

DRAFT

**State Aquatic Resources Delineation Report  
for the  
Desert Peak Energy Center – Phase 1**

*Prepared for:*

**Desert Peak Energy Center, LLC**

*Prepared by:*

**DUDEK**

78-075 Main Street, Suite G  
La Quinta, California 92253  
*Contact: Britney Strittmater*

**AUGUST 2021**



# Table of Contents

---

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>III</b>
<b>1 EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>2 INTRODUCTION .....</b>	<b>3</b>
2.1 Project Description .....	3
2.2 Project Location.....	3
<b>3 REGULATORY SETTING .....</b>	<b>9</b>
3.1 California Department of Fish and Wildlife.....	9
3.2 California Regional Water Quality Control Board.....	9
<b>4 METHODS .....</b>	<b>11</b>
4.1 Desktop Analysis .....	11
4.2 Field Delineation.....	11
4.2.1 California Department of Fish and Wildlife Jurisdiction .....	11
4.2.2 Regional Water Quality Control Board Jurisdiction .....	11
4.2.3 Field Data Collection.....	12
<b>5 RESULTS .....</b>	<b>15</b>
5.1 Environmental Setting.....	15
5.1.1 Climate and Rainfall .....	15
5.1.2 Hydrology.....	15
5.1.3 Soils .....	16
5.1.4 Vegetation Communities and Land Covers.....	21
5.2 Aquatic Resources.....	22
5.2.1 Potential Waters of the State .....	22
5.2.2 Summary of State Aquatic Resources.....	25
<b>6 CONCLUSIONS .....</b>	<b>27</b>
<b>7 REFERENCES CITED.....</b>	<b>29</b>
<b>APPENDICES</b>	
A OHWB Datasheets	
B MESA Datasheets	
C Beta Arid West SDAM Form	
D Representative Site Photographs	
E APT Table	

## FIGURES

1	Project Location .....	5
2	USGS Topographic Map .....	7
3	Hydrologic Setting .....	17
4	USDA Soils .....	19
5	Aquatic Resources Delineation .....	23

## TABLES

1	Potential State Jurisdictional Aquatic Resources.....	1
2	Summary of Soil Units in the Review Area.....	16
3	Summary of State Aquatic Resources in the Review Area .....	25
4	Channel Transect Data Summary .....	25

# Acronyms and Abbreviations

---

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
Delineation	State Aquatic Resources Delineation
Manual	.S. Army Corps of Engineers Wetlands Delineation Manual
MESA	Mapping Episodic Stream Assessment
OHW	ordinary high water mark
OHW Guide	A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States
Regional Supplement	Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region
RWQCB	Regional Water Quality Control Board
SCADA	supervisory control and data acquisition
SCE	Southern California Edison
SDAM	stream duration assessment method
USACE	United States Army Corps of Engineers
USGS	U.S. Geological Survey

INTENTIONALLY LEFT BLANK

# 1 Executive Summary

This State Aquatic Resources Delineation (“Delineation”) for the Desert Peak Energy Center – Phase 1 (“Project”) was conducted in accordance with the U.S. Army Corps of Engineers (“USACE”) *Wetlands Delineation Manual* (“Manual”) (USACE 1987); the *Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region*, Version 2.0 (“Regional Supplement”) (USACE 2008a); *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (“OHWM Guide”) (USACE 2008b); *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010); and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (CEC 2014). The *User Manual for a Beta Streamflow Duration Assessment Method for the Arid West of the United States* (Mazor et al. 2021) stream duration assessment method (“SDAM”) was used to determine if the stream channels within the review area are ephemeral. Dudek conducted a Delineation on May 11, 2021, for the purpose of identifying aquatic resources within the review area potentially subject to the jurisdiction of the State of California under Section 401 of the Clean Water Act (“CWA”), California Fish and Game Code Section 1600 et. seq., and the Porter-Cologne Water Quality Control Act.

This Delineation yielded a total of 4.65 acres (14,302 linear feet) of ephemeral drainages. All of these features are likely subject to California Department of Fish and Wildlife (“CDFW”) and/or Regional Water Quality Control Board (“RWQCB”) jurisdiction based on evidence of bed and bank or ephemeral flow. Four erosional drainages were also investigated but determined to be non-jurisdictional. Table 1 summarizes the Delineation findings. OHWM forms are included in Appendix A, OHWM Datasheets; Mapping Episodic Stream Assessment (“MESA”) forms are included in Appendix B, MESA Datasheets; and a field form for the Beta Arid West SDAM was completed within the review area to determine that features on site are ephemeral and are included as Appendix C, Beta Arid West SDAM Form.

**Table 1. Potential State Jurisdictional Aquatic Resources**

ID <sup>1</sup>	Name	Cowardin Classification <sup>2</sup>	Total Area (acres)	Total Length (linear feet)	State Jurisdictional Status
<b>Potential Waters of the State</b>					
NWW-1	Unnamed feature	R6	0.01	552	Jurisdictional
NWW-2	Unnamed feature	R6	3.14	3,681	Jurisdictional
NWW-2a	Unnamed feature	R6	0.02	287	Jurisdictional
NWW-2b	Unnamed feature	R6	0.08	1,865	Jurisdictional
NWW-3	Unnamed feature	R6	0.01	643	Jurisdictional
NWW-4	Unnamed feature	R6	0.03	1,047	Jurisdictional
NWW-5	Unnamed feature	R6	0.02	913	Jurisdictional
NWW-6	Unnamed feature	R6	0.66	1,501	Jurisdictional
NWW-7	Unnamed feature	R6	0.50	3,333	Jurisdictional
NWW-7a	Unnamed feature	R6	0.09	392	Jurisdictional
NWW-7b	Unnamed feature	R6	0.08	90	Jurisdictional
NWW-8	Unnamed feature	R6	0.01	552	Jurisdictional
E-1	Unnamed feature	R6	N/A	N/A	Non-jurisdictional
E-2	Unnamed feature	R6	N/A	N/A	Non-jurisdictional
E-3	Unnamed feature	R6	N/A	N/A	Non-jurisdictional
E-4	Unnamed feature	R6	N/A	N/A	Non-jurisdictional

**Notes:**

<sup>1</sup> ID Type: NWW = non-wetland waters (ephemeral drainage); E = erosional feature.

