

# APPROVED JURISDICTIONAL DELINEATION

**VULCAN – SACRAMENTO AGGREGATES  
CARLI EXPANSION SITE  
SACRAMENTO COUNTY, CALIFORNIA**



**LSA**

May 2019

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## **VULCAN – SACRAMENTO AGGREGATES CARLI EXPANSION SITE SACRAMENTO COUNTY, CALIFORNIA**

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Project No. VMC1601



May 2019

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## 1.0 INTRODUCTION

This report, prepared by LSA on behalf of Calmat Co. dba Vulcan Materials Company – Western Division, presents the results of a delineation of potential waters of the U.S. for a review area of the Vulcan-Sacramento Aggregates Carli Property. Potential regulated waters in the review area include areas meeting the United States Army Corps of Engineers (USACE) criteria for wetlands and/or other waters of the U.S. subject to regulation under Section 404 of the Clean Water Act (CWA). Included herein are a description of the review area, an explanation of the methods used during the delineation, and a discussion of the results.

The findings and conclusions presented in this report, including the location and extent of wetlands and other waters subject to regulation under Section 404 of the CWA, represent the professional opinion of LSA. These findings and conclusions should be considered preliminary until verified by the USACE.

### 1.1 GENERAL DESCRIPTION

The review area totals 154.82 acres (ac) and is located in Sacramento County, approximately 9.7 miles (mi) east of the city of Sacramento, on the northeast corner of Eagles Nest Road and Florin Road. Topography is flat with some shallow undulation; the elevation is approximately 115 feet (ft) above mean sea level (Figures 1 and 2).

The Vulcan – Sacramento Aggregates mining operation will be expanding to a 160.98-ac site located southwest and adjacent to Vulcan’s current mining operation (referred to as the Carli Property). The review area, as defined above, is consistent with the Carli Property with the exception of the 6.16-ac segment of the Florin Road Right-of-Way (ROW). The Carli Property is located in the southeast quarter of Section 36 of Township 8 North, Range 6 East and the southwest quarter of Section 31 of Township 8 North, Range 7 East, on the Elk Grove and Carmichael USGS quadrangle maps.

Aggregate mining and processing operations are currently permitted on 394.32 ac under Sacramento County Use Permit (01-ZGB-UPB-0107). Existing operations include an aggregate processing plant. An EIR (Sacramento Aggregates–East Vineyard Community Plan Amendment, Rezone and Use Permit, Control No. 94-CZB-UPB-0715, State Clearinghouse No. 95052078) was approved for the original project in 1997, and a Supplemental EIR (Triangle Rock Products, Inc. Zoning Agreement and Use Permit Amendments, State Clearinghouse No. 1995050278) was approved for revisions in the original area in February 2003.

The existing processing plant is immediately east of the current review area; the areas north and east of the current review area have been mined over the last 20 years (Figure 3). In addition, in November 2008 the County approved an expansion to the south of Florin Road (the Florin Road South Expansion) just southeast of the current review area for which an EIR was prepared.

### 1.2 CARLI PROPERTY DESCRIPTION

The proposed Carli Property includes 160.98 acres of private and public land. The Carli Property’s southern boundary shares a boundary with the southern boundary of the Florin Road ROW, the

western boundary is Eagles Nest Road, and the northern and eastern edges bound the existing 338.04-acre Current Active Mining Area.

### **1.2.1 Non-Disturbance Areas**

Non-Disturbance Areas in the Carli Property, totaling 19.76 acres, include a Wetland Avoidance Area (10.69 acres) located in the southeast corner of the Carli Property adjacent to Florin Road; County ROW (6.16 acres) on Florin Road along the southern boundary; and a perimeter area of Undisturbed Setbacks (2.91 acres) along the shoulders of Eagles Nest Road and Florin Road.

### **1.2.2 Proposed Carli Mining Area**

The remainder of the Carli Property contains the proposed 141.22-acre Carli Mining Area. The Carli Mining Area contains two distinct areas that will be implemented in phases: Phase T-1 is 74.58 acres and Phase T-2 is 66.64 acres.

## **1.3 MINE PLAN**

The Sacramento Aggregates sand and gravel mining operation consists of Phases I – X and Expansion Phases E-1, E-2 and E-3 (Florin Road South Expansion). The approved end use for the existing phases is reclamation back to grazing land and in some areas of Expansion Phase E, the end use will also include seasonal wetlands.

The Carli Property will add Phase T to the approved operations and will be implemented in two mining phases: Phases T-1 (74.58 acres) and T-2 (66.64 acres). The site will be mined starting in the northern portion of the site, extending south down and around the existing composting facility, then to the east, and finally back up towards the northeast to excavate the area currently occupied by the composting operation. The Carli Property will be reclaimed back to grazing land consistent with the other approved mining phases.



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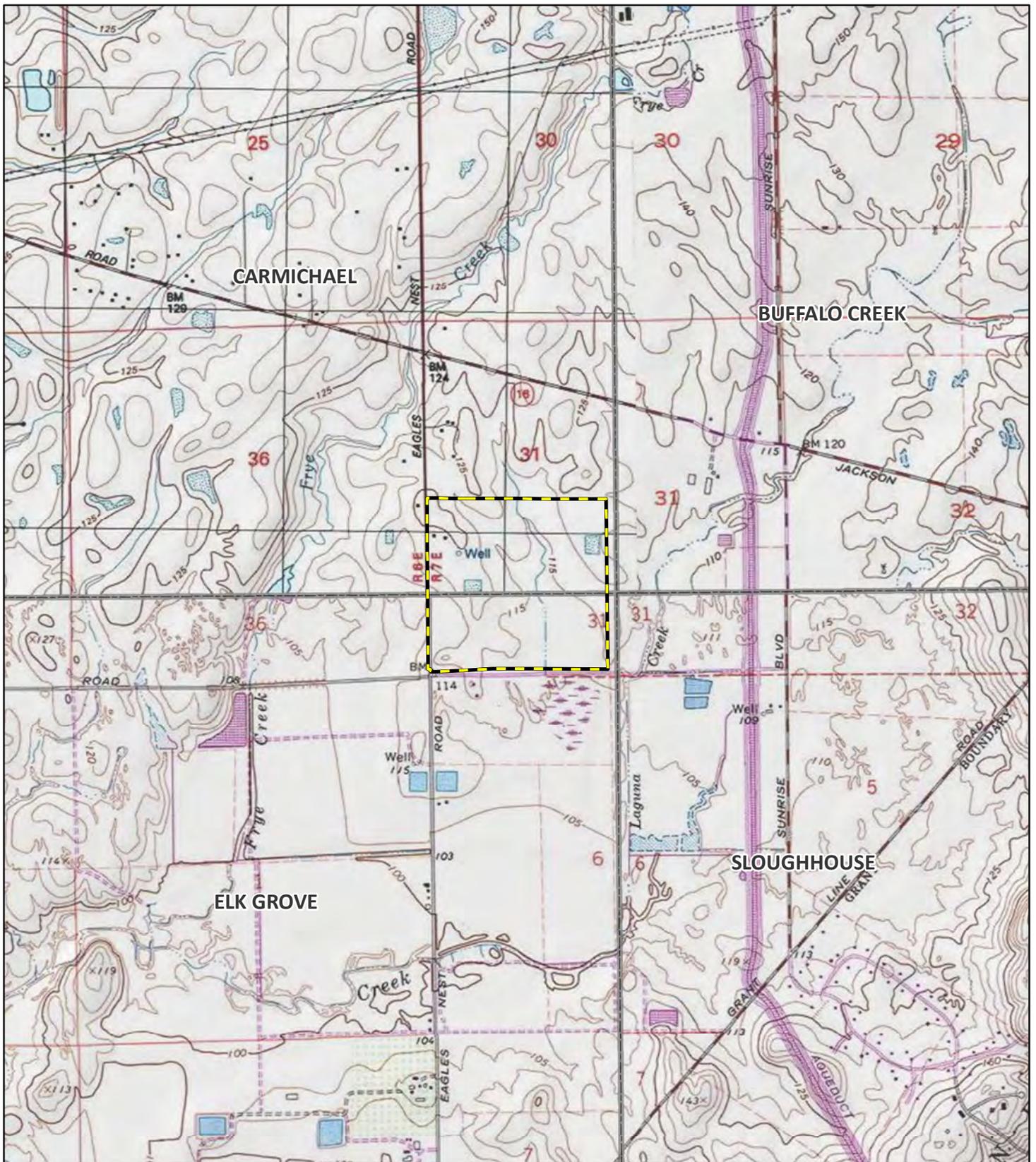
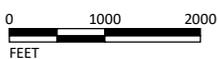


FIGURE 2

LSA

LEGEND

-  Review Area - (154.82 ac)
-  USGS 7.5' Quad Boundaries



Sacramento Aggregates Expansion  
 Sacramento County, California  
 LSA Project No. VMC1601

Review Area Vicinity on Topographic Base

SOURCE: USGS 7.5-minute topographic quadrangles Carmichael (1997); Elk Grove (1980); Buffalo Creek (1980); Sloughouse (1993)

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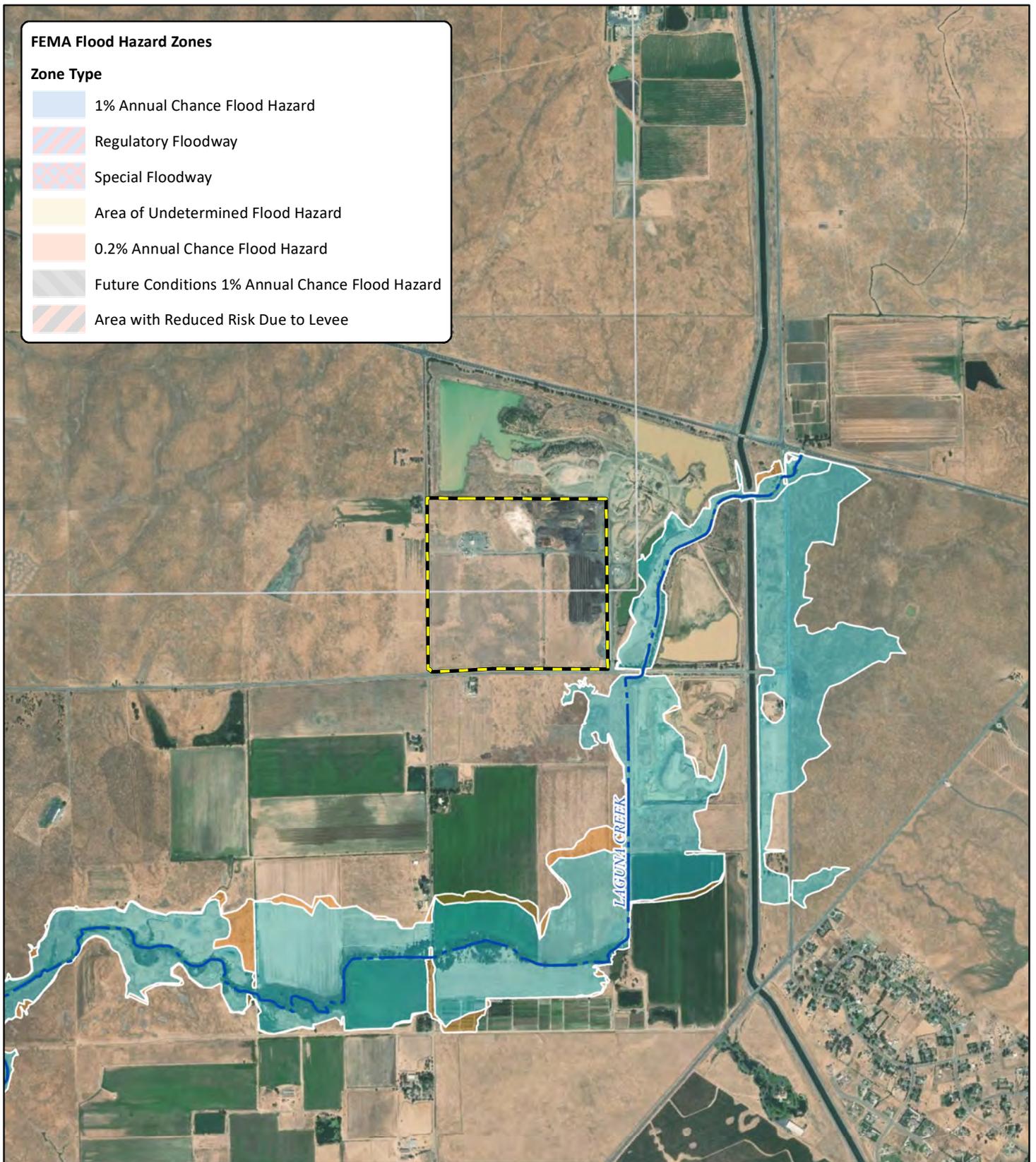


FIGURE 3

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LEGEND

 Review Area - (154.82 ac)



0 1000 2000  
FEET

SOURCE: NAIP Aerial Imagery (6/2016)

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Sacramento County, California  
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**Review Area Vicinity on Aerial Base  
and FEMA Flood Zones**

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### 1.3.1 Description of Mining

Overburden from the Carli Property will be removed with existing equipment used at other Sacramento Aggregate mining areas (e.g., a hydraulic excavator and front-loaders). Aggregate will be mined from the Carli Property using existing equipment, including a hydraulic excavator and front-loaders. Excavated aggregate will be transported to an extendable pit conveyor by loaders or existing haul trucks. Other existing mobile equipment will include bulldozer, motor-grader, water truck, and service truck. No processing will occur on the Carli Property.

