			
2. _____	_____	_____	_____	OBL species _____ x 1 = <u>0</u>			
3. _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>			
4. _____	_____	_____	_____	FAC species _____ x 3 = <u>0</u>			
5. _____	_____	_____	_____	FACU species <u>50</u> x 4 = <u>200</u>			
Total Cover: <u>_____</u> %				UPL species <u>31</u> x 5 = <u>155</u>			
				Column Totals: <u>81</u> (A) <u>355</u> (B)			
				Prevalence Index = B/A = <u>4.38</u>			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <u>Erodium cicutarium</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <u>Sisymbrium irio</u>	<u>1</u>		<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
3. <u>Hordeum murinum</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. _____	_____	_____	_____				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
Total Cover: <u>81</u> %							
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
1. _____	_____	_____	_____				
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u>_____</u> %							
% Bare Ground in Herb Stratum <u>20</u> %			% Cover of Biotic Crust <u>_____</u> %				

Remarks:

# SOIL

Sampling Point: 8

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

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

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

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

# HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

**Secondary Indicators (2 or more required)**

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

**Field Observations:**

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 9  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.630200 Long: -116.178543 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: Plot taken in small roadside ditch where tamarisk are concentrated adjacent to road and field.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>Tamarix ramosissima</i>	75	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2.				Total Number of Dominant Species Across All Strata:	2 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	50.0 % (A/B)
4.					
Total Cover: 75 %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1.				Total % Cover of:	Multiply by:
2.				OBL species	x 1 = 0
3.				FACW species	x 2 = 0
4.				FAC species	75 x 3 = 225
5.				FACU species	x 4 = 0
Total Cover: %				UPL species	10 x 5 = 50
				Column Totals:	85 (A) 275 (B)
Herb Stratum				Prevalence Index = B/A = 3.24	
1. <i>Sisymbrium irio</i>	10	Yes	UPL	Hydrophytic Vegetation Indicators:	
2.				<input checked="" type="checkbox"/> Dominance Test is >50%	
3.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
4.				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
7.				Hydrophytic Vegetation Present?	
8.				Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover: 10 %					
Woody Vine Stratum					
1.					
2.					
Total Cover: %					
% Bare Ground in Herb Stratum 95 %			% Cover of Biotic Crust %		

Remarks:

## SOIL

Sampling Point: 9

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/2	100					Loamy sand	
3-6	10YR 5/3	100					Sand	
6-14	10 YR 3/2	98	5YR 4/6	2	C	PL	Sandy cl loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? 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 signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 10  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: _____ %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>8</u>
Total Cover: _____ %				UPL species	x 5 = <u>175</u>
				Column Totals:	<u>37</u> (A) <u>183</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>4.95</u>	
1. <i>Sisymbrium irio</i>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:	
2. <i>Hordeum murinum</i>	<u>2</u>	<u>No</u>	<u>FACU</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <i>Descurainia pinnata</i>	<u>15</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
4. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present?	
8. _____	_____	_____	_____	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover: <u>37</u> %					
Woody Vine Stratum					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>95</u> %	% Cover of Biotic Crust _____ %				

Remarks:



## SOIL

Sampling Point: 10

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 4/3	100					Silt loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? 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 signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 1  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>_____</u> %				UPL species	x 5 = <u>275</u>
				Column Totals:	<u>55</u> (A) <u>275</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>5.00</u>	
1. <u>Sisymbrium irio</u>	<u>5</u>	No	UPL		
2. <u>Schismus barbatus</u>	<u>50</u>	Yes	UPL		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>55</u> %					
Woody Vine Stratum					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
% Bare Ground in Herb Stratum <u>50</u> %			% Cover of Biotic Crust <u>_____</u> %		

### Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%  
☒ Prevalence Index is ≤3.0<sup>1</sup>  
☐ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic  
Vegetation  
Present?

Yes ☐ No ☒

Remarks:

## SOIL

Sampling Point: 11

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 12  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Ramona sandy loam, 9 to 15 percent slopes, eroded 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: Plot taken in bottom of small pit with Tamarisk. Area appears previously disturbed. Water appears to pond here.					