<sup>2</sup> Cowardin Classification Code (USFWS 1992): R6 = riverine, ephemeral.

**Contact Information/Site Access**

Desert Peak Energy Center, LLC, is the Project applicant and will, therefore, act as the primary point of contact for site access.

***Applicant:***

Desert Peak Energy Center, LLC  
Contact: Patti Murphy, Project Manager, Environmental Services  
One California Street, Suite 1600  
San Francisco, California 94111  
510.501.0535  
Patti.Murphy@nexteraenergy.com

***Agent:***

Dudek  
Contact: Britney Strittmater, Senior Biologist  
78-075 Main Street, Suite G  
La Quinta, California 92253  
760.685.1231  
bstrittmater@dudek.com

# 2 Introduction

---

This report documents the methods and results of the Delineation of potential state jurisdictional wetlands and waters of the state within the 352-acre Desert Peak – Phase 1 Project Site (hereafter referred to as ‘review area’), Riverside County, California (Figure 1, Project Location). The results of this Delineation are preliminary until verified by CDFW and RWQCB.

## 2.1 Project Description

1. The Project includes construction and operation of a battery energy storage system facility. The battery energy storage system facility would include a 400-megawatt by 4-hour facility on an approximately 35-acre footprint of the larger 188-acre Project site, along with associated on-site switchyard, inverters, fencing, roads, and supervisory control and data acquisition (“SCADA”) system, and would store 1,600 megawatt-hours of energy. The Project also includes a 230-kilovolt overhead gen-tie line, which would extend approximately 0.3 miles north to the Southern California Edison (“SCE”) Devers Substation.

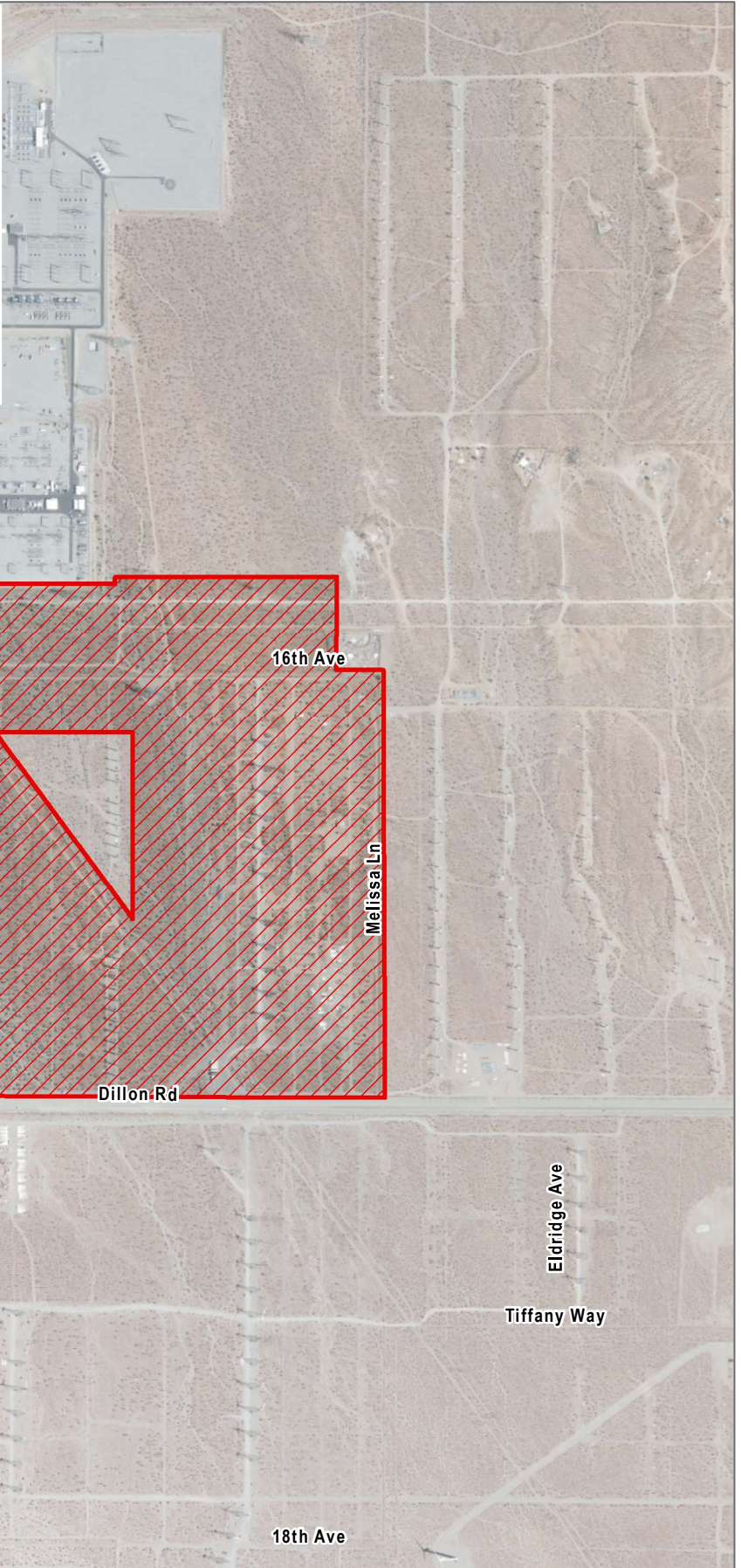
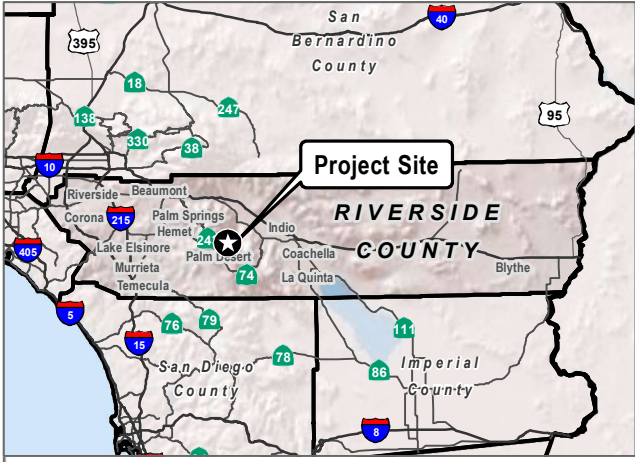
## 2.2 Project Location