### 1.3.2 Overburden and Waste Material Placement Sites

There is an approximately 2- to 3-foot thick layer of topsoil present in the Carli Property. Topsoil will be removed as a separate layer from each phase by using existing front-loaders or hydraulic excavator. Topsoil is transported by haul trucks, spread at previously excavated areas for use as the final cover for reclamation, or stored separately for such use in later reclamation.

An estimated 6.3 million cubic yards of overburden will be removed during the mining at the Carli Property (Phase T) by using existing hydraulic excavator and will be transported by haul trucks, spread at previously excavated areas for use as fill for reclamation or stored separately for such use in later reclamation.

### 1.3.3 Non-Disturbance Areas

The proposed excavation setbacks (2.91 acres total) would be the same as for the existing permitted operations (i.e., 30 feet from edge of pavement). For the Carli Property, that includes 30 feet from the Florin Road right-of-way and 30 feet from the Eagles Nest Road right-of-way). The setbacks would be landscaped to match the existing landscaping on the northeast and southeast sides of Florin Road and create a visual barrier between the roads and the mining activities. The landscaping would include the same native and/or landscape varieties of plants within a 15 feet wide planting area. The proposed mine plan is included in Appendix A.

The 6.16-acre segment of Florin Road ROW included in the Carli Property stretches from Eagles Nest Road eastward for approximately 2,640 feet (0.5 mile). No project elements are proposed within the Florin Road ROW. This area has not been included in the review area for purposes of this study.

Additionally, a 10.69-acre area in the southeast corner of the Carli Property has been designated for avoidance as a Wetland Avoidance Area. The seasonal wetlands present in this area will be preserved.

## 1.4 RECLAMATION PLAN

The mined area will be reclaimed to rolling grazing lands. Overburden and rock will be removed to elevations ranging between approximately 50 and 70 feet (approximate depths of 50 to 70 feet below current average site elevation of 120 feet), with side slopes of 1H:1V. This will be a temporary slope that will be partially filled during mine reclamation. Mined slopes meet criteria at 1H:1V for the final pit depth and 1.75H:1V backfilled with engineered fill for the reclaimed pit depth.

## 2.0 ENVIRONMENTAL SETTING

The review area is located in the Central Valley of California. Topography in the region varies from lowlands of the valley floor to the rolling terrain of the foothills. The predominant habitats in the region are grassland and oak woodland/savannah interspersed with various wetland and riparian habitats. Primary land uses in the vicinity are agricultural and industrial with smaller areas of concentrated residential housing.

### 2.1 CLIMATE

The climate in the review area is Mediterranean with cool, wet winters and hot, dry summers. The average total annual precipitation is approximately 18.15 inches (Western Regional Climate Center, 2017), most of which falls between November and April. There is normally less than 0.5 inch of rain between June and September. The average winter temperature is 48.3 degrees Fahrenheit (°F) and the average winter low temperature is 40.9°F. The average summer temperature is 73.9°F and the average summer high temperature is 89.4°F.

### 2.2 HYDROLOGY

Historic aerial photos (the earliest of which is from 1937) indicate the predominant flow pattern in the review area from northwest to southeast, except for the southwest part of the site with trends to the west. Subsequent photos (1947, 1957, and 1964) show an increase in agricultural use and associated irrigation. During this time period, irrigation runoff and still appeared to flow southeast out of the review area, joining Laguna. Current conditions (1971 to present) continue to maintain the general southeast flow pattern but a large ditch has been constructed to provide water for the compost operation and the ditch has been designed to flow north. Florin Road has also been constructed and blocks historical southeast flows into Laguna Creek, creating a large seasonal wetlands in the southeast corner of the review area. Water from this wetland flows into Laguna Creek only during large storm events. Historic aerial photos are included in Appendix A. Laguna Creek joins Morrison Creek approximately 20 mi west, then flows southwest for approximately 3 mi and joins the Sacramento River.

### 2.3 SOILS

The review area contains the following soil types (shown in Figure 4):

- Durixeralfs, 0 to 1 percent slopes
- Fiddyment fine sandy loam, 1 to 8 percent slopes
- San Joaquin silt loam, leveled, 0 to 1 percent slopes
- San Joaquin silt loam, 0 to 3 percent slopes
- Xerarents-San Joaquin complex, 0 to 1 percent slopes

All soil types in the review area with the exception of the Fiddyment fine sandy loam soils are considered hydric soils (NRCS Soil Survey Sacramento County, California).

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**LEGEND**

Review Area - (154.82 ac)

**NRCS Soil Classification**

137 - Durixeralfs, 0 to 1 percent slopes

145 - Fiddyment fine sandy loam, 1 to 8 percent slopes

213 - San Joaquin silt loam, leveled, 0 to 1 percent slopes

214 - San Joaquin silt loam, 0 to 3 percent slopes

238 - Xerarents-San Joaquin complex, 0 to 3 percent slopes



SOURCE: Basemap - NAIP Aerial Imagery (6/2016); Mapping - NRCS Soil Survey Sacramento County (1993)

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**FIGURE 4**

*Sacramento Aggregates Expansion  
Sacramento County, California  
LSA Project No. VMC1601  
NRCS Soil Classifications*

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### 2.3.1 Durixeralfs, 0 to 1 percent slopes

Durixeralfs are a great group of soils in the Alfisols order and the Xeralfs suborder and consist of well-drained soils formed in material derived from granitic rock sources. These soils are found on low terraces. The mean annual precipitation is about 15 inches and the mean annual temperature is about 62°F.

### 2.3.2 Fiddyment fine sandy loam, 1 to 8 percent slopes

The Fiddyment-series soil consists of moderately deep, well-drained soils formed in material weathered from consolidated sediments of mixed rock sources. These soils are on nearly level to rolling low terraces and hills. The mean annual precipitation is about 19 inches and mean annual temperature is about 61°F. Soil temperature ranges from 62 to 67°F. Soil between 8 and 21 inches is moist in all parts from December through April and is dry in all parts from June through mid-October in most years.

### 2.3.3 San Joaquin soil complex

The San Joaquin-series soils consist of moderately deep to a duripan (depth ranges from 20 to 40 inches), well and moderately well drained soils formed in alluvium derived from mixed but predominantly granitic rock sources. They are on undulating low terraces; some areas have been leveled. The mean annual precipitation is about 15 inches and the mean annual temperature is about 61°F. Soil temperature ranges from 60 to 64°F. Soil at depths of about 7 to 24 inches or directly above the duripan is dry in all parts from June to November and is moist in some or all parts the rest of the year. Permeability is very slow, so some areas are subject to rare or occasional flooding.

### 2.3.4 Xeraents-San Joaquin complex, 0 to 1 percent slopes

Xerarents-San Joaquin Complex soils consist of well and moderately well drained soils formed in alluvium derived from granitic rock sources. These soils are found on low terraces in floodplains and basin floors. The mean annual precipitation is about 17 inches and the mean annual temperature is about 62°F.

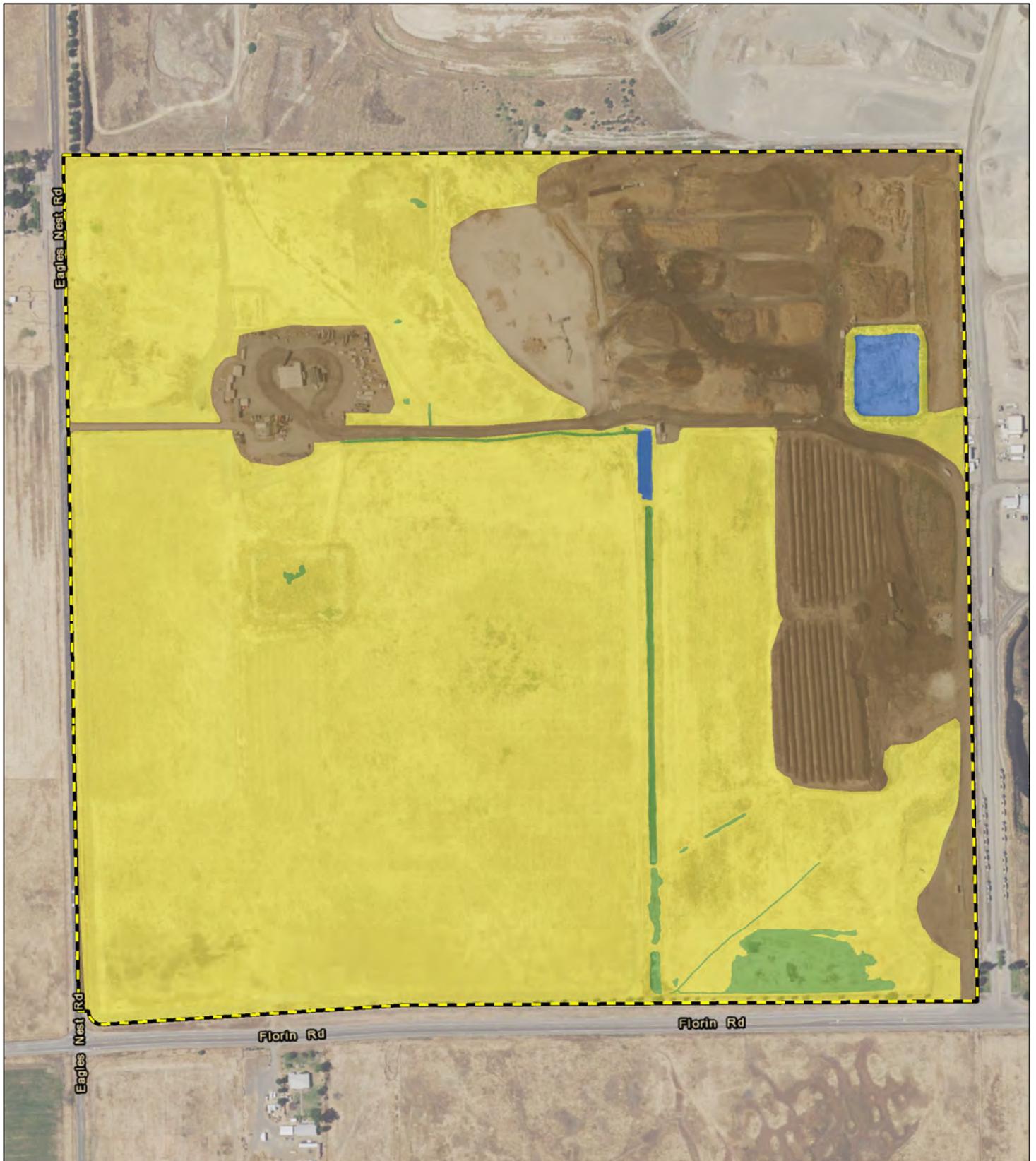
## 2.4 PLANT COMMUNITIES / LAND USES

Natural habitats comprise approximately 111.62 ac of the review area and include non-native grassland, seasonal wetland, and open water communities. The remaining 43.62 ac are devoted to developed land uses (Figure 5).

### 2.4.1 Non-Native Grasslands

Non-native grasslands are the most common vegetation community in the review area, comprising 70% of the site. This community is dominated by Italian ryegrass (*Festuca perennis*) but wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), and foxtail barley (*Hordeum murinum*) are also present, with many other grasses and herbs present in smaller numbers. Small areas of ruderal vegetation and barren disturbed areas are included in this category. Portions of the non-native grassland community are mowed and/or disked annually for fire protection.

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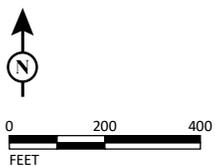


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LEGEND

-  Review Area - (154.82 ac)
-  Developed - (42.96 ac)
-  Nonnative Grassland - (108.12 ac)
-  Open Water - (1.25 ac)
-  Seasonal Wetland - (2.49 ac)

FIGURE 5



*Sacramento Aggregates Expansion  
Sacramento County, California  
LSA Project No. VMC1601  
Plant Communities on the  
Carli Property Expansion Site*

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### 2.4.2 Seasonal Wetlands

Seasonal wetlands occur in several locations within the review area. The seasonal wetlands are dominated by Italian ryegrass, rabbitsfoot grass (*Polypogon monspeliensis*), common spikerush (*Eleocharis macrostachya*), and curly dock (*Rumex crispus*) but several other species common in seasonal wetlands were also observed including Mediterranean barley (*Hordeum marinum*), low manna grass (*Glyceria declinata*), and vernal pool buttercup (*Ranunculus bonariensis* var. *trisepalus*).

### 2.4.3 Open Water

Aquatic open water features within the review area include a ponded ditch bisecting the southern half of the property and a retention basin in the northeast corner of property. Both features are man-made and were created to store water as part of the composting operation dust control practices. Consequently, both features are typically inundated. Based on minimal vegetation present, these areas are mapped as open water.

### 2.4.4 Developed Areas

Developed areas include the office complex, compost piles, entrance station, and gravel roads.

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## 3.0 REGULATORY BACKGROUND

The discharge of dredged or fill material into streams, lakes, and other bodies of water, including wetlands, are often regulated by the USACE under Section 404 of the CWA. The USACE also regulates activities in navigable waters under Section 10 of the Rivers and Harbors Act. The basis of USACE jurisdiction over various waters is described in the following sections.

### 3.1 SECTION 404

Under Section 404 of the CWA, the USACE regulates the discharge of dredged or fill material into waters of the U.S., including wetlands.