## VEGETATION

Tree Stratum (Use scientific names.)	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>3</u> (B)			
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3 %</u> (A/B)			
4. _____							
Total Cover: _____ %							
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>			
1. <i>Tamarix ramosissima</i>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____			
2. _____				OBL species _____ x 1 = <u>0</u>			
3. _____				FACW species _____ x 2 = <u>0</u>			
4. _____				FAC species <u>15</u> x 3 = <u>45</u>			
5. _____				FACU species _____ x 4 = <u>0</u>			
Total Cover: <u>15 %</u>				UPL species <u>2</u> x 5 = <u>10</u>			
<u>Herb Stratum</u>				Column Totals: <u>17</u> (A) <u>55</u> (B)			
1. <i>Erodium cicutarium</i>	<u>1</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>3.24</u>			
2. <i>Schismus barbatus</i>	<u>1</u>	<u>Yes</u>	<u>UPL</u>				
3. _____							
4. _____							
5. _____							
6. _____							
7. _____							
8. _____							
Total Cover: <u>2 %</u>							
<u>Woody Vine Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>			
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%			
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: _____ %							
% Bare Ground in Herb Stratum <u>99 %</u> % Cover of Biotic Crust _____ %							

Remarks: Lots of dead *Sisymbrium irio* and *Tamarix* surrounding sample point.



## SOIL

Sampling Point: 12

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox observed.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Soil cracks present. Ponding likely in this area.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 13  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>      </u> %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>      </u> %				UPL species	x 5 = <u>375</u>
				Column Totals:	<u>75</u> (A) <u>375</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>5.00</u>	
1. <u>Hirschfeldia incana</u>	<u>60</u>	<u>Yes</u>	<u>UPL</u>		
2. <u>Schismus barbatus</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>75</u> %					
Woody Vine Stratum				Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
Total Cover: <u>      </u> %				Hydrophytic Vegetation Present?	
% Bare Ground in Herb Stratum <u>25</u> %			% Cover of Biotic Crust <u>      </u> %	Yes <input type="radio"/>	
				No <input checked="" type="radio"/>	

Remarks:

## SOIL

Sampling Point: 13

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/3	99	5YR 4/4	1	C	PL	Sandy loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: Minor redox, but no indicators met.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 14  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/> No <input checked="" type="radio"/>	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Plot taken in historic ag field.</u>			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0.0 %</u>	(A/B)
4. _____	_____	_____	_____		
Total Cover: <u>_____ %</u>					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species <u>_____</u>	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>_____</u>	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species <u>_____</u>	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species <u>_____</u>	x 4 = <u>0</u>
Total Cover: <u>_____ %</u>				UPL species <u>93</u>	x 5 = <u>465</u>
				Column Totals: <u>93</u>	(A) <u>465</u> (B)
				Prevalence Index = B/A = <u>5.00</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Sisymbrium irio</u>	<u>3</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Schismus barbatus</u>	<u>10</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Erodium cicutarium</u>	<u>80</u>	<u>Yes</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>93 %</u>					
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: <u>_____ %</u>					
% Bare Ground in Herb Stratum <u>7 %</u>			% Cover of Biotic Crust <u>_____ %</u>		

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: \_\_\_\_\_



## SOIL

Sampling Point: 14

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 15  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Reiff fine sandy loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>_____</u> %				UPL species	<u>95</u> x 5 = <u>475</u>
				Column Totals:	<u>95</u> (A) <u>475</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>5.00</u>	
1. <u>Sisymbrium irio</u>	<u>5</u>	No	UPL	Hydrophytic Vegetation Indicators:	
2. <u>Hirschfeldia incana</u>	<u>10</u>	No	UPL	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <u>Descurainia pinnata</u>	<u>80</u>	Yes	UPL	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
4. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>95</u> %					
Woody Vine Stratum				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="radio"/>	
2. _____	_____	_____	_____	No <input checked="" type="radio"/>	
Total Cover: <u>_____</u> %					
% Bare Ground in Herb Stratum <u>5</u> %			% Cover of Biotic Crust <u>_____</u> %		

Remarks:

## SOIL

Sampling Point: 15

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR 3/3	100					Loam	
4-14	10YR 3/3	98	5YR 4/4	2	C	PL	Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: Slight redox in lower layer, but no indicators met.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 16  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.628178 Long: -116.176196 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, saline, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>_____</u> %				UPL species	x 5 = <u>475</u>
				Column Totals:	<u>95</u> (A) <u>475</u> (B)
				Prevalence Index = B/A = <u>5.00</u>	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Sisymbrium irio</u>	<u>5</u>		UPL	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Hirschfeldia incana</u>	<u>30</u>	Yes	UPL	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Descurainia pinnata</u>	<u>60</u>	Yes	UPL	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>95</u> %					
<u>Woody Vine Stratum</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: <u>_____</u> %					
% Bare Ground in Herb Stratum <u>5</u> %		% Cover of Biotic Crust <u>_____</u> %		<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	