The review area is located in the City of Palm Springs at the northeastern intersection of Diablo Road and 16th Avenue (Figure 1). The Project Site is located approximately 1.1 miles north of Interstate 10, 1.1 miles east of State Route 62, and 1.5 miles west of North Indian Canyon Drive. The Project Site is located in the southwestern corner of Section 4 and northwestern corner of Section 9, Township 3 South, and Range 4 East of the San Bernardino Baseline and Meridian, U.S. Geological Survey (“USGS”) Desert Hot Springs 7.5-minute quadrangle (Figure 2, USGS Topographic). The approximate center of the Project Site corresponds to 33° 55’ 44.37” north latitude (33.928992) and 116° 34’ 30.49” west longitude (-116.575136).

A summary of specific Project location attributes includes the following:

- **County:** Riverside
- **Section:** 4 and 9; **Township:** 3S; **Range:** 4E
- **USGS 7.5-Minute Quadrangle:** Desert Hot Springs
- **Latitude, Longitude:** 33.928992, -116.575136 (centroid)
- **Average Elevation:** 950 to 1,050 feet above mean sea level
- **Desert Peak – Phase 1 Project Site Total Acreage:** 352.6

INTENTIONALLY LEFT BLANK



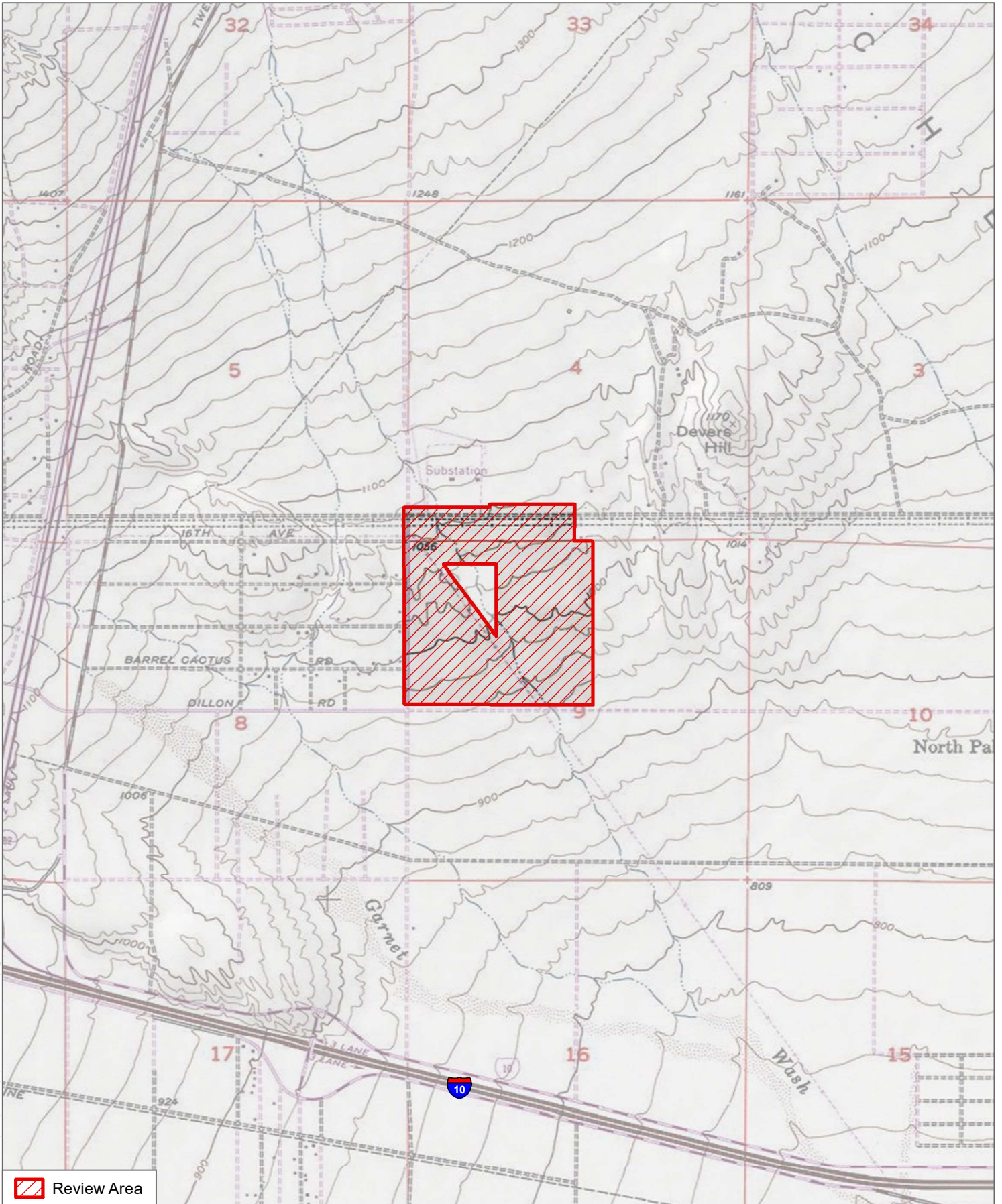
 Review Area

SOURCE: Esri 2021



**FIGURE 1**  
Project Location

INTENTIONALLY LEFT BLANK



SOURCE: USGS 7.5-Minute Series Desert Hot Springs Quadrangle

FIGURE 2

USGS Topographic Map

INTENTIONALLY LEFT BLANK

# 3 Regulatory Setting

---

## 3.1 California Department of Fish and Wildlife

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or other aquatic wildlife.