#### 3.1.1 Definition of Waters of the U.S.

In the USACE/EPA CWA regulation (33 CFR 328.3(a)), the term “waters of the U.S.” is defined as follows:

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

Based on this definition, the USACE will assert jurisdiction over the following waters as outlined in the Jurisdictional Determination Form Instructional Guidebook (May 2007):

1. Traditional Navigable Waters (TNW) and adjacent wetlands.
2. Relatively Permanent Waters (RPW) (i.e. tributaries that typically flow year-round or have continuous flow at least seasonally) that flow directly or indirectly into TNW.
3. Non-Relatively Permanent Waters (Non-RPW) that flow directly or indirectly into TNW (with significant nexus determination).

4. Wetlands directly abutting an RPW that flows directly or indirectly into a TNW.
5. Wetlands adjacent to by not directly abutting an RPW that flows directly or indirectly into a TNW (with significant nexus determination).
6. Wetlands adjacent to non-RPWs that flow directly or indirectly into a TNW (with significant nexus determination).

### 3.1.2 Significant Nexus Evaluation

A significant nexus evaluation includes:

1. An assessment of the flow characteristics and functions of the tributary, itself, in combination with the functions performed by any wetlands adjacent to the tributary to determine if they have more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of TNWs.
2. A consideration of hydrologic factors such as volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary; proximity to the TNW; size of the watershed; average annual rainfall; and average annual winter snow pack.
3. A consideration of ecologic factors such as the ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to TNWs; the ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW; the ability for adjacent wetlands to trap and filter pollutants or store flood waters; and the ability to maintain water quality.

### 3.1.3 Wetlands

The USACE and EPA defines wetlands as follows:

*“Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.”*

In order to satisfy the USACE wetland definition, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific definition and criteria that must be satisfied in order for that particular wetland characteristic to be met. Several parameters (indicators) may be analyzed to determine whether the criteria are satisfied. Conversely, if an area lacks one of the three characteristics under normal circumstances, the area is non-wetland.

### 3.1.4 Non-Wetland Waters

Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an ordinary high water mark (OHWM).

### 3.1.5 Isolated Waters

As discussed above, USACE regulatory jurisdiction under Section 404 is founded on a connection between the water body in question connectivity to navigable waters. This connection may be

direct, through a tributary system linking a stream channel with traditional navigable waters, or may be indirect, through a nexus identified in the USACE regulations.

### 3.1.6 Man-Made Waters

The preamble to USACE regulations (Preamble Section 328.3 Definitions) states that the USACE does not generally consider the following waters to be waters of the U.S. The USACE does, however, reserve the right to regulate these waters on a case-by-case basis.

- Non-tidal drainage and irrigation ditches excavated on dry land.
- Artificially irrigated areas that would revert to upland if the irrigation ceased.
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
- Water filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the U.S.

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## 4.0 METHODS

A delineation of all aquatic features in the review area was conducted on May 10, 2017, by LSA biologists Mike Trueblood and Anna Van Zuuk. Current and historical photos (see Appendix A) were also reviewed prior to the field investigation.

All aquatic features in the review area were delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2008 Regional Supplement – Arid West Region. A total of 19 formal observation points were described in the field. At each point, a pit was dug and soils and hydrology examined; vegetation was also characterized at each data point. Copies of the field data forms are attached (Appendix B).

Aquatic features were located in the field using a GPS unit with sub-meter accuracy. All data was entered into a GIS database to calculate the extent of the mapped features in the review area and to produce the final mapping. Final mapping was completed using color aerial photos, dated June 2016, at a scale of 1 inch = 200 ft.

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## 5.0 DELINEATION RESULTS

A total of 3.857 ac of potential jurisdictional waters were mapped in the review area, consisting of approximately 2.698 ac of potential wetlands and 1.159 ac of non-wetland waters. Areas potentially meeting USACE criteria for wetlands in the review area include scattered isolated wetlands, a large seasonal wetland in the southeast corner, and a manmade inundated ditch that extends through the center of the review area. Potential non-wetland waters in the review area include several ephemeral ditches and a manmade retention basin in the northeast corner. Potential jurisdictional waters are shown in Figure 5 and summarized in Table 1. Representative photos are also provided in Appendix D.

**Table 1: Summary of Potential Jurisdictional Waters in the Review Area (acres)**

Type	Total
<b>Wetlands</b>	
Seasonal Wetlands	1.589
Ephemeral Drainage	0.049
Adjacent Wetlands	0.126
Ponded Ditch	0.858
Isolated Wetland	0.076
<b>Wetlands Subtotal</b>	<b>2.698</b>
<b>Non-Wetland Waters</b>	
Ephemeral Drainage	0.102
Retention Basin	1.057
<b>Non-Wetland Waters Subtotal</b>	<b>1.159</b>
<b>Total</b>	<b>3.857</b>

A comprehensive discussion of the delineation results is provided below. Potential wetlands in the review area are characterized by data points 1 – 11 and 13 – 16, 18, and 19. Wetland data forms are provided in Appendix B.

Areas that were sampled and determined to be non-wetland waters include the man-made retention basin and ephemeral drainage ditches. These features were characterized by data points 1a – 11a, 12, and 13a – 16a, 17, 18a, and 19a.

## 5.1 ISOLATED DEPRESSIONS

### 5.1.1 Vegetation

Data collection points 6, 8, 9, 12, 13, 15, 18, and 19 were taken on the margins of isolated wetlands within the review area. The margins were dominated by a variety of hydrophytic vegetation including tall flatsedge (*Cyperus eragrostis*) – FACW, common spikerush – OBL, Italian ryegrass – FAC, low manna grass – FACW, Mediterranean barley – FAC, hyssop loosestrife (*Lythrum hyssopifolium*) – OBL, stalked popcornflower (*Plagiobothrys stipitatus* var. *micranthus*) – FACW, rabbitsfoot grass – FACW, and curly dock – FAC. Other hydrophytic vegetation present but not dominant included brass buttons (*Cotula coronopifolia*) – OBL, toad rush (*Juncus bufonius* var. *bufonius*) – FACW, yellow glandweed (*Parentucellia viscosa*) – FAC, prostrate knotweed (*Polygonum aviculare*) – FACW, and vernal pool buttercup – OBL. Since the isolated depression margins supported a variety of dominant hydrophytic species according to the USACE, the vegetation criterion for wetlands was met.

### 5.1.2 Soils

Indicators for hydric soils were observed at data points 6, 8, 9, 13, 15, 18, and 19. Data point 6 consisted of a layer with a Munsell moist color of 10YR 4/2 to 12 inches and contained 7 percent redoxomorphic concentrations in the matrix of 2.5YR 3/6. Data point 8 contained a layer of organic material to 2 inches and a second layer with a Munsell moist color of 10YR 3/2 to 13 inches, with 5 percent redoxomorphic concentrations in the matrix of 2.5YR 3/6. Data points 9 and 13 included a layer to 14 and 12 inches, respectively, with a Munsell moist color of 10YR 3/2. Data point 15 also contained a layer with a Munsell moist color of 10YR 3/2 to 4 inches, after which a hardpan was encountered. Data point 18 consisted of a layer with a Munsell moist color of 10YR 3/2 to 8 inches and contained 5 percent redoxomorphic concentrations in the matrix of 2.5YR 4/8. Data point 19 contained a layer to 10 inches with a Munsell moist color of 10YR 4/3. Data points 6 and 8 meet the requirements of the Redox Dark Surface indicator for hydric soils, data point 15 contains a hardpan at 4 inches, and data point 18 meets the requirements of the Redox Depressions indicator for hydric soils. Data points 9, 13, and 19 contain problematic soils due to recent human disturbance and presence of new fill material. These data points are consistent with problematic hydric soils of recently developed wetlands. These soils meet the USACE hydric soils criterion for wetlands.

### 5.1.3 Hydrology

Hydrology indicators identified included biotic crust and surface soil cracks, which are primary indicators for hydrology and thus meet the minimum USACE hydrology criterion for wetlands.

### 5.1.4 Paired Upland Data Points

Corresponding upland data points were taken to help determine the upland/wetland boundary (data points 6a, 8a, 9a, 13a, 15a, 18a, and 19a). Data point 12 was determined to be an upland point due to the lack of hydric soil indicators. In areas with recently developed wetlands, consistent with problematic hydric soils observed at data points 9, 13, and 19, the data points were considered to be within a wetland only if they also exhibited hydrophytic vegetation and hydrology indicators. This is consistent with the 2008 Regional Supplement – Arid West Region guidelines for problematic hydric soils.

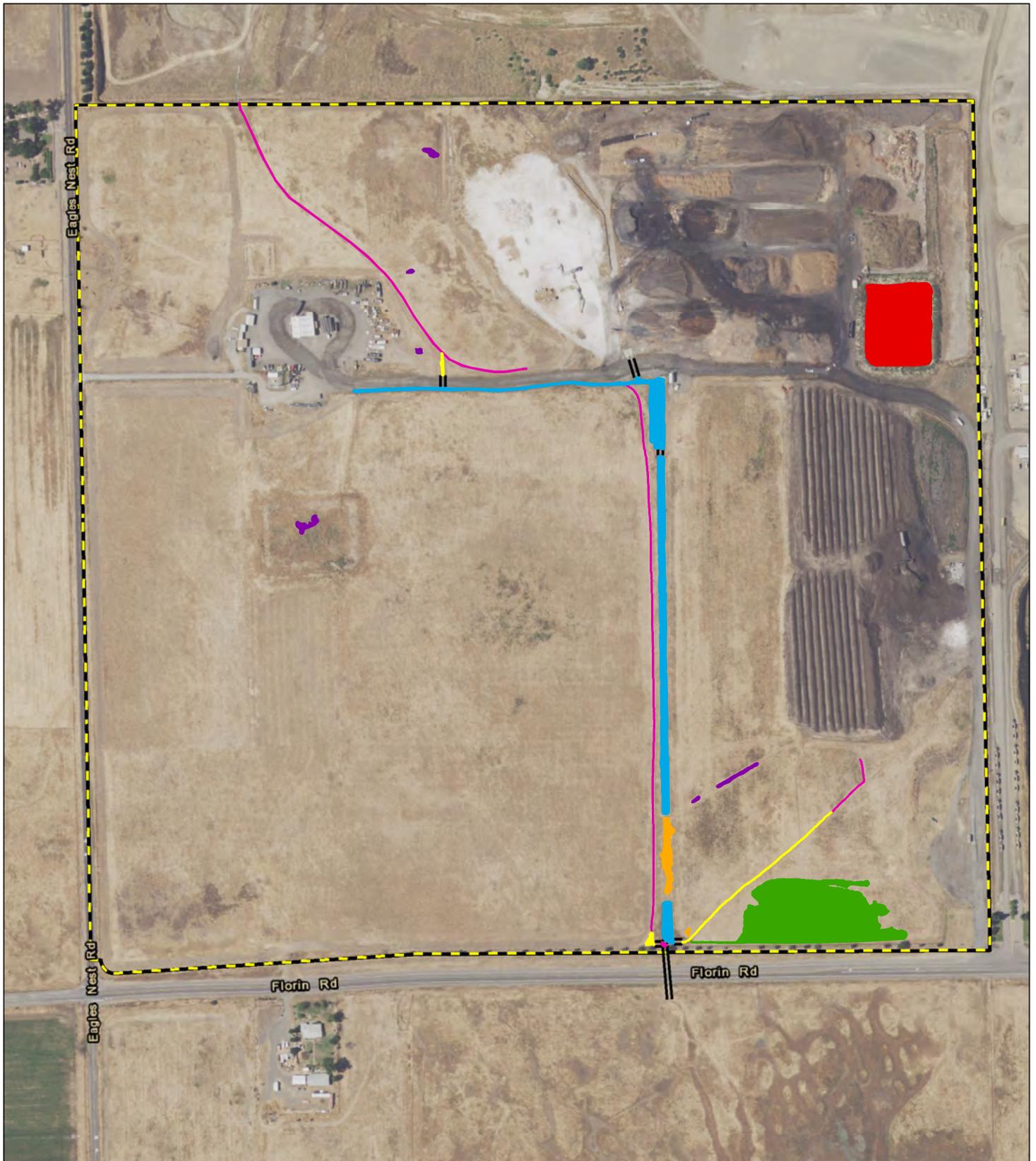
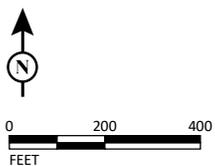


FIGURE 6

LSA

LEGEND

-  Review Area - (154.82 ac)
-  Culverts
- Wetlands - (2.698 ac)**
  -  Isolated Wetlands - (0.076 ac)
  -  Adjacent Wetlands - (0.126 ac)
  -  Seasonal Wetland - (1.589 ac)
- Non-Wetland Waters - (1.159 ac)**
  -  Ponded Ditches - (0.858 ac)
  -  Ephemeral Drainages - (0.049 ac)
  -  Ephemeral Drainages - (0.102 ac)
  -  Retention Basin - (1.057 ac)



SOURCE: Basemap - NAIP Aerial Imagery (6/2016); Mapping - LSA (2017)  
 I:\VMC1601\GIS\Reports\AJD\Fig6\_potential\_wtrs\_42319.mxd (5/6/2019)

*Sacramento Aggregates Expansion  
 Sacramento County, California  
 LSA Project No. VMC1601*

Potential Jurisdictional Waters of the U.S.