Remarks:



## SOIL

Sampling Point: 16

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 17  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Reiff fine sandy loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>      </u> %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>      </u> %				UPL species	x 5 = <u>375</u>
Herb Stratum				Column Totals:	<u>75</u> (A) <u>375</u> (B)
1. <u>Sisymbrium irio</u>	<u>5</u>		<u>UPL</u>	Prevalence Index = B/A = <u>5.00</u>	
2. <u>Hirschfeldia incana</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>		
3. <u>Descurainia pinnata</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>		
4. <u>Schismus barbatus</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>75</u> %					
Woody Vine Stratum				Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Remarks: _____					

Remarks: \_\_\_\_\_

# SOIL

Sampling Point: 17

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

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

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

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

# HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

**Secondary Indicators (2 or more required)**

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

**Field Observations:**

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 18  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Reiff fine sandy loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>      </u> %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>      </u> %				UPL species	x 5 = <u>155</u>
				Column Totals:	<u>31</u> (A) <u>155</u> (B)
				Prevalence Index = B/A = <u>5.00</u>	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Hirschfeldia incana</u>	<u>25</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Descurainia pinnata</u>	<u>3</u>	<u>No</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Schismus barbatus</u>	<u>3</u>	<u>No</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>31</u> %					
<u>Woody Vine Stratum</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b>	
2. _____	_____	_____	_____	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover: <u>      </u> %					
% Bare Ground in Herb Stratum <u>5</u> %			% Cover of Biotic Crust <u>      </u> %		

Remarks: Lots of dead vegetation.



## SOIL

Sampling Point: 18

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 19  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field. Just north of airstrip adjacent to border wall.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>      </u> %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: <u>      </u> %				UPL species	x 5 = <u>450</u>
				Column Totals:	<u>90</u> (A) <u>450</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>5.00</u>	
1. <i>Schismus barbatus</i>	<u>15</u>	<u>No</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:	
2. <i>Hirschfeldia incana</i>	<u>15</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <i>Descurainia pinnata</i>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
4. <i>Erodium cicutarium</i>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
8. _____	_____	_____	_____		
Total Cover: <u>90</u> %					
Woody Vine Stratum					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: <u>      </u> %					
% Bare Ground in Herb Stratum <u>5</u> %	% Cover of Biotic Crust <u>      </u> %				

Remarks:

## SOIL

Sampling Point: 19

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-10	10YR 3/3	100					Loam	
10-14	10YR 3/3	99	2.5YR 3/6	1	C	PL	Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: Slight redox in lower layer. No indicators met.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 20  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field. Just south of airstrip adjacent to border wall.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0.0</u> % (A/B)			
4. _____	_____	_____	_____				
Total Cover: <u>_____</u> %							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____			
2. _____	_____	_____	_____	OBL species _____ x 1 = <u>0</u>			
3. _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>			
4. _____	_____	_____	_____	FAC species _____ x 3 = <u>0</u>			
5. _____	_____	_____	_____	FACU species <u>10</u> x 4 = <u>40</u>			
Total Cover: <u>_____</u> %				UPL species <u>85</u> x 5 = <u>425</u>			
				Column Totals: <u>95</u> (A) <u>465</u> (B)			
				Prevalence Index = B/A = <u>4.89</u>			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <u>Schismus barbatus</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <u>Cryptantha intermedia</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
3. <u>Hordeum murinum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
4. <u>Erodium cicutarium</u>	<u>10</u>	<u>No</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. <u>Amsinckia menziesii</u>	<u>50</u>	<u>Yes</u>	<u>UPL</u>				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
Total Cover: <u>95</u> %							
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
1. _____	_____	_____	_____				
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u>_____</u> %							
% Bare Ground in Herb Stratum <u>5</u> %			% Cover of Biotic Crust _____ %				

Remarks:



## SOIL

Sampling Point: 20

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/4	100					Loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 21  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.613715 Long: -116.172211 Datum: NAD 83  
 Soil Map Unit Name: Indio silt loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: Plot taken in artificial basin approximately 70 x 50 meters. Bottom of basin very even. Mostly bare but several native shrubs and non-native herbs present.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: _____ %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. <i>Isocoma acradenia</i>	<u>5</u>	Yes	FACU	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>20</u>
Total Cover: <u>5</u> %				UPL species	x 5 = <u>150</u>
<u>Herb Stratum</u>				Column Totals:	<u>35</u> (A) <u>170</u> (B)
1. <i>Schismus barbatus</i>	<u>15</u>	Yes	UPL	Prevalence Index = B/A = <u>4.86</u>	
2. <i>Cryptantha intermedia</i>	<u>5</u>	No	UPL		
3. <i>Erodium cicutarium</i>	<u>10</u>	Yes	UPL		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>30</u> %					
<u>Woody Vine Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
Remarks:					

Remarks:

## SOIL

Sampling Point: 21

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/4	100					Loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 22  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Reiff fine sandy loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field just north of border wall.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: _____ %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>0</u>
Total Cover: _____ %				UPL species	<u>50</u> x 5 = <u>250</u>
				Column Totals:	<u>50</u> (A) <u>250</u> (B)
				Prevalence Index = B/A = <u>5.00</u>	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Hirschfeldia incana</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Schismus barbatus</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>50</u> %					
<u>Woody Vine Stratum</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b>	
2. _____	_____	_____	_____	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>20</u> %		% Cover of Biotic Crust _____ %			

Remarks:



## SOIL

Sampling Point: 22

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/4	100					Loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Slight surface soil cracking. However, as noted in the Arid West Supplement, surface soil cracks do not always indicate hydrology "as they may also occur in temporary ponds and puddles in nonwetlands; these situations are easily distinguished by the absence of hydrophytic vegetation and/or hydric soils". Given the lack of other wetland indicators, the surface soil cracks observed here are not considered a hydrology indicator.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 23  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Reiff fine sandy loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field just north of border wall.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: _____ %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	<u>20</u> x 4 = <u>80</u>
Total Cover: _____ %				UPL species	<u>67</u> x 5 = <u>335</u>
				Column Totals:	<u>87</u> (A) <u>415</u> (B)
				Prevalence Index = B/A = <u>4.77</u>	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Hordeum murinum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Erodium cicutarium</u>	<u>50</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Schismus barbatus</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Sisymbrium irio</u>	<u>2</u>	<u>No</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>87</u> %					
<u>Woody Vine Stratum</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ %			% Cover of Biotic Crust _____ %	<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	

Remarks:

## SOIL

Sampling Point: 23

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

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

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jacumba Valley Ranch City/County: Jacumba/San Diego Sampling Date: 2/24/2020  
 Applicant/Owner: JVR Energy Park, LLC State: CA Sampling Point: 24  
 Investigator(s): C. Schaaf, S. Carey Section, Township, Range: S4 T18S R8E  
 Landform (hillslope, terrace, etc.): Field/flat Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 32.619755 Long: -116.176634 Datum: NAD 83  
 Soil Map Unit Name: Reiff fine sandy loam, 0 to 2 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: <u>Plot taken in historic ag field just north of border wall.</u>					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</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>0.0</u> % (A/B)
4. _____	_____	_____	_____		
Total Cover: _____ %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	x 3 = <u>0</u>
5. _____	_____	_____	_____	FACU species	x 4 = <u>40</u>
Total Cover: _____ %				UPL species	x 5 = <u>0</u>
				Column Totals:	<u>10</u> (A) <u>40</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>4.00</u>	
1. <u>Hirschfeldia incana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>10</u> %					
Woody Vine Stratum				Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
Total Cover: _____ %				Hydrophytic Vegetation Present?	
% Bare Ground in Herb Stratum <u>90</u> %			% Cover of Biotic Crust _____ %	Yes <input type="radio"/>	
				No <input checked="" type="radio"/>	

Remarks:



## SOIL

Sampling Point: 24

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

[illegible]

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

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

#### Indicators for Problematic Hydric Soils:

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type:

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☐ No ☒

Remarks: No redox.

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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**Secondary Indicators (2 or more required)**

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

**Field Observations:**

Surface Water Present? Yes ☐ No ☒

Depth (inches):

Water Table Present? Yes ☐ No ☒

Depth (inches):

Saturation Present? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No signs of hydrology.