In Title 14 of the California Code of Regulations, Section 1.72, CDFW defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.”

In Title 14 of the California Code of Regulations, Section 1.56, CDFW defines “lake” to include “natural lakes or man-made reservoirs.” Diversion, obstruction, or change to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from CDFW by entering into an agreement pursuant to Section 1602 of the Fish and Game Code.

## 3.2 California Regional Water Quality Control Board

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA and the Porter–Cologne Water Quality Control Act, as well as California Code of Regulations Section 3831(k) and California Wetlands Conservation Policy. The CWA was established to create a regulatory permitting program designed to address the discharge of pollutants into “waters of the United States,” which includes surface waters and water bodies as defined by U.S. Environmental Protection Agency regulations (e.g., 40 CFR Section 122.2). All “waters of the United States” in California are also “waters of the state” (defined by the Porter-Cologne Water Quality Control Act as “any surface water or ground water, including saline waters, within the boundaries of the state.” [Water Code Section 13050(e)]). However, not all waters of the state (e.g., ground water) are waters of the United States.

### **Clean Water Act – Section 401**

The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state’s water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The Central Valley RWQCB (Region 5) has authority for Section 401 compliance in the project area. A request for certification is submitted to the regional board at the same time that an application is filed with the USACE. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) for impacts to waters of the state under the Porter-Cologne Act (described below).

### **Porter–Cologne Water Quality Control Act**

The Porter–Cologne Water Quality Control Act established the State Water Resources Control Board and each RWQCB as the principal state agencies responsible for the protection of water quality in California. The Porter–Cologne Water Quality Control Act provides that “All discharges of waste into the waters of the State are privileges, not rights.” Waters of the state are defined in Section 13050(e) of the Porter–Cologne Water Quality Control Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” All dischargers are subject to regulation under the Porter–Cologne Water Quality Control Act, including both point and nonpoint source dischargers. The Central Valley RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction.

# 4 Methods

---

## 4.1 Desktop Analysis

Prior to conducting fieldwork, Dudek reviewed the following available resources to identify portions of the Desert Peak – Phase 1 Project Site with a probability for containing potential jurisdictional aquatic resources:

- Google Earth current and historical aerial imagery (Google 2021; Historic Aerials 2021)
- National Resources Conservation Service Web Soil Survey (USDA 2021a)
- U.S. Fish and Wildlife Service National Wetlands Inventory Mapper of historical wetland data (USFWS 2021)
- USGS Historical Topographical map data (USGS 2021a)
- USGS National Hydrography Dataset to assess potential surface water features occurring in the Desert Peak - Phase 1 Site Project vicinity (USGS 2021b)

## 4.2 Field Delineation

Following the initial data collection, Dudek conducted an on-site delineation of waters of the state within the review area on May 11, 2021. All areas that were identified as being potentially subject to the jurisdiction of the CDFW and RWQCB were field verified and mapped.

### 4.2.1 California Department of Fish and Wildlife Jurisdiction

For the purposes of identifying potentially jurisdictional wetlands and waters of the state for the CDFW in compliance with Section 1602 of the California Fish and Game Code, Dudek delineated the top of bank for stream and channels or the limit of the adjacent riparian vegetation, whichever was greater. Taxonomic nomenclature for plant species was in accordance with Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2021). The habitat types occurring in the review area were characterized according to pre-defined plant community and alliance classifications categorized by CDFW and the California Native Plant Society in *A Manual of California Vegetation* (Sawyer et al. 2009).

The guidance described in *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (CEC 2014) was also used to determine the extent of state waters. The MESA forms are included in Appendix B.

### 4.2.2 Regional Water Quality Control Board Jurisdiction

For the purposes of identifying potentially jurisdictional wetlands and waters of the state for the RWQCB in compliance with Section 401 of the CWA and the Porter-Cologne Water Quality Act, the field Delineation methods implemented were consistent with the approach outlined in the Manual (USACE 1987), Regional Supplement (USACE 2008a), and the OHWM Guide (USACE 2008b). The assessment relied on field observations and indicators of an OHWM, as well as positive indicators for wetland vegetation, hydrology, and soils. Areas regulated by the RWQCB are generally coincident with the USACE, but include features isolated from navigable waters of the United States that have evidence of surface water inundation.

- **OHWM Assessment.** Pursuant to the OHWM Guide, Dudek identified the established and maintained physical and biological signatures at the boundaries of each active channel. The OHWM forms are included in Appendix A. The OHWM Guide addresses the underlying hydrologic and geomorphic concepts pertaining to the OHWM and the field indicators, methods, and additional lines of evidence used to assess and delineate the OHWM. Delineation of the active channel signature (i.e., the OHWM) is based largely on identification of three primary physical or biological indicators (USACE 2008b):
  - Topographic break in slope
  - Change in sediment characteristics
  - Change in vegetation characteristics (species or cover)
- **Wetland Indicator Assessment.** Pursuant to the Manual and Regional Supplement, key explicit environmental criteria for determining if potential state jurisdictional wetlands are present within the review area include:
  - **Soil:** Soil characteristics that result from the influence of periodic or permanent inundation or soil saturation for extended periods that further affect anaerobic conditions (i.e., chemical reduction in the soils or hydric soils).
  - **Hydrology:** The presence of inundated or saturated soil conditions resulting from permanent or periodic inundation by groundwater or surface water.
  - **Vegetation:** A prevalence of vegetation typically adapted for life in saturated soil conditions (i.e., hydrophytic vegetation).