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## 5.2 SEASONAL WETLANDS

### 5.2.1 Vegetation

Data collection points 1, 2, 3, 4, and 5 were taken on the margins of the large seasonal wetland located in the southeast corner of the review area. The margins were dominated by a variety of hydrophytic vegetation including Italian ryegrass – FAC, Mediterranean barley – FAC, and rabbitsfoot grass – FACW. Other hydrophytic vegetation present but not dominant included common spikerush – OBL, low manna grass – FACW, stalked popcornflower – FACW, vernal pool buttercup – OBL, and curly dock – FAC. Since the seasonal wetland margins contain a variety of dominant hydrophytic species according to the USACE, the vegetation criterion for wetlands was met.

### 5.2.2 Soils

Indicators for hydric soils were observed at data points 1, 2, 3, 4, and 5. Data point 1 consisted of a layer to 7 inches with a Munsell moist color of 10YR 2/2 and a subsequent layer from 7 to 13 inches with a Munsell moist color of 10YR 3/2 containing 15 percent redoxomorphic concentration in the pore linings of 2.5YR 3/6. Data point 2 consisted of a layer to 6 inches with a Munsell moist color of 10YR 2/1 and a second layer from 6 to 14 inches with a Munsell moist color of 10YR 3/2 containing 10 percent redoxomorphic concentrations in the pore linings of 2.5YR 4/8. Data point 3 consisted of a layer to 6 inches with a Munsell moist color of 10YR 2/1 and a second layer from 6 to 12 inches with a Munsell moist color of 10YR 3/2 containing 15 percent redoxomorphic concentration in the matrix of 2.5YR 4/8. Data point 4 consisted of a layer to 5 inches of organic matter and a second layer from 5 to 13 inches with a Munsell moist color of 10YR 4/2 containing 10 percent redoxomorphic concentrations in the pore linings of 2.5YR 4/8. Data point 5 consisted of a layer to 5 inches with a Munsell moist color of 10YR 3/2 and a subsequent layer from 5 to 12 inches with a Munsell moist color of 10YR 4/2 containing 20 percent redoxomorphic concentrations in the matrix of 2.5YR 4/8. Data points 1 through 5 meet the requirements of the Redox Dark Surface indicator for hydric soils, and thus meet the USACE hydric soils criterion for wetlands.

### 5.2.3 Hydrology

Hydrology indicators identified included biotic crust, which is a primary indicator for hydrology and thus meets the minimum USACE hydrology criterion for wetlands.

### 5.2.4 Paired Upland Data Points

Corresponding upland data points were taken to help determine the upland/wetland boundary (data points 1a, 2a, 3a, 4a, and 5a).

## 5.3 PONDED DITCH

### 5.3.1 Vegetation

Data collection points 10 and 14 were taken on the margins of the ponded ditch within the review area. The margins were dominated by a variety of hydrophytic vegetation including common spikerush – OBL, rabbitsfoot grass – FACW, shining willow (*Salix lasiolepis*) – FACW, and cattail (*Typha sp.*) – OBL. Other hydrophytic vegetation present but not dominant included tall flatsedge – FACW, low manna grass – FACW, duckweed (*Lemna minor*) – OBL, and curly dock – FAC. Since the

ponded ditch margins contain a variety of dominant hydrophytic species according to the USACE, the vegetation criterion for wetlands was met.

### 5.3.2 Soils

Indicators for hydric soils were observed at data points 10 and 14. At data point 10, a soil pit was not dug and soils were not evaluated due to the presence of surface water and nearly vertical banks of the feature. Data point 14 consisted of a layer to 9 inches with a Munsell moist color of 10YR 4/3. Data points 10 and 14 contain problematic soils due to the presence of surface water and recent human disturbance. It is assumed that data point 10 would exhibit hydric soil indicators due to the presence of surface water and data point 14 is consistent with problematic hydric soils of recently developed wetlands. These soils meet the USACE hydric soils criterion for wetlands.

### 5.3.3 Hydrology

Hydrology indicators identified included surface water and biotic crust, which are primary indicators for hydrology and thus meet the minimum USACE hydrology criterion for wetlands.

### 5.3.4 Paired Upland Data Points

Corresponding upland data points were taken to help determine the upland/wetland boundary (data points 10a and 14a). In areas with recently developed wetlands, consistent with problematic hydric soils observed at data point 14, and areas where soils were not evaluated due to the presence of surface water (data point 10) the data points were considered to be within a wetland only in they also exhibited hydrophytic vegetation and hydrology indicators. This is consistent with the 2008 Regional Supplement – Arid West Region guidelines for problematic hydric soils.

## 5.4 EPHEMERAL DITCHES AND RETENTION BASIN

### 5.4.1 Vegetation

Data collection points 7, 11, 16, and 17 were taken on the margins of ephemeral ditches within the review area. The margins were dominated by a variety of hydrophytic vegetation including fringed willowherb (*Epilobium ciliatum*) – FACW, Italian ryegrass – FAC, and rabbitsfoot grass – FACW. Other hydrophytic vegetation present but not dominant included Mediterranean barley – FAC, common spikerush – OBL, curly dock – FAC, and tall flatsedge – FACW. Since the ditch margins contain a variety of dominant hydrophytic species according to the USACE, the vegetation criterion for wetlands was met.

### 5.4.2 Soils

Indicators for hydric soils were observed at data points 7, 11, and 16. Data point 7 consists of a layer to 2 inches of black compost and a subsequent layer from 2 to 14 inches with a Munsell moist color of 10YR 4/2 containing 40 percent redoxomorphic concentration in the matrix of 2.5YR 3/6. Data point 11 consists of a layer to 14 inches with a Munsell moist color of 10YR 3/2 and contained 5 percent redoxomorphic concentrations in the matrix of 5YR 4/6. Data point 16 consisted of a layer to 13 inches with a Munsell moist color of 10YR 3/2 and contained 5 percent redoxomorphic concentrations in the matrix of 2.5YR 3/6. Data points 7, 11, and 16 meet the requirements of the

Redox Dark Surface indicator for hydric soils, and thus meet the USACE hydric soils criterion for wetlands.

#### **5.4.3 Hydrology**

Hydrology indicators identified included biotic crust, which is a primary indicator for hydrology and thus meets the minimum USACE criterion for wetlands.

#### **5.4.4 Paired Upland Data Points**

Corresponding upland data points were taken to help determine the upland/wetland boundary (data points 7a, 11a, and 16a). Data point 17 was determined to be an upland point due to the lack of hydric soil and hydrology indicators.

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## 6.0 SECTION 404 JURISDICTIONAL DETERMINATION

A total of 1.993 acres are considered waters of the U.S. and under the CWA, consisting of two adjacent wetland depressions, seasonal wetland features, and two ephemeral ditches. A total of 1.864 acres were determined not to be subject to regulation under Section 404 of the CWA, consisting of six wetland depressions, the ponded ditch, one ephemeral ditch, and the retention basin. A detailed summary of Section 404 and non-Section 404 waters is provided below in Table 2 and these features are shown on Figures 6 and 7.

**Table 2: Detailed Summary of Section 404 Waters and Non-Section 404 Waters in the Review Area (acres)**

Type	Section 404 Waters	Non-Section 404 Waters	Total
<b>Wetlands</b>			
Seasonal Wetlands	1.589	0.000	1.589
Ephemeral Drainage	0.040	0.009	0.048
Adjacent Wetlands	0.126	0.000	0.126
Ponded Ditch	0.193	0.665	0.858
Isolated Wetland	0.000	0.076	0.076
<b>Wetlands Subtotal</b>	<b>1.948</b>	<b>0.750</b>	<b>2.698</b>
<b>Non-Wetland Waters</b>			
Ephemeral Drainage	0.045	0.057	0.102
Retention Basin	0.000	1.057	1.057
<b>Non-Wetland Waters Subtotal</b>	<b>0.045</b>	<b>1.114</b>	<b>1.159</b>
<b>Total</b>	<b>1.993</b>	<b>1.864</b>	<b>3.857</b>

Also refer to the Approved Jurisdictional Delineation (JD) Form (Appendix C) and representative photos (Appendix D).

### 6.1 EPHEMERAL DRAINAGES

Of the three ephemeral drainages within the review, only two were determined to be tributary waters. The small drainage that parallels the ponded ditch in the center of the review area (Non-RPW 1) and the drainage north of the seasonal wetland convey flows south of the review area (Non-

RPW 2). These drainages have the potential to carry waters to Laguna Creek, an intermittent stream and secondary tributary to the Sacramento River. Therefore, these ephemeral drainages were both determined to be waters of the U.S., and subject to USACE regulation under Section 404 of the CWA.

The remaining drainage, located northeast of the office complex, has been altered to convey site operation waters north into a large mining pit. Based on the lack of connectivity to a TNW and artificial nature of this feature, this drainage is not considered a water of the U.S. and would not be regulated under Section 404 of the CWA.

## 6.2 SEASONAL WETLANDS

The large seasonal wetland in the southeast corner of the property directly abuts a non-RPW that flows indirectly into a TNW, and therefore determined to be waters of the U.S., and subject to USACE regulation under Section 404 of the CWA.

## 6.3 ISOLATED DEPRESSIONS

Eight isolated depressions were identified in the review area. Of these, only two (the southernmost depression adjacent to the large seasonal wetland and the newly created depression directly south of the ponded ditch) demonstrated a significant nexus by being a wetland adjacent to a non-RPW that flows directly or indirectly into a TNW. The remaining six depressions / isolated wetlands do not demonstrate a significant nexus and are not considered waters of the U.S., and would not be regulated under Section 404 of the CWA.

## 6.4 PONDED DITCH

The ponded ditch was excavated in uplands (see Appendix A for historic aerial photos) and designed to flow north. Water is artificially pumped into the ditch from a well and is used in compost operations for dust control. This feature does not flow or have connection to any other waters within or adjacent to the review area. Based on the lack of a connectivity to a TNW and artificial nature of this feature, this ditch is not considered a waters of the U.S. and would not be regulated under Section 404 of the CWA.

However, a section of the ponded ditch was recently filled and separated an approximately 200 ft long section of the ditch at the south end of the review area from the majority of the ditch to the north. This has effectively reversed flow direction of the southern section of the ponded ditch to the south and now conforms with natural flows in the area. Since this section of ditch is connected to non-RPW 1 through a valve release culvert, this feature is now considered a tributary waters of the U.S. and is subject to regulation under Section 404 of the CWA.

## 6.5 RETENTION BASIN

The retention basin is an isolated RPW that is not connected to other waters within or adjacent to the review area. Additionally, this feature is man-made and has been created by placing elevated basin walls; no excavation below ground level occurred. This feature is not considered waters of the U.S., and would not be regulated under Section 404 of the CWA.

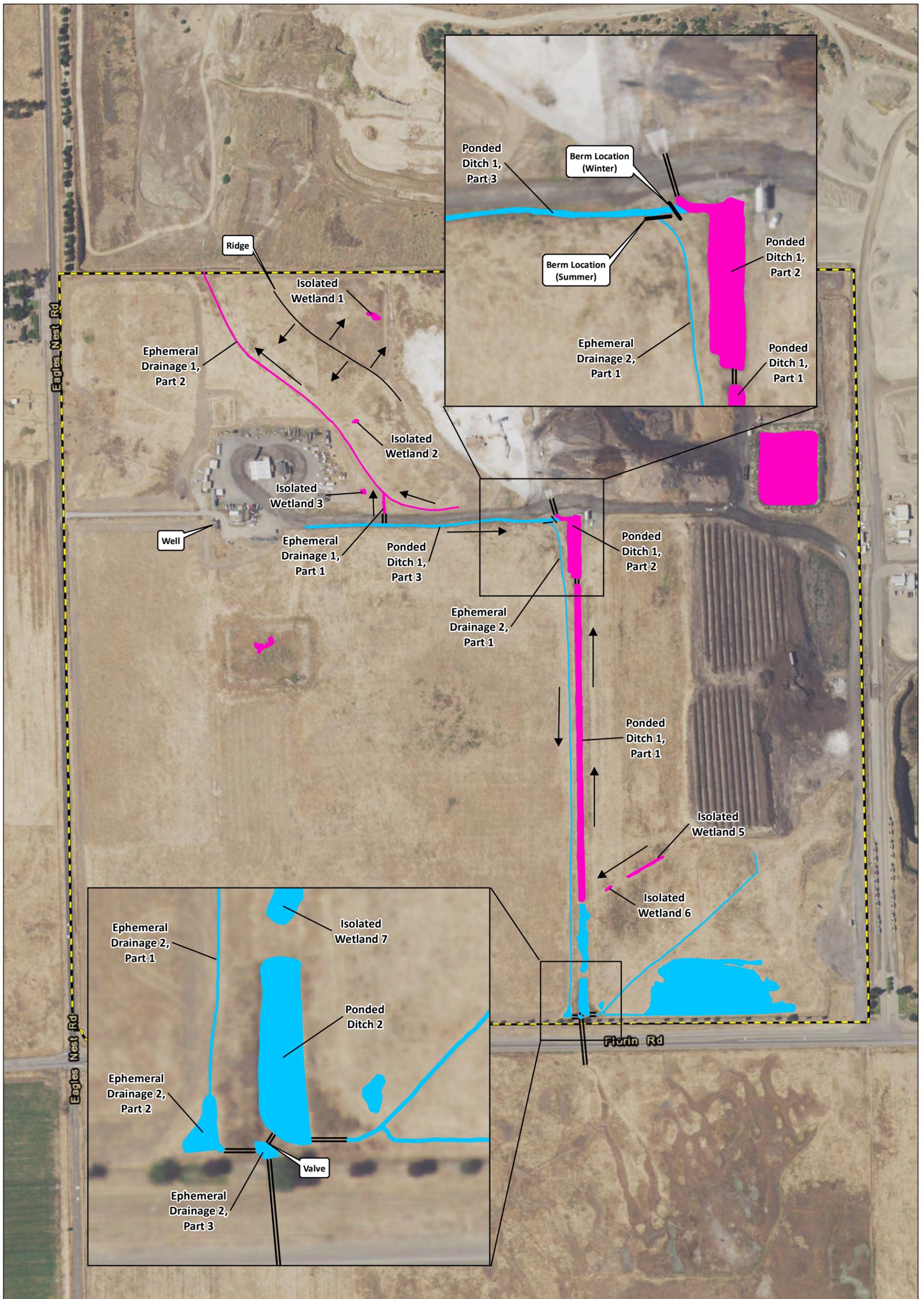
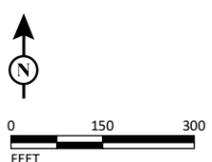