# Attachment E

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WETS Table

## WETS Table

WETS Station: CAMPO ASOS, CA									
Requested years: 1971 - 2019									
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall	
Jan	62.0	34.5	48.2	1.86	0.58	2.21	4	-	
Feb	61.3	34.1	47.7	2.28	1.01	2.78	5	-	
Mar	65.7	35.1	50.4	1.12	0.52	1.36	3	-	
Apr	69.2	36.9	53.0	0.76	0.21	0.84	2	-	
May	75.9	41.8	58.9	0.30	0.00	0.20	1	-	
Jun	85.5	45.8	65.6	0.05	0.00	0.00	0	-	
Jul	91.9	54.4	73.2	0.30	0.13	0.33	1	-	
Aug	92.3	54.4	73.4	0.23	0.00	0.13	1	-	
Sep	87.5	50.2	68.9	0.42	0.12	0.42	1	-	
Oct	77.5	43.2	60.3	-	-	-	-	-	
Nov	68.9	37.3	53.1	0.76	0.36	0.91	2	-	
Dec	60.7	33.4	47.0	1.70	0.51	2.01	4	-	
Annual:					-	-			
Average	74.9	41.7	58.3	-	-	-	-	-	
Total	-	-	-	-			-	-	

## GROWING SEASON DATES

Years with missing data:	24 deg = 31	28 deg = 30	32 deg = 29
Years with no occurrence:	24 deg = 0	28 deg = 0	32 deg = 0
Data years used:	24 deg = 18	28 deg = 19	32 deg = 20
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	Insufficient data	Insufficient data	5/8 to 10/22: 167 days
70 percent *	Insufficient data	Insufficient data	5/1 to 10/30: 182 days

\* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1998				1.72	0.91	0.03	0.10	0.20	0.19	0.01	0.74	1.16	5.06
1999	1.33	0.74	0.45	1.57	0.00	0.33	0.50	M0.00	0.12	0.00	0.00	0.41	5.45
2000	0.42	3.51	1.08	0.34	M0.00	0.20	0.00	0.14	0.22	0.41	0.33	0.03	6.68
2001	2.32	3.41	1.31	0.97	0.01	0.02	0.12	0.00	0.67	0.00	0.80	0.73	10.36
2002	0.32	0.09	0.82	0.49	M0.00	0.00	0.16	0.00	1.07	0.01	M0.76	1.58	5.30
2003	M0.16	3.73	M1.66	1.21	0.70	M0.00	M1.62	M0.01	M0.41	M0.00	M0.42	0.93	10.85
2004	0.36	M3.60	0.59	1.32	0.00	0.00	0.09	0.01	0.00	6.51	M0.49	M3.51	16.48
2005	4.06	3.94	1.25	0.43	0.02	M0.00	M0.45	M1.64	M0.01	0.53	0.11	0.05	12.49

2006	0.66	M0.45	M3.37	0.07	0.18	M0.16	M0.55	0.02	M0.09	0.33	0.15	M0.92	6.95
2007	M0.56	3.27	M0.13	0.45	0.04	0.00	0.13	M0.13	M0.01	M0.18	M1.45	0.88	7.23
2008	M4.25	1.95	0.38	0.01	0.22	0.00	0.00	1.14	M0.00	M0.10	1.60	4.63	14.28
2009	M0.15	2.84	0.04	M0.19	M0.00	M0.01	M0.00	0.01	M0.02	0.03	M0.09	M4.00	7.38
2010	5.41	4.28	M2.16	1.74	0.00	0.00	0.10	0.00	M0.08	M2.90	M0.08	M2.43	19.18
2011	M0.24	4.93	1.64	0.39	0.40	0.00	0.22	M0.00	0.20	0.39	2.94	1.49	12.84
2012	0.51	M1.52	1.76	2.26	0.00	0.00	0.35	0.55	0.52	0.34	0.43	2.28	10.52
2013	2.03	0.98	1.43	0.01	0.33	0.00	0.24	0.19	1.51	0.90	0.80	0.55	8.97
2014	0.08	1.24	0.75	0.68	0.01	0.00	0.14	0.48	1.41	0.00	0.26	3.61	8.66
2015	0.36	0.67	1.45	0.27	2.31	0.27	0.51	0.01	0.59	1.06	0.76	1.25	9.51
2016	3.60	0.20	0.72	1.71	0.14	0.00	0.00	0.00	1.01	0.06	0.88	4.29	12.61
2017	6.66	3.69	0.11	0.00	0.89	0.00	0.16	0.00	0.21	0.00	0.34	0.01	12.07
2018	2.16	0.52	1.20	0.03	0.05	0.00	1.05	0.02	0.00	0.10	1.89	1.71	8.73
2019	M1.82												1.82