Positive indicators of all three parameters are normally present in wetlands. No features within the review area were assessed as potential wetlands due to lack of hydrophytic vegetation.

- **Stream Duration Method Assessment.** The method described in the *User Manual for a Beta Streamflow Duration Assessment Method for the Arid West of the United States* (Mazor et al. 2021) is intended to classify stream reaches into one of three streamflow duration classes: ephemeral (channels that flow only in direct response to precipitation), intermittent (channels that contain sustained flowing water for part of the year; typically the wet season), or perennial (channels that contain flowing water continuously during a year of normal rainfall). The Beta Arid West Streamflow Duration Assessment Method Form is included in Appendix C. Five indicators are used in this method to predict streamflow duration class:
  - Presence of hydrophytic plant species
  - Presence of macroinvertebrate individuals
  - Evidence of aquatic stages of Ephemeroptera, Plecoptera, or Trichoptera taxa
  - Presence of algae
  - Presence of fish or  $\geq 10\%$  algal cover

### 4.2.3 Field Data Collection

Following the initial data collection, Dudek conducted an on-site delineation of waters of the United States within the review area on May 11, 2021. The Delineation was based on field observations and indicators of an OHWM, as well as positive indicators for wetland vegetation, hydrology, and soils, if present. As outlined in Section 1, Executive Summary, the field Delineation methods implemented are consistent with the approach outlined in the Manual (USACE 1987), Regional Supplement (USACE 2008a), and the OHWM Guide (USACE 2008b). The *User Manual for*

a *Beta Streamflow Duration Assessment Method for the Arid West of the United States* (Mazor et al. 2021) SDAM was used to determine if the stream channels within the review area are ephemeral.

Latin and common names for plant species with a California Rare Plant Rank follow the California Native Plant Society's Inventory of Rare and Endangered Plants (CNPS 2021). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2021), and common names follow the U.S. Department of Agriculture's Natural Resources Conservation Service Plants Database (USDA 2021b). Natural vegetation communities were mapped in the field following the *Coachella Valley Multiple Species Habit Conservation Plan* (CVAG 2016) where feasible, with modifications to accommodate the lack of conformity of the observed communities to those of *A Manual of California Vegetation*, second edition (Sawyer et al. 2009) or Oberbauer et al. (2008).

INTENTIONALLY LEFT BLANK

# 5 Results

---

## 5.1 Environmental Setting

The review area is located within the Colorado Desert, in the northwestern end of the Coachella Valley, which is generally bound by the San Bernardino Mountains and Little San Bernardino Mountains to the north, the San Jacinto and Santa Rosa Mountains to the south, and the Salton Sea and Imperial Valley to the east. The review area is relatively flat; however, elevations gradually slope from northwest to southeast. Elevation within the review area ranges from approximately 1,050 feet above mean sea level in northern portion to approximately 950 feet above mean sea level in the southern portion of the review area.

The review area is characterized as an active wind turbine farm with associated development (i.e., concrete pads, wind turbines, storage yard, and associated dirt roads) in the eastern portion of the site, with the remaining portions containing a series of dirt roads and native desert vegetation. There are residential homes and part of the SCE Devers Substation, as well as native desert vegetation, immediately outside of the review area. This review area is bordered by Dillon Road to the south and Diablo Road to the west. Indian Canyon Drive is further east; Interstate 10 is to the south; and State Route 62 is to the west. Historic aerials depict vegetation clearing for development associated with the wind turbine farm sometime between 1972 and 1996 (Historic Aerials 2021). Existing adjacent land uses include a mix of associated wind turbine farms and vacant lands to the north, east, south, and west.

### 5.1.1 Climate and Rainfall

The Coachella Valley, within which the review area is located, has an arid climate characterized by hot, dry summers with mild winters (RWQCB 2019). Average temperatures near Palm Springs range from approximately 57°F to 89°F; precipitation occurs primarily in the winter, with additional thunderstorms in the summer, and typically averages less than 5 inches per year (WRCC 2021; RWQCB 2019). An Antecedent Precipitation Tool was used to document the climatological data around the delineation date and that report is included in Appendix E. The delineation was conducted during the dry season under normal conditions; however, based on the information provided in the APT, the review area is in an extreme drought.

### 5.1.2 Hydrology

The review area is located within the Whitewater Hydrologic Unit and Garnet Wash Subwatershed, in which the Whitewater River is the major surface water body (Figure 3, Hydrologic Setting). According to the Water Quality Control Plan for the Colorado River Basin (RWQCB 2019), the runoff resulting from rains and snowmelt within the higher elevations are the major sources of groundwater replenishment and result in several perennial streams in the Coachella Valley Planning Area, with the Whitewater River being the major drainage course. The Whitewater River contains perennial flows in the mountains; however, because of diversions and percolation into the basin this river becomes dry further downstream. Further downstream to the east, the Whitewater River flows through an engineered extension known as the Coachella Valley Storm Water Channel that ultimately flows east until it terminates into the Salton Sea.

The nearest major water bodies are Garnet Wash, approximately 4,500 feet south of the review area, and the Whitewater River, approximately 1.8 miles south of the review area. The USGS topographic quadrangle and National Hydrography Dataset (USGS 2021b) depict two streams within the review area, bisecting the northwestern and southern portions of the review area (Figure 3). The National Wetlands Inventory (USFWS 2021) generally depicts the same riverine features (Figure 3).

The western and eastern channels within the review area are unnamed, braided, ephemeral features that flow northwest to southeast and originate outside of the review area to the northwest from Painted Hills. Flows continue southeast, flowing under State Route 62, and then continuing southeast approximately 1.73 miles, where flows enter the northern portion of the review area, and then are directed south due to development of the SCE Devers Substation. Flows continue south through the review area before crossing Dillon Road, continuing approximately 0.5 miles southeast outside of the review area before dissipating as sheetflow. Flows have been altered due to the development of Dillon Road, roads associated with the utility line easement that bisect the northeastern portion of the review area, and associated development with the active wind turbine farm. Historically, these flows continued 0.7 miles southeast until their confluence with Garnet Wash.

Several isolated channels are mapped throughout the site. These channels only displayed hydrology indicators for a short distance and were wholly contained within the site.

### 5.1.3 Soils

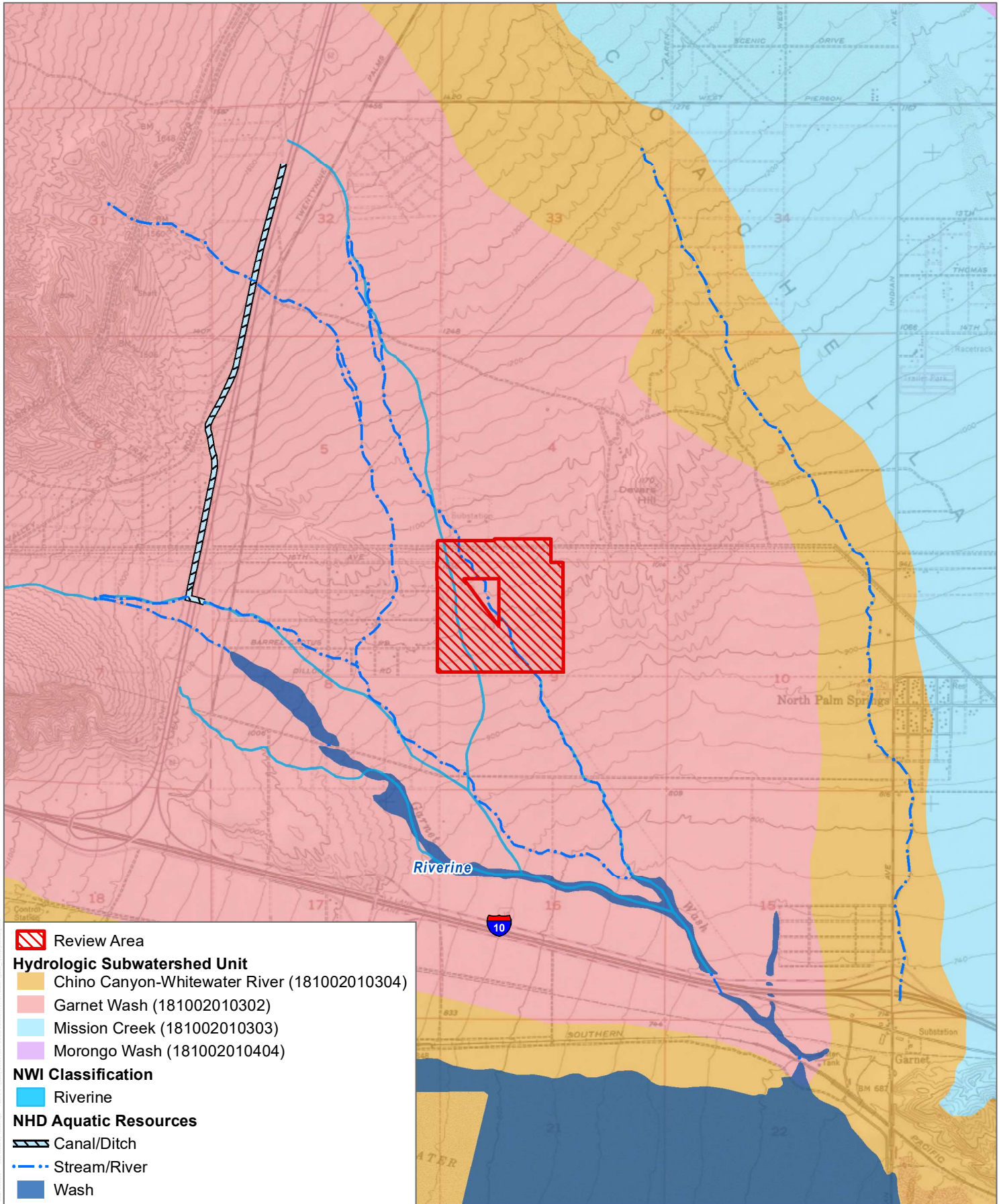
During the literature and database review, two soil units were mapped within the review area. Each soil unit, its proportion of hydric soils, drainage class (i.e., frequency and duration of wet periods under conditions similar to those in which it was developed), and typical landform or geomorphic position within the landscape is detailed in Table 2, Summary of Soil Units in the Review Area below. Figure 4, USDA Soils, provides the geographic extent of each soil unit in the Project area (USDA 2021a).

**Table 2. Summary of Soil Units in the Review Area**

Soil Code	Soil Map Unit Name	Landform	Drainage Class	Hydric
CdC	Carsitas gravelly sand, 0% to 9% slopes	alluvial fans, fan aprons, valley fills, and remnants of alluvial fans and in drainage ways	Well-drained	No
CkB	Carsitas fine sand, 0% to 5% slopes	alluvial fans, fan aprons, valley fills, and remnants of alluvial fans and in drainage ways	Well-drained	No

Source: USDA 2021a.

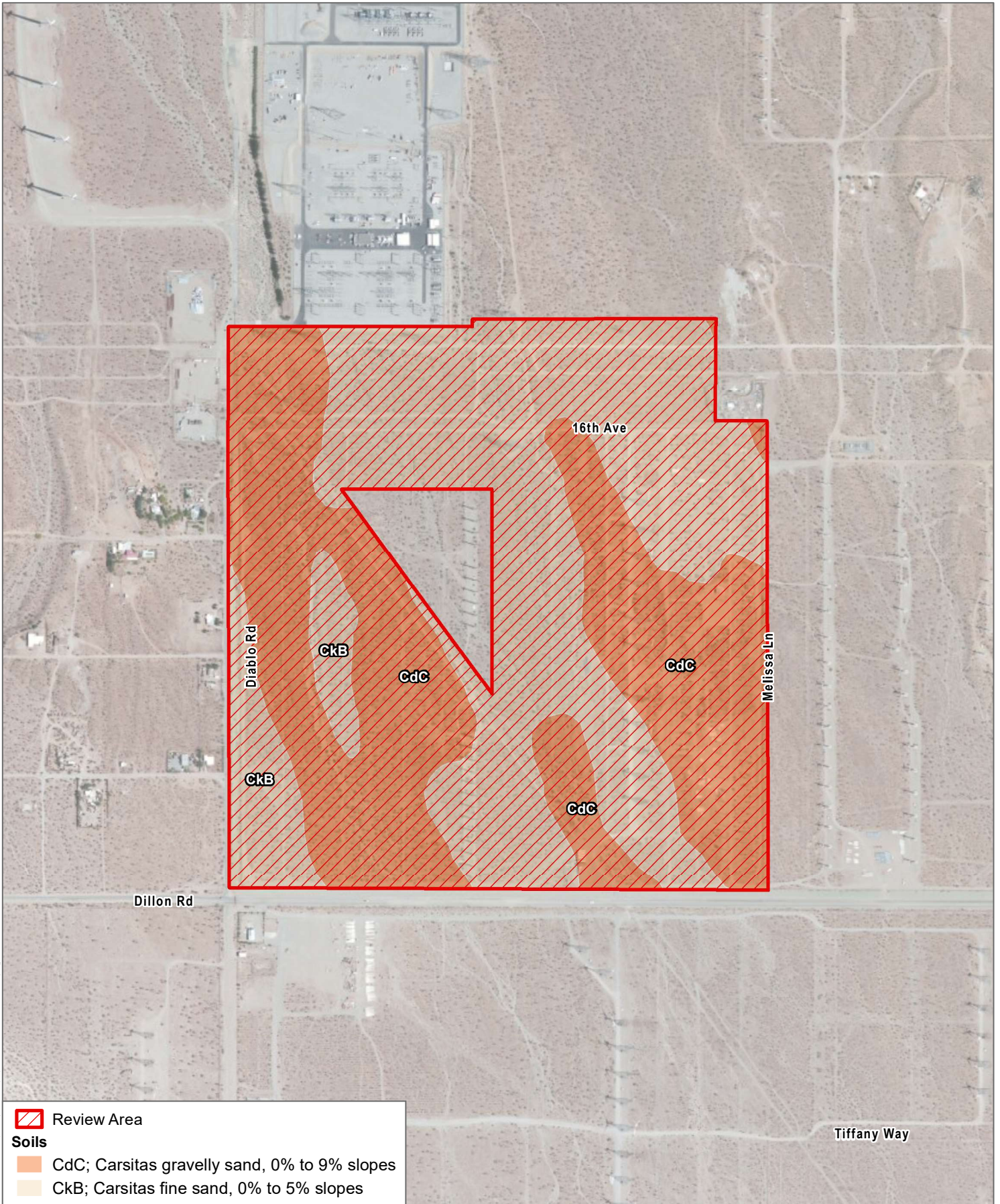
None of the soil units identified in the review area are listed as hydric soils. Hydric soils are defined by the National Technical Committee for Hydric Soils as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. Soils encountered during the field visits were generally sandy soils.



**FIGURE 3**

**Hydrologic Setting**

INTENTIONALLY LEFT BLANK



**FIGURE 4**  
**USDA Soils**

INTENTIONALLY LEFT BLANK

## 5.1.4 Vegetation Communities and Land Covers

The review area consists of a combination of natural vegetation communities and non-natural land cover types. The natural vegetation communities identified within the review were Sonoran creosote bush scrub and unvegetated channel. The non-natural land cover types identified within the review area were disturbed habitat and urban/developed lands. A total of 34 vascular plant species were observed within these vegetation communities and land covers during the Delineation and subsequent focused rare plant surveys, which were conducted in May 2021. Descriptions of the vegetation communities and land cover types within the review area are provided below.

### 5.1.4.1 Natural Vegetation Communities

#### **Sonoran Creosote Bush Scrub**

The Sonoran creosote bush scrub community includes creosote bush as the dominant shrub, forming an open community approximately 0.5 to 3 meters (2 to 10 feet) in height and occurring on well-drained soils (CVAG 2016). Burrobush is a common co-dominant shrub in the canopy, with various ephemeral herbs flowering in late winter/early spring within the herbaceous layer (CVAG 2016).

Within the study area, Sonoran creosote bush scrub is dominated by an open cover of creosote bush. Associated species present within this community include burrobush, cheesebush (*Ambrosia salsola*), sweetbush (*Bebbia juncea*), brittlebush (*Encelia farinosa*), and jojoba (*Simmondsia chinensis*). The herbaceous layer is composed of common Mediterranean grass (*Schismus barbatus*) and redstem stork's bill (*Erodium cicutarium*). Disturbed Sonoran creosote bush scrub is dominated by a lower cover of creosote bush and associated species as a result of past disking and disturbance. Sonoran creosote bush scrub was mapped within much of the study area, with disturbed Sonoran creosote bush mapped within portions of the site south of Dillon Road. These areas included evidence of past disturbance/grading with a lower cover of shrubs present.

#### **Unvegetated Channel**

Several ephemeral drainages area mapped as unvegetated channels. These do not conform to classifications in Oberbauer et al. 2008.

### 5.1.4.2 Non-Natural Land Covers

#### **Disturbed Habitat**

The *Coachella Valley Multiple Species Habit Conservation Plan* does not describe disturbed habitat; however, this land cover type refers to areas that have been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present, and the land lacks habitat value for sensitive wildlife, including potential raptor foraging.

Disturbed land on site consists of dirt roads within the Project Site and vacant areas (i.e., storage yards southeast of Dillon Road and Diablo Road intersection and north of Dillon Road) that have been previously graded and are primarily devoid of vegetation.

### Urban/Developed

Urban/developed areas include areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation (Oberbauer et al. 2008).

Within the Project Site, developed areas include paved roads (e.g., Dillon Road and Melissa Lane) and the SCE Devers Substation within the northern portion of the site.

## 5.2 Aquatic Resources

The following summarizes the aquatic resources observed during the field assessment conducted on May 11, 2021. Details regarding each resource identified and evaluated during the Delineation are provided below. In addition, each resource's preliminary regulatory status is provided. Each resource's preliminary regulatory status is also provided. All data collected in the field is provided in Appendices A through C. Figure 5, Aquatic Resources Delineation, provides a complete geographic overview of the features discussed. Representative photos of the resources and data points are provided in Appendix D, Representative Site Photographs.

### 5.2.1 Potential Waters of the State

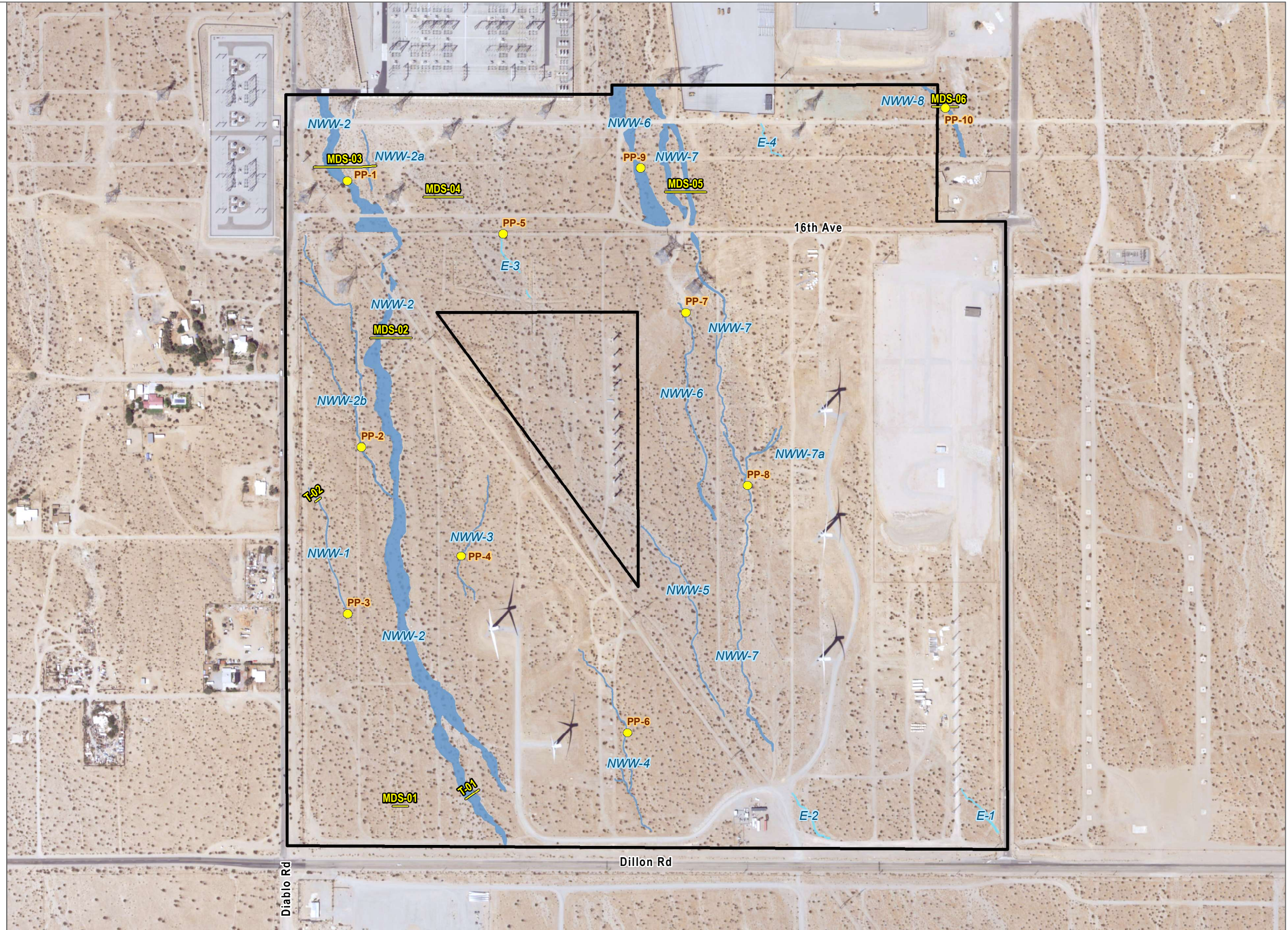
#### 5.2.1.1 Ephemeral Drainages

Eight ephemeral drainage features were investigated within the review area. These drainages collect local runoff from the surrounding hills that eventually dissipate as