FIGURE 7

LSA

LEGEND

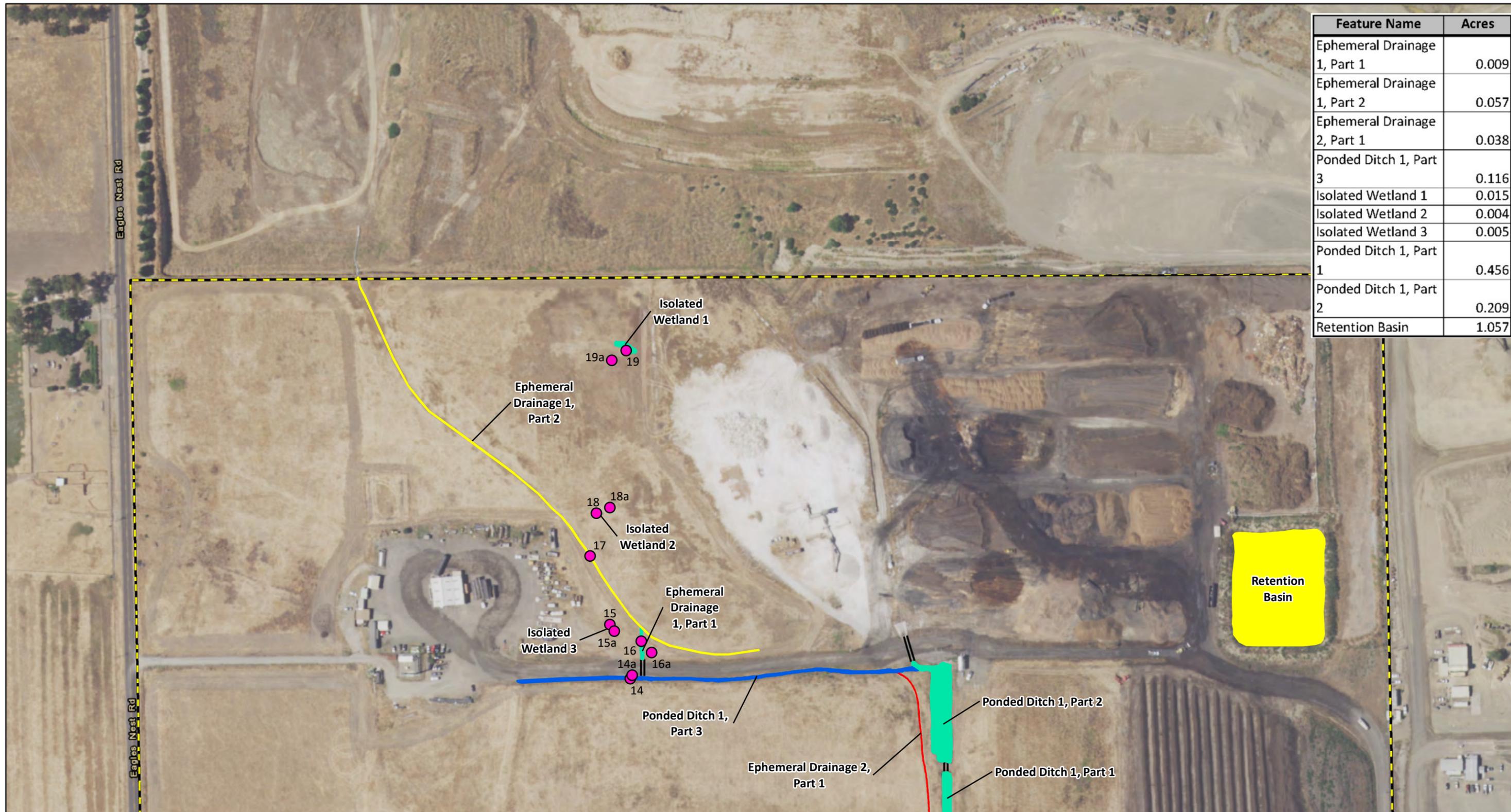
- Review Area - (154.82 ac)
- Culverts
- Jurisdictional Waters of the U.S. - (1.993 ac)
- Non-404 Waters - (1.864 ac)



SOURCE: Basemap - NAIP Aerial Imagery (6/2016); Mapping - LSA (2017)  
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Sacramento Aggregates Expansion  
 Sacramento County, California  
 LSA Project No. VMC1601  
 Overview of Waters of the U.S.

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Feature Name	Acres
Ephemeral Drainage 1, Part 1	0.009
Ephemeral Drainage 1, Part 2	0.057
Ephemeral Drainage 2, Part 1	0.038
Ponded Ditch 1, Part 3	0.116
Isolated Wetland 1	0.015
Isolated Wetland 2	0.004
Isolated Wetland 3	0.005
Ponded Ditch 1, Part 1	0.456
Ponded Ditch 1, Part 2	0.209
Retention Basin	1.057

LSA

LEGEND

- Review Area - (154.82 ac)
- Data Points
- Culverts
- Jurisdictional Waters of the U.S. (1.993 ac)
  - Wetlands (1.948 ac)
  - Non-Wetland Waters (0.045 ac)
- Non-404 Waters (1.864 ac)
  - Wetlands (0.750 ac)
  - Non-Wetland Waters (1.114 ac)



0 100 200  
FEET

SOURCE: Basemap - NAIP Aerial Imagery (6/2016); Mapping - LSA (2017)

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Map Index

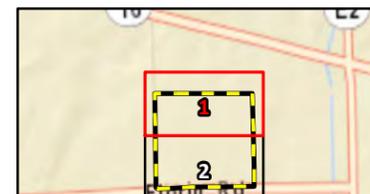


FIGURE 8  
Page 1 of 2

Sacramento Aggregates Expansion  
Sacramento County, California  
LSA Project No. VMC1601  
Approved Jurisdictional Delineation  
200-Foot Scale Focus

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LSA

LEGEND

Review Area - (154.82 ac)

Data Points

Culverts

**Jurisdictional Waters of the U.S. (1.993 ac)**

Wetlands (1.948 ac)

Non-Wetland Waters (0.045 ac)

**Non-404 Waters (1.864 ac)**

Wetlands (0.750 ac)

Non-Wetland Waters (1.114 ac)



SOURCE: Basemap - NAIP Aerial Imagery (6/2016); Mapping - LSA (2017)

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Map Index

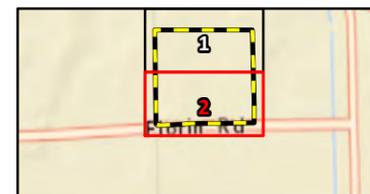


FIGURE 8

Sacramento Aggregates Expansion  
 Sacramento County, California  
 LSA Project No. VMC1601  
 Approved Jurisdictional Delineation  
 200-Foot Scale Focus

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## 7.0 CONCLUSION

A total of 3.857 acres of wetlands and non-wetland waters were mapped in the review area, of which 1.993 acres were determined to be Section 404 waters, and 1.864 acres were determined to be non-Section 404 waters. This information is summarized below in Table 2.

**Table 3: Summary of Waters of the U.S. in the Review Area (acres)**

Type	Section 404 Waters	Non-Section 404 Waters	Total
Wetlands	1.948	0.750	2.698
Non-Wetland Waters	0.045	1.114	1.159
<b>Total</b>	<b>1.993</b>	<b>1.864</b>	<b>3.857</b>

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## **APPENDIX A**

# **HISTORIC AERIAL PHOTOS**

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**INQUIRY #:** 4020261.9

**YEAR:** 1937

| = 500'





**INQUIRY #:** 4020261.9

**YEAR:** 1947

| = 500'





INQUIRY #: 4020261.9

YEAR: 1957

| = 500'





INQUIRY #: 4020261.9

YEAR: 1964

| = 500'





INQUIRY #: 4020261.9

YEAR: 1971

| = 500'



9-81

1:120



INQUIRY #: 4020261.9

YEAR: 1981

| = 500'





INQUIRY #: 4020261.9

YEAR: 1993

| = 500'





INQUIRY #: 4020261.9

YEAR: 1998

| = 500'





INQUIRY #: 4020261.9

YEAR: 2005

| = 500'





INQUIRY #: 4020261.9

YEAR: 2006

| = 500'





INQUIRY #: 4020261.9

YEAR: 2009

| = 500'





INQUIRY #: 4020261.9

YEAR: 2010

— = 500'





INQUIRY #: 4020261.9

YEAR: 2012

| = 500'



## **APPENDIX B**

# **WETLAND DATA FORMS**

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**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 1  
 Investigator(s): A. VAN ZUUL, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				_____ = Total Cover
Herb Stratum (Plot size: _____)				
1. <u>RUMEX CRISPUS</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
2. <u>PLAGIOBOTRYEUS STIPITATUS VAR. MICRANTHUS</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
3. <u>ELEOCHARIS MACROSTACHYA</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>FESTUCA PERENNIS</u>	<u>8</u>	<u>N</u>	<u>FAC</u>	
5. <u>POLYPOGON MONSPELIENSIS</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
				<u>65</u> = Total Cover
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
				_____ = Total Cover
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust <u>85</u>			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<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, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks:

**SOIL**

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7"	10YR 2/2	100					LOAMY SAND	
7-15"	10YR 3/2	85	2.5YR 3/6	15	C	PL	LOAMY SAND	

<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.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)

- 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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

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

- 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): >13"  
 Saturation Present? Yes  No  Depth (inches): >13"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/16/2017  
 Applicant/Owner: TRIANGLE ROCK (VOLCAN) State: CA Sampling Point: 1A  
 Investigator(s): A. VAN ZUYLE, M. TWEED Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b>				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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)
<b>Herb Stratum</b>				
1. <u>FESTUCA PERENNIS</u>	<u>95</u>	<u>Y</u>	<u>FAC</u>	
2. <u>HORDEUM MARINUM</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>RUMEX CRISPUS</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>100</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Woody Vine Stratum</b>				
1. _____				
2. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			
Remarks: _____ _____ _____				

**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>		
0-15"	10YR 2/1	75%	2.5YR 4/8	3	C	PL	LOAMY SAND	

<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.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 checked="" 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)	

<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 FORMS BALL, NO RIBBON**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): 75"

Saturation Present? Yes  No  Depth (inches): 715"

(includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 2  
 Investigator(s): A. VAN ZUUL, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				OBL species _____ x 1 = _____
1. _____	_____	_____	_____	FACW species _____ x 2 = _____
2. _____	_____	_____	_____	FAC species _____ x 3 = _____
3. _____	_____	_____	_____	FACU species _____ x 4 = _____
4. _____	_____	_____	_____	UPL species _____ x 5 = _____
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input 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)
1. <u>FESTUCA PERENNIS</u>	<u>14</u>	<u>Y</u>	<u>FAC</u>	
2. <u>HORDEUM MARINUM</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. <u>RUMEX CRISPUS</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust <u>70</u>		
Remarks:				

**SOIL**

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6"	10 YR 2/1	100					LOAMY SAND	
6-14"	10 YR 3/2	90	2.5 YR 4/8	10	C	PL	CLAYEY SAND	

<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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Salt Crust (B11)	
<input checked="" type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): >14"

Saturation Present? Yes  No  Depth (inches): >14"

(includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 2A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>99</u> x 3 = <u>297</u>
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
= Total Cover				UPL species <u>1</u> x 5 = <u>5</u>
				Column Totals: <u>100</u> (A) <u>302</u> (B)
				Prevalence Index = B/A = <u>3.02</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>FESTUCA PERENNIS</u>	<u>93</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>HORDEUM MARINUM</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>RUMEX CRISPUS</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>GERANIUM DISSECTUM</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>

Remarks:



## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 3  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>ELEOCHARIS MACROSTACHYA</u>	<u>2</u>	<u>N</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>FESTUCA PERENNIS</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>HORDEUM MARINUM</u>	<u>7</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>RUMEX CRISPUS</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>50</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

Remarks:

**SOIL**

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6"	10 YR 2/1	100					LOAMY SAND	
6-12"	10 YR 3/2	85	2.5 YR 4/8	15	C	M	SILTY SAND	

<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.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Salt Crust (B11)	
<input checked="" type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): > 12"

Saturation Present? Yes  No  Depth (inches): > 12"

(includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/16/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 3A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
3. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>
4. _____	_____	_____	_____	
= Total Cover				OBL species _____ x 1 = _____
<b>Sapling/Shrub Stratum</b>				FACW species _____ x 2 = _____
1. _____	_____	_____	_____	FAC species _____ x 3 = _____
2. _____	_____	_____	_____	FACU species _____ x 4 = _____
3. _____	_____	_____	_____	UPL species _____ x 5 = _____
4. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = _____
= Total Cover				<b>Hydrophytic Vegetation Indicators:</b>
<b>Herb Stratum</b>				
1. <u>FESTUCA PERENNIS</u>	<u>95</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
2. <u>HORDEUM MARINUM</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
3. <u>RUMEX CRISPUS</u>	<u>41</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
4. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>100</u> = Total Cover				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			

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



### WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 4  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Indicators:</b> ___ 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, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. <u>POLYPOGON MONSPELIENSIS</u>	<u>75</u>	<u>Y</u>	<u>FACW</u>	
2. <u>RANUNCULUS BOBARIENSIS VAR. TRISEPALUS</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
3. <u>ELEOCHARIS MACROSTACHYA</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>GLYCERIA DECLINATA</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>RUMEX CRISPUS</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. <u>FESTUCA PERENNIS</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
7. <u>HORDEUM MARINUM</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
= Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>25</u>				
Remarks:				

**SOIL**

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5"	ORGANIC	100					ORGANIC MATTER	
5-13"	10YR 4/2	90	2.5YR 4/6	10	C	PL	SILTY SAND	

<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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): 713"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 713"

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 4A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: _____)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
3. _____				
4. _____				
	_____ = Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				<b>Prevalence Index worksheet:</b>
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>10</u> x 2 = <u>20</u>
4. _____				FAC species <u>80</u> x 3 = <u>240</u>
5. _____				FACU species <u>2</u> x 4 = <u>8</u>
	_____ = Total Cover			UPL species <u>8</u> x 5 = <u>40</u>
<u>Herb Stratum</u> (Plot size: _____)				Column Totals: <u>100</u> (A) <u>308</u> (B)
1. <u>FESTUCA PERENNIS</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = <u>3.08</u>
2. <u>HORDEUM MARINUM</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>GERANIUM DISSECTUM</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
4. <u>FESTUCA MYUROS</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
5. <u>BROMUS HORDEACEUS</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. <u>POLYPOGON MONSPELIENSIS</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
7. <u>MALVA NEGLECTA</u>	<u>&lt;1</u>	<u>N</u>	<u>UPL</u>	
8. _____				
	<u>100</u> = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>
1. _____				<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
	_____ = Total Cover			<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks:				



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carl Property (VMC1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 5  
 Investigator(s): Anna van Zwick; Mike Trebblooc Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Eleocharis macrostachya</u>	<u>10</u>	<u>N</u>	<u>Obl</u>	
2. <u>Festuca Perennis</u>	<u>80</u>	<u>Y</u>	<u>For</u>	
3. <u>Hordeum marinum</u>	<u>2</u>	<u>N</u>	<u>Fac</u>	
4. <u>Polygonum monspeliensis</u>	<u>3</u>	<u>N</u>	<u>Facw</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>95</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust <u>20</u>			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<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, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks:

**SOIL**

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5"	10YR 3/2	100						silty sand
5-12"	10YR 4/2	80	2.5YR 4/8	20	C	M		Clay sand

<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.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input checked="" 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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): —

Water Table Present? Yes  No  Depth (inches): > 12"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): > 12"

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carl's Property (VMC1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 5a  
 Investigator(s): Anne vanZuuk; Mike Irvenlood Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
3. _____				
4. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b>
<u>Sapling/Shrub Stratum</u>				Total % Cover of: _____ Multiply by: _____
1. _____				OBL species _____ x 1 = _____
2. _____				FACW species _____ x 2 = _____
3. _____				FAC species _____ x 3 = _____
4. _____				FACU species _____ x 4 = _____
5. _____				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
<u>Herb Stratum</u>				Prevalence Index = B/A = _____
1. <u>Festuca perennis</u>	<u>100</u>	<u>Y</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b>
2. <u>Hordeum marinum</u>	<u>30</u>	<u>N</u>	<u>Fac</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
3. _____				<input 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. _____				
7. _____				
8. _____				
<u>130</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>Woody Vine Stratum</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			
Remarks:				

**SOIL**

Sampling Point: 5a

**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>		
0-2"	Organic	100						Organic
2-5"	10YR 2/1	100						loam
5-12"	10YR 4/2	90	2.5YR 3/6	10	C	m		Silty Sand

<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.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches):   -  

Water Table Present? Yes  No  Depth (inches):   >12"  

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches):   >12"  

**Wetland Hydrology Present?** Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carl's Property (VMC 1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 6  
 Investigator(s): Anna van Zant; Mike Trushoff Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Festuca perennis</u>	<u>80</u>	<u>Y</u>	<u>fac</u>	
2. <u>Hordeum maritimum</u>	<u>20</u>	<u>Y</u>	<u>Fac</u>	
3. <u>Poa annua</u>	<u>1</u>	<u>N</u>	<u>Fac</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>101</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust <u>10</u>			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<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, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	10YR 4/2	93	2.5YR 2/6	7	C	M		silty clay

<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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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>3</sup>:**

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>  -  </u>	Wetland Hydrology Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>  712"  </u>	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>  712"  </u>	

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carli Property (VMC 1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 6a  
 Investigator(s): Anne van Zuyk, Mike Truelwood Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Festuca perennis</u>	<u>100</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Hurdia maritima</u>	<u>20</u>	<u>N</u>	<u>Fac</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>120</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<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, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks:

**SOIL**

Sampling Point: 66

**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>		
0-4"	10YR 3/2	100						Sandy loam
4-11"	10YR 4/2	90	2.5YR 4/9	10	C	M		

<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.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches):     

Water Table Present? Yes  No  Depth (inches):     > 11"    

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches):     > 11"    

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 7  
 Investigator(s): A. VAN ZUIJK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>FESTUCA PERENNIS</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	
2. <u>HORDEUM MARINUM</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
3. <u>ELEOCHARIS MACROSTACHYA</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4. <u>RUMEX CRISPUS</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>103</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>25</u>				

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species 5 x 1 = 5  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species 98 x 3 = 294  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: 103 (A) 299 (B)  
 Prevalence Index = B/A = 2.90

**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, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2"	BLACK						LOAM	MANURE
2-14"	10YR 4/2	60	2.5YR 3/6	40	C	M	SILTY SAND	

<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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" 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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;14"</u>	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;14"</u>	

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 7A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**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>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				<b>Prevalence Index worksheet:</b>
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>102</u> x 3 = <u>306</u>
5. _____	_____	_____	_____	FACU species <u>2</u> x 4 = <u>8</u>
Total Cover: _____				UPL species <u>2</u> x 5 = <u>10</u>
				Column Totals: <u>106</u> (A) <u>324</u> (B)
				Prevalence Index = B/A = <u>3.06</u>
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b>
1. <u>FESTUCA PERENNIS</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>HORDEUM MARINUM</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>BROMUS DIANDRUS</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>LACTUCA SCARIOLA</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. <u>GALIUM APARINE</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
6. <u>RUMEX CRISPUS</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7. <u>GERANIUM DISSECTUM</u>	<u>12</u>	<u>N</u>	<u>UPL</u>	
8. _____	_____	_____	_____	
Total Cover: <u>106</u>				
<b>Woody Vine Stratum</b>				<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 _____ No <input checked="" type="checkbox"/>
Remarks:				

**SOIL**

Sampling Point: 7A

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>		
0-4"	ORGANIC						NO COLOR	ORGANIC MATTER
4-10"	10YR 4/2	95	2.5YR 4/8	5	C	PL	CLAY SAND	
10-14"	10YR 4/2	60	2.5YR 3/6	40	C	M	CLAY SAND	

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

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 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)

- 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.

Restrictive Layer (if present):

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

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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)

- 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): >14"  
 Saturation Present? Yes  No  Depth (inches): >14"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carl's Property (VML1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 8  
 Investigator(s): Anne van Zuyk; Mike Trudlooc Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

**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>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																												
2. _____	_____	_____	_____																													
3. _____	_____	_____	_____																													
4. _____	_____	_____	_____																													
Total Cover: _____				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td>_____</td> <td>x 1 =</td> <td>_____</td> </tr> <tr> <td>FACW species</td> <td>_____</td> <td>x 2 =</td> <td>_____</td> </tr> <tr> <td>FAC species</td> <td>_____</td> <td>x 3 =</td> <td>_____</td> </tr> <tr> <td>FACU species</td> <td>_____</td> <td>x 4 =</td> <td>_____</td> </tr> <tr> <td>UPL species</td> <td>_____</td> <td>x 5 =</td> <td>_____</td> </tr> <tr> <td>Column Totals:</td> <td>_____ (A)</td> <td>_____ (B)</td> <td>_____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:		Multiply by:		OBL species	_____	x 1 =	_____	FACW species	_____	x 2 =	_____	FAC species	_____	x 3 =	_____	FACU species	_____	x 4 =	_____	UPL species	_____	x 5 =	_____	Column Totals:	_____ (A)	_____ (B)	_____
Total % Cover of:		Multiply by:																														
OBL species	_____	x 1 =	_____																													
FACW species	_____	x 2 =	_____																													
FAC species	_____	x 3 =	_____																													
FACU species	_____	x 4 =	_____																													
UPL species	_____	x 5 =	_____																													
Column Totals:	_____ (A)	_____ (B)	_____																													
<b>Sapling/Shrub Stratum</b>																																
1. _____	_____	_____	_____																													
2. _____	_____	_____	_____																													
3. _____	_____	_____	_____																													
4. _____	_____	_____	_____																													
5. _____	_____	_____	_____																													
Total Cover: _____																																
<b>Herb Stratum</b>																																
1. <u>Eleocharis macrostachya</u>	<u>5</u>	<u>N</u>	<u>Obl</u>																													
2. <u>Festuca perennis</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>																													
3. <u>Hemlock maritima</u>	<u>5</u>	<u>N</u>	<u>Fac</u>																													
4. <u>Rumex crispus</u>	<u>20</u>	<u>Y</u>	<u>Fac</u>																													
5. _____	_____	_____	_____																													
6. _____	_____	_____	_____																													
7. _____	_____	_____	_____																													
8. _____	_____	_____	_____																													
Total Cover: <u>60</u>																																
<b>Woody Vine Stratum</b>																																
1. _____	_____	_____	_____																													
2. _____	_____	_____	_____																													
Total Cover: _____																																
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust <u>40</u>																														
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																																
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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2"	Green							Organic
2-13"	10YR 2/2	95	2.5YR 3/6	5	C	PL		Sandy clay

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 checked="" 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)	

<sup>3</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:	Secondary Indicators (2 or more required)
<b>Primary Indicators (any one indicator is sufficient)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches):   

Water Table Present? Yes  No  Depth (inches): 713"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 713"

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carl's Property (VMC 1601) City/County: Sacramento Sampling Date: 8/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 8a  
 Investigator(s): Anna van Zulk; Mike Swenloot Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**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>1</u> (B)																
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Total Cover: _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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)																
<b>Sapling/Shrub Stratum</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
<b>Herb Stratum</b> 1. <u>Lactuca serriola</u> <u>1</u> <u>N</u> <u>FACU</u> 2. <u>Festuca perennis</u> <u>100</u> <u>Y</u> <u>FAC</u> 3. <u>Rumex crispus</u> <u>1</u> <u>N</u> <u>FAC</u> 4. <u>Hieracium marianum</u> <u>10</u> <u>N</u> <u>FAC</u> 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>112</u>																				
<b>Woody Vine Stratum</b> 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____																		
Remarks:																				

**SOIL**

Sampling Point: 8c

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>		
0-2"	Organic							Organic
2-7"	10M 2/1	99	2.5 YR 3/6	1	C	PL		sandy loam
7-14"	10YR 4/2	95	2.5YR 4/8	5	C	M		silty clay

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

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 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)

- 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.