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22





# Attachment F

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Review Area Photos

## ATTACHMENT F

### Review Area Photos

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WSP 1a



WSP 1b



WSP 2a



WSP 2b

## ATTACHMENT F (Continued)



WSP 3



WSP 4



WSP 5



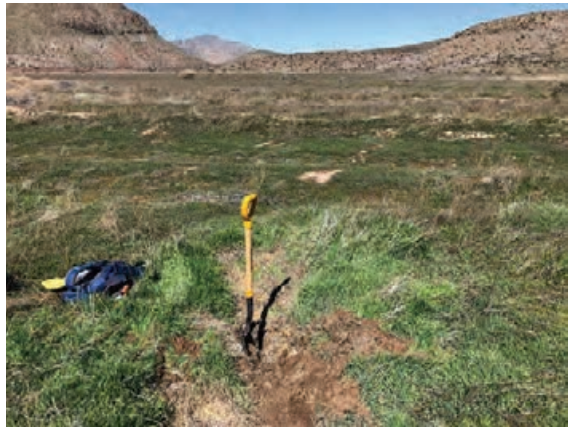
WSP 6



## ATTACHMENT F (Continued)



WSP 7



WSP 8

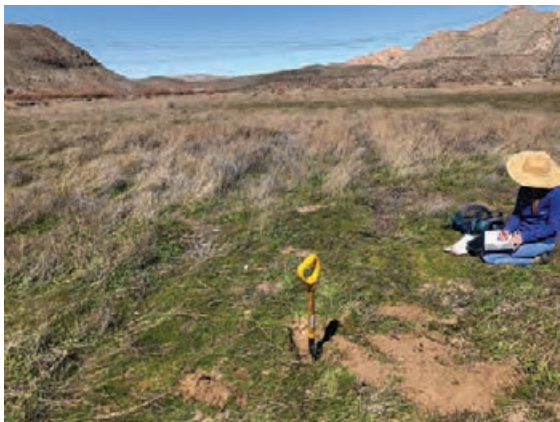


WSP 9



WSP 10

## ATTACHMENT F (Continued)



WSP 11



WSP 12



WSP 13



WSP 14



## ATTACHMENT F (Continued)



WSP 15



WSP 16



WSP 17



WSP 18

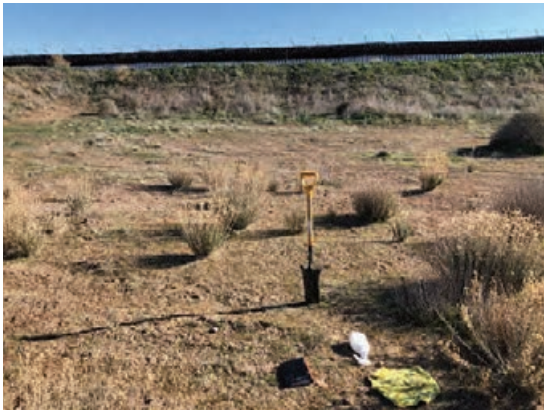
## ATTACHMENT F (Continued)



WSP19



WSP 20



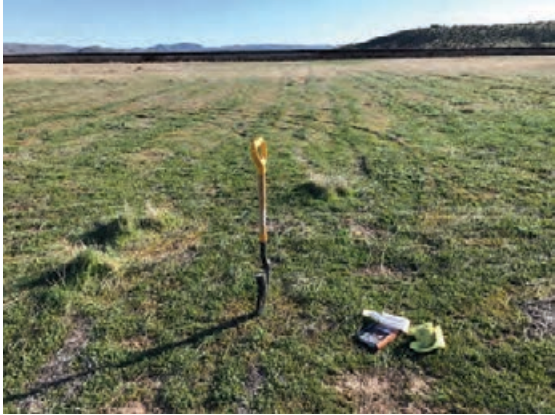
WSP 21



WSP 22



## ATTACHMENT F (Continued)



WSP 23



WSP 24







Transect A



Transect B

## ATTACHMENT F (Continued)

	
Culvert connected to Feature A, facing northwest	Transect C
	
Transect D	Borrow pit 1

## ATTACHMENT F (Continued)

	
Borrow pit 2	