Restrictive Layer (if present):

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

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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)

- 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): 714'  
 Saturation Present? Yes  No  Depth (inches): 714  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carli Property (VMC1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 9  
 Investigator(s): Anna van Zwick; Mike Kneiblow Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**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>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<b>Herb Stratum</b>				
1. <u>Rumex crispus</u>	<u>90</u>	<u>Y</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 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)
2. <u>Festuca perennis</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
3. <u>Polygonum aviculare</u>	<u>1</u>	<u>N</u>	<u>Facw</u>	
4. <u>Cerastium glomeratum</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>102</u>				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____		
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	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14"	10YR 3/2	100						silty clay

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks: recently filled in ditch with upland soils. rains compacted recently filled canal to create a new depressional feature. soils not from wetlands so did not veg.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (2 or more required)</b>
<b>Primary Indicators (any one indicator is sufficient)</b>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches):   >14  

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches):   >14  

Wetland Hydrology Present? Yes  No \_\_\_\_\_

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carl's Property (VMC1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Volcan) State: CA Sampling Point: 9a  
 Investigator(s): Anna van Zvuk, Mike Trushlood Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**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</u> (A/B)																
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species <u>55</u></td> <td>x 3 = <u>165</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>7</u></td> <td>x 5 = <u>35</u></td> </tr> <tr> <td>Column Totals: <u>92</u> (A)</td> <td><u>320</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.48</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species <u>55</u>	x 3 = <u>165</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>7</u>	x 5 = <u>35</u>	Column Totals: <u>92</u> (A)	<u>320</u> (B)	Prevalence Index = B/A = <u>3.48</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species <u>55</u>	x 3 = <u>165</u>																			
FACU species <u>30</u>	x 4 = <u>120</u>																			
UPL species <u>7</u>	x 5 = <u>35</u>																			
Column Totals: <u>92</u> (A)	<u>320</u> (B)																			
Prevalence Index = B/A = <u>3.48</u>																				
Total Cover: _____																				
<b>Sapling/Shrub Stratum</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Total Cover: _____																				
<b>Herb Stratum</b>																				
1. <u>FESTUCA PERENNIS</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>																	
2. <u>RUMEX CRISPUS</u>	<u>3</u>	<u>N</u>	<u>FAC</u>																	
3. <u>BROMUS HORDEACEOUS</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>																	
4. <u>CONVOLVULUS ARVENSIS</u>	<u>2</u>	<u>N</u>	<u>UPL</u>																	
5. <u>TRIFOLIUM OUBUM</u>	<u>5</u>	<u>N</u>	<u>UPL</u>																	
6. <u>MEDICAGO POLYMOERPA</u>	<u>10</u>	<u>N</u>	<u>FACU</u>																	
7. <u>HORDEUM MARINUM</u>	<u>2</u>	<u>N</u>	<u>FAC</u>																	
8. _____	_____	_____	_____																	
Total Cover: <u>92</u>																				
<b>Woody Vine Stratum</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																		
Remarks:																				

**SOIL**

Sampling Point: 9A

**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>		
0-9"	10YR 3/2	100					SILTY CLAY ROCK HARD	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<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)		

<sup>3</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:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 79"

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): 79"

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 10  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil , or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil , or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>SOIL INUNDATED, STANDING WATER PRESENT</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>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
<b>Sapling/Shrub Stratum</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Total Cover: _____																				
<b>Herb Stratum</b>																				
1. <u>LEMNA MINOR</u>	<u>3</u>	<u>N</u>	<u>OBL</u>																	
2. <u>GLYCERIA DECLINATA</u>	<u>2</u>	<u>N</u>	<u>FACW</u>																	
3. <u>ELEOCHARIS MALROBACHYA</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>																	
4. <u>RUMEX CRISPUS</u>	<u>1</u>	<u>N</u>	<u>FAC</u>																	
5. <u>TYPHA SP.</u>	<u>41</u>	<u>N</u>	<u>OBL</u>																	
6. <u>CYPERUS ERAGROSTIS</u>	<u>2</u>	<u>N</u>	<u>FACW</u>																	
7. <u>POLYPOGON MONSPELIENSIS</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>																	
8. _____	_____	_____	_____																	
Total Cover: <u>64</u>																				
<b>Woody Vine Stratum</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																				
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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 checked="" type="checkbox"/> No _____																				
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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

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

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)                |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)               |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)                  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input checked="" type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input checked="" type="checkbox"/> Other (Explain in Remarks) |
| <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)          |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

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

Hydric Soil Present? Yes  No

Remarks:  
AREA INUNDATED, NO SOIL PIT DUG.

**HYDROLOGY**

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 5/10/17  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 10a  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks: <p align="center">See 9a</p>			

**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</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<b>Herb Stratum</b>				
1. <u>GERANIUM DISSECTUM</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
2. <u>BROMUS HORDEACEOUS</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
3. <u>HORDEUM MURINUM</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>SILYBUM MARINUM</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
5. <u>AVENA FATUA</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
6. <u>BROMUS DIANDRUS</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
7. <u>FESTUCA PERENNIS</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
8. <u>CONVOLVULUS ARVENSIS</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
Total Cover: <u>96</u>				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks:				

**SOIL**

Sampling Point: 10A

**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>		
0-12"	10 YR 3/2	100					SILTY CLAY	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<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)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks: SEE 9A.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >12"

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): >12"

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks: SEE 9A.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 11  
 Investigator(s): A. VAN ZUUL, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____	

**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>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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)
5. _____	_____	_____	_____	
Total Cover: _____				
<b>Herb Stratum</b>				
1. <u>FESTUCA PERENNIS</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	
2. <u>POLYPOGON MONSPELIENSIS</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
3. <u>RUMEX CRISPUS</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>108</u>				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14"	10YR 3/2	95	5YR 4/6	5	C	M	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.

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                   | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)               | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)           | <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)           | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)               | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input checked="" 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)          |   |   |

<sup>3</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:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input checked="" type="checkbox"/> Biotic Crust (B12)                 | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >14"  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >14"

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARL PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 11A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: SEE 10A	

### 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>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>96</u> x 3 = <u>288</u> FACU species <u>4</u> x 4 = <u>16</u> UPL species <u>3</u> x 5 = <u>15</u> Column Totals: <u>103</u> (A) <u>319</u> (B) Prevalence Index = B/A = <u>3.10</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<b>Herb Stratum</b>				
1. <u>PESTUCA PERENNIS</u>	<u>95</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
2. <u>AVENA FATUA</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
3. <u>HORDEUM MURINUM</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
4. <u>BROMUS HORDEACEOUS</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
5. <u>LACTUCA SERRIOLA</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. <u>CONVOLVULUS ARVENSIS</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	
7. <u>HORDEUM MARINUM</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
Total Cover: <u>103</u>				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

**SOIL**

Sampling Point: IIA

**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>		
0-12"	10 YR 3/2	100					SILTY CLAY	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<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)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks: SEE 10A

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
<b>Primary Indicators (any one indicator is sufficient)</b>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >12"

Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): >12"

(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks: SEE 10A

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 12  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil , or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks:					

### 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>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: _____				Total % Cover of: _____ Multiply by: _____	
<b>Sapling/Shrub Stratum</b>				OBL species _____ x 1 = _____	
1. _____	_____	_____	_____	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
Total Cover: _____				Prevalence Index = B/A = _____	
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>FESTUCA PERENNIS</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>HORDEUM MARINUM</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>AVENA FATUA</u>	<u>1</u>	<u>N</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. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>101</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____	
<b>Woody Vine Stratum</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover: _____					
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____			
Remarks:					

**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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7"	BLACK	100					CLAY LOAM	
7-14"	10 YR 3/3	100					LOAMY CLAY	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<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)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks: **SIGNIFICANTLY DISTURBED**

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 7|4"

Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): 7|4"

(includes capillary fringe)

Wetland Hydrology Present? Yes  No \_\_\_\_\_

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/16/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 13  
 Investigator(s): A. VAN ZUUL, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil , or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### 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>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
<b>Sapling/Shrub Stratum</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Total Cover: _____																				
<b>Herb Stratum</b>																				
1. <u>FESTUCA PERENNIS</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>																	
2. <u>CYPERUS ERAGROSTIS</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>																	
3. <u>POLYPOGON MONSPELIENSIS</u>	<u>5</u>	<u>N</u>	<u>FACW</u>																	
4. <u>ELEOCHARIS MACROSTACHYA</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>																	
5. <u>JUNCUS BUFONIS</u>	<u>5</u>	<u>N</u>	<u>FACW</u>																	
6. <u>RUMEX CRISPUS</u>	<u>2</u>	<u>N</u>	<u>FAC</u>																	
7. <u>PARENTUCHELLA VISCOSA</u>	<u>1</u>	<u>N</u>	<u>FAC</u>																	
8. _____	_____	_____	_____																	
Total Cover: <u>113</u>																				
<b>Woody Vine Stratum</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>10</u>																				
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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 checked="" type="checkbox"/> No _____																				
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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	10 YR 3/2	100					SILTY CLAY	

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

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)               |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)                 |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input checked="" type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)           |
| <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)          |   |   |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

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

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

SIGNIFICANTLY DISTURBED, RECENTLY GRADED

**HYDROLOGY**

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input checked="" type="checkbox"/> Salt Crust (B11)                   | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input checked="" type="checkbox"/> Biotic Crust (B12)                 | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 712"  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): 712"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No \_\_\_\_\_

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: CARL PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 13A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**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)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
Total Cover: _____				
<b>Herb Stratum</b>				
1. <u>BROMUS HORDEACEOUS</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>RUMEX CRISPUS</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
3. <u>CENTUREA SOLSTITIALIS</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
4. <u>BROMUS DIANDRUS</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
5. <u>SONCHUS ARVENSIS</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
6. <u>AMSIACKIA MENZIESII</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
7. <u>BRASSICA RAPA</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
8. <u>LACTUCA SCARIOLA</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
Total Cover: <u>65</u>				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		

Remarks:

**SOIL**

Sampling Point: 13A

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>		
0-12"	10YR 3/2	100					SANDY 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.

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks) |
| <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)          |   |   |

<sup>3</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:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >12"  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): >12"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carli Property (VMC 1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 14  
 Investigator(s): Anna Vanzuvki; Mike Trueblood Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Saxifraga lasiolepis</i></u>	<u>15</u>	<u>Y</u>	<u>Few</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
Total Cover: <u>15</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b>				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____				
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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)
1. <u><i>Typha latifolia</i> sp.</u>	<u>35</u>	<u>Y</u>	<u>Obl</u>	
2. <u><i>Cyperus eragrostis</i></u>	<u>3</u>	<u>N</u>	<u>Facw</u>	
3. <u><i>Polypogon monspeliensis</i></u>	<u>1</u>	<u>N</u>	<u>Few</u>	
4. <u><i>Eleocharis macrostachya</i></u>	<u>1</u>	<u>N</u>	<u>Obl</u>	
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>40</u>				
<b>Woody Vine Stratum</b>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust <u>50</u>		
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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9"	10R 4/3	100						Clay sand

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<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)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks: Dredged regularly. Did not use soil criteria.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (2 or more required)</b>
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): > 9"

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): > 9"

Wetland Hydrology Present? Yes  No \_\_\_\_\_

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Curtis Property (VMC 1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 14a  
 Investigator(s): Anna van Zuyk; Mike Trumbull Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>upland data point</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</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> ___ 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)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	Remarks: _____
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>80</u>				
<b>Herb Stratum</b>				
1. <u>Erodium botrys</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Anulva neglecta</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust _____		

**SOIL**

Sampling Point: 14a

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>		
0-12"	10YR 4/3	100						loamy clay

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

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks) |
| <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)          |   |   |

<sup>3</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:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 712"  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): 712"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carli Property (VMC 1601) City/County: Sacramento Sampling Date: 5/10/17  
 Applicant/Owner: Triangle Rock (Vulcan) State: CA Sampling Point: 15  
 Investigator(s): Anna van Zulk, Mike Trebbled Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**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>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 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)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>30</u>				
<b>Herb Stratum</b>				
1. <u>Eleocharis macrostachya</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. <u>Glyceria declinata</u>	<u>10</u>	<u>Y</u>	<u><del>OBL</del> FACW</u>	
3. <u>Cotula coronopifolia</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
4. <u>Festuca perennis</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
Total Cover: _____				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>70</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			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-4"	10 YR 3/2	100					Silty clay
4'	Hardpan						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<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)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: Hardpan  
 Depth (inches): 4"

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): -

Water Table Present? Yes  No  Depth (inches): >4"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >4"

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017

Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 15A

Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_

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

Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_

Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
--	--

Remarks: CORRESPONDING UPLAND DATA POINT

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>101</u> x 3 = <u>303</u>
5. _____	_____	_____	_____	FACU species <u>8</u> x 4 = <u>32</u>
_____ = Total Cover				UPL species <u>6</u> x 5 = <u>30</u>
				Column Totals: <u>115</u> (A) <u>365</u> (B)
				Prevalence Index = B/A = <u>3.17</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>FESTUCA PERENNIS</u>	<u>100</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>HORDEUM MURINUM</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>MEDICAGO POLYMORPHA</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>LACTUCA SPERGIOLA</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. <u>RUMEX CRISPUS</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
6. <u>BRONNUS DIANDRUS</u>	<u>6</u>	<u>N</u>	<u>UPL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>115</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: ISA

**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>		
0-12"	10YR 4/3	100					LOAMY CLAY	

<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.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)

- 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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

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

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7)                        | <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 712"  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): 712"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 1b  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input 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, unless disturbed or problematic.
= Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>EPILOBIUM CILIATUM</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>RUMEX CRISPUS</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>POLYPOGON MONSPELIENSIS</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
4. <u>FESTUCA PERENNIS</u>	<u>8</u>	<u>N</u>	<u>FAC</u>	
5. <u>CYPERUS ERAGROSTIS</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>ELEOCHARIS MACROSTACHYA</u>	<u>2</u>	<u>N</u>	<u>OBL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
= Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>50</u>		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____		

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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-13"	10YR 3/2	95	2.5YR 3/6	5	C	M	SANDY SILTY CLAY	

<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.

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Vernal Pools (F9)</p>	<p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>

**Restrictive Layer (if present):**

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

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

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one required: check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input checked="" type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input checked="" type="checkbox"/> Biotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): >13"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >13"

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/16/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 17  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks:			

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. <u>FESTUCA PERENNIS</u>	<u>100</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____	_____	_____	_____	<input 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. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	BLACK	COMPOST					SILTY LOAM	

<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.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

<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:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (minimum of one required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >12"

Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): >12"  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 18  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>POLYPOGON MONSPELIENSIS</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>FESTUCA PERENNIS</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>LYTHRUM HYSSOPIFOLIA</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>HORDEUM MARINUM</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>87</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>15</u>				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

Remarks:

**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				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8"	10YR 3/2	95	2.5YR 4/8	5	C	M	SILTY CLAY LOAM	

<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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<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 checked="" 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)		

<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:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input checked="" 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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): 78"

Saturation Present? Yes  No  Depth (inches): 78"

(includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC 1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 18A  
 Investigator(s): A. VAN ZUUK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks: <u>CORRESPONDING UPLAND DATA POINT.</u>			

### VEGETATION – Use scientific names of plants.

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
3. _____				
4. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b>
<b>Sapling/Shrub Stratum</b>				Total % Cover of: _____ Multiply by: _____
1. _____				OBL species _____ x 1 = _____
2. _____				FACW species _____ x 2 = _____
3. _____				FAC species <u>70</u> x 3 = <u>210</u>
4. _____				FACU species <u>10</u> x 4 = <u>40</u>
5. _____				UPL species <u>34</u> x 5 = <u>170</u>
_____ = Total Cover				Column Totals: <u>114</u> (A) <u>420</u> (B)
<b>Herb Stratum</b>				Prevalence Index = B/A = <u>3.68</u>
1. <u>VICIA VILLOSA</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input 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)
2. <u>FESTUCA PERENNIS</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	
3. <u>HORDEUM MURINUM</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>AVENA FATUA</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
5. <u>CONVOLVULUS ARVENSIS</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
6. _____				
7. _____				
8. _____				
<u>114</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Woody Vine Stratum</b>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

**SOIL**

Sampling Point: 18A

**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>		
0-1"	ORGANIC MATTER						ORGANIC	
1-10"	10YR 3/3	100					SILTY CLAY LOAM	

<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.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<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)		

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 710"

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): 710"

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 19  
 Investigator(s): A. VAN ZOOK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil , or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil , or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>PLAGIOBOTHRYS STIPITATUS VAR. MICRANTHUS</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>LYTHRUM HYSSOPIFOLIA</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>RANUNCULUS BONARIENSIS VAR. TRISEPALUS</u>	<u>1</u>	<u>N</u>	<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>HORDEUM MARINUM</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. <u>HYPOCHAERIS GLABRA</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	
6. <u>POLYPOGON MONSPELIENSIS</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
7. <u>FESTUCA PERENNIS</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>40</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

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

<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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<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)		

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: **SCRAPED OUT AREA FROM CONSTRUCTION EQUIPMENT. SOILS HAVE NOT YET ESTABLISHED TO DEPRESSIONAL CONDITIONS.**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): >10"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >10"

Wetland Hydrology Present? Yes  No

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CARLI PROPERTY (VMC1601) City/County: SACRAMENTO Sampling Date: 05/10/2017  
 Applicant/Owner: TRIANGLE ROCK (VULCAN) State: CA Sampling Point: 19A  
 Investigator(s): A. VAN ZUIK, M. TRUEBLOOD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>CORRESPONDING UPLAND DATA POINT,</u>	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>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</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				<b>Prevalence Index worksheet:</b>
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>
1. <u>TRIFOLIUM HIRTUM</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	___ Dominance Test is >50%
2. <u>VICIA VILLOSA</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	___ Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>MEDICAGO POLYMORPHA</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>ERODIUM BOTRYS</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. <u>BROMUS DIANDRUS</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
6. <u>FESTUCA MYUROS</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>92</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>8</u>		% Cover of Biotic Crust _____		<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>

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

**SOIL**

Sampling Point: 19A

**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>		
0-11"	10YR 3/4	100					CLAY	

<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.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark <sup>3</sup> Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

<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:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<b>Primary Indicators (minimum of one required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

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

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): 711"

Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): 711"

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

**APPENDIX C**

**APPROVED JURISDICTIONAL DELINEATION FORM**

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**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

## Sacramento Aggregates Expansion Project

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: CA County/parish/borough: Sacramento City: Sacramento  
Center coordinates of site (lat/long in degree decimal format): Lat. 38°30'1.21" N, Long. 121°15'22.55" W.  
Universal Transverse Mercator: 652054.8 (easting), 4262771.2 (northing), Zone 10  
Name of nearest waterbody: Laguna Creek  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Sacramento River  
Name of watershed or Hydrologic Unit Code (HUC): HUC: 180201630404, California Region / Sacramento Subunit  
 Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.  
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

- Office (Desk) Determination. Date:  
 Field Determination. Date(s):

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.  
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: 3385 linear feet: 1-193 width (ft) and/or 0.046 acres.  
Wetlands: 1.831 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): .

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: **Several man-made ditches were determined to be not jurisdictional since these ditches were excavated in and drain only uplands. Additional man-made basins and depressions containing wetlands were determined to be isolated**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

(having no connectivity to TNWs or other nexus to interstate waters). Based on SWANCC these features have no value for interstate commerce and are considered not jurisdictional.

### **SECTION III: CWA ANALYSIS**

#### **A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW: .

Summarize rationale supporting determination: .

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: .

#### **B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

**Non-RPW-1 (See attached map) – Non-RPW-1 consists of an unnamed ephemeral ditch that flows south into a wetland adjacent to Laguna Creek.**

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

**(i) General Area Conditions:**

Watershed size: 33.87 acres  
Drainage area: 33.87 acres  
Average annual rainfall: 18.51 inches  
Average annual snowfall: 0.00 inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

- Tributary flows directly into TNW.  
 Tributary flows through 2 tributaries before entering TNW.

Project waters are 20-25 river miles from TNW.  
Project waters are 1 (or less) river miles from RPW.

---

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters are **10-15** aerial (straight) miles from TNW.  
Project waters are **1 (or less)** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain: n/a.

Identify flow route to TNW<sup>5</sup>: Flows south then east 0.4 mile into Laguna Creek, then flows southwest then northwest 20 miles to Morrison Creek, then flows southwest 3 miles to the Sacramento River.  
Tributary stream order, if known: Third.

(b) General Tributary Characteristics (check all that apply):

**Tributary** is:  Natural  
 Artificial (man-made). Explain: .  
 Manipulated (man-altered). Explain: Tributary is channelized and serves as a drainage ditch during and after storm events.

**Tributary** properties with respect to top of bank (estimate):

Average width: 1 foot  
Average depth: <1 feet  
Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover: Italian ryegrass (*Festuca perennis*) dominant, 90-95% relative cover, >100% absolute cover.  
 Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Banks appear to be stable.

Presence of run/riffle/pool complexes. Explain: Flows tend to move slowly through the study area.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 1 %

(c) Flow:

Tributary provides for: **Ephemeral flow**

Estimate average number of flow events in review area/year: **6-10**

Describe flow regime: Tributary collects surface runoff only; conveys ephemeral flows.

Other information on duration and volume: n/a.

Surface flow is: **Confined**. Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

Dye (or other) test performed: .

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):

Discontinuous OHWM.<sup>7</sup> Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup> A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup> Ibid.

- tidal gauges
- other (list):

**(iii) Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).  
 Explain: no water observed.  
 Identify specific pollutants, if known: unknown.

**(iv) Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

**2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**  
 None

**Non-RPW-2 (See attached map) – Non-RPW-2 consists of an unnamed ephemeral ditch that flows southwest into Non-RPW-1.**

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

**(i) General Area Conditions:**

Watershed size: 18.68 acres  
 Drainage area: 18.68 acres  
 Average annual rainfall: 18.51 inches  
 Average annual snowfall: 0.00 inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

- Tributary flows directly into TNW.
- Tributary flows through 2 tributary before entering TNW.

Project waters are 20-25 river miles from TNW.  
 Project waters are 1 (or less) river miles from RPW.  
 Project waters are 10-15 aerial (straight) miles from TNW.  
 Project waters are 1 (or less) aerial (straight) miles from RPW.  
 Project waters cross or serve as state boundaries. Explain: n/a.

Identify flow route to TNW<sup>8</sup>: Flows west into Non-RPW-1 in the study area, then flows south then east 0.4 mile into Laguna Creek, then flows southwest then northwest 20 miles to Morrison Creek, then flows southwest 3 miles to the Sacramento River.  
 Tributary stream order, if known: Third.

**(b) General Tributary Characteristics (check all that apply):**

- Tributary is:**
- Natural
  - Artificial (man-made). Explain:
  - Manipulated (man-altered). Explain: Tributary is channelized and serves as a drainage ditch during and after storm events.

**Tributary properties with respect to top of bank (estimate):**

Average width: 1 feet  
 Average depth: <1 feet  
 Average side slopes: 2:1.

**Primary tributary substrate composition (check all that apply):**

- Silts
- Sands
- Concrete
- Cobbles
- Gravel
- Muck
- Bedrock
- Vegetation. Type/% cover: Italian ryegrass (Festuca perennis) dominant, 90% relative cover, >100% absolute cover.

<sup>8</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Banks appear to be stable.  
Presence of run/riffle/pool complexes. Explain: Flows tend to move slowly through the study area.  
Tributary geometry: **Relatively straight**  
Tributary gradient (approximate average slope): 2 %

(c) **Flow:**

Tributary provides for: **Ephemeral flow**

Estimate average number of flow events in review area/year: **6-10**

Describe flow regime: Tributary collects surface runoff only; conveys ephemeral flows.

Other information on duration and volume: n/a.

Surface flow is: **Confined**. Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

Dye (or other) test performed: .

Tributary has (check all that apply):

Bed and banks

OHWM<sup>9</sup> (check all indicators that apply):

clear, natural line impressed on the bank

changes in the character of soil

shelving

vegetation matted down, bent, or absent

leaf litter disturbed or washed away

sediment deposition

water staining

other (list):

Discontinuous OHWM.<sup>10</sup> Explain: .

the presence of litter and debris

destruction of terrestrial vegetation

the presence of wrack line

sediment sorting

scour

multiple observed or predicted flow events

abrupt change in plant community

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:

oil or scum line along shore objects

fine shell or debris deposits (foreshore)

physical markings/characteristics

tidal gauges

other (list):

Mean High Water Mark indicated by:

survey to available datum;

physical markings;

vegetation lines/changes in vegetation types.

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: no water observed.

Identify specific pollutants, if known: Unknown.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

Riparian corridor. Characteristics (type, average width): .

Wetland fringe. Characteristics: .

Habitat for:

Federally Listed species. Explain findings: .

Fish/spawn areas. Explain findings: .

Other environmentally-sensitive species. Explain findings: .

Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

All wetland(s) being considered in the cumulative analysis: **3**

Approximately (1.715) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Yes

Size (in acres)

1.589

Directly abuts? (Y/N)

Size (in acres)

<sup>9</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>10</sup>Ibid.

No 0.005  
No 0.121

Summarize overall biological, chemical and physical functions being performed: Seasonal wetland directly abutting Non-RPW-1. Tributary connectivity via ephemeral ditch. Small wetlands to the north do not directly abut and are connected via sheetflow (no wetlands in sheetflow area).

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: Non-RPW-1 is a ditch with seasonal flows into wetlands adjacent to Laguna Creek. Non-RPW-1 has the capacity to convey pollutants to TNWs, thus providing a significant nexus.
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Non-RPW-2 consists of a ditch with seasonal flows into Non-RPW-1 and its adjacent wetlands. Non-RPW-2 has the capacity to convey pollutants to TNWs, thus providing a significant nexus.
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: n/a.

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

TNWs: linear feet width (ft), Or, acres.  
 Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .  
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: All RPWs in the study area have either intermittent "seasonal" flows or ephemeral flows with areas of seasonal ponding.

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters:  
 Other non-wetland waters: .

Identify type(s) of waters: .

**3. Non-RPWs<sup>11</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: **Non-RPW-1: 1,690** linear feet **1 - 24** width (ft).  
**Non-RPW-2: 1,052** linear feet **1 - 33** width (ft).

- Other non-wetland waters: . acres.  
Identify type(s) of waters: .

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: .

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: . acres.

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

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: **1.832** acres.

**7. Impoundments of jurisdictional waters.<sup>12</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>13</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: .  
 Other factors. Explain: .

**Identify water body and summarize rationale supporting determination:** .

<sup>11</sup>See Footnote # 3.

<sup>12</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>13</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: **The isolated wetlands are within or adjacent to non-RPWs that were excavated in and drain only uplands, and have no connection to TNWs.**
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: 1.057 acres. List type of aquatic resource: Man-made water retention basin.
- Wetlands: 0.077 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: 1.114 acres. List type of aquatic resource: Man-made ditch and basin created in and draining only uplands without direct or indirect connection to a TNW.
- Wetlands: 0.867 acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall 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 scale & quad name: Carmichael and Elk Grove, 1:24,000.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Sacramento County.
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): NAIP (6/2016).
  - or  Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** .

## **APPENDIX D**

# **REPRESENTATIVE PHOTOS**

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Data Point 1



Data Point 1a



Data Point 2



Data Point 2a

LSA

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 3



Data Point 3a



Data Point 4



Data Point 4a

LSA

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 5



Data Point 5a



Data Point 6



Data Point 6a

LSA

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 7



Data Point 7a



Data Point 8



Data Point 8a

LSA

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 9



Data Point 10



Data Point 11



Data Point 11a

LSA

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 12



Data Point 13



Data Point 13a



Data Point 14

**LSA**

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 14a



Data Point 15



Data Point 16



Data Point 18

LSA

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California



Data Point 18a



Data Point 19



Data Point 19a

**LSA**

**FIGURE 5**  
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Sacramento Aggregates Expansion Site  
City of Sacramento, Sacramento County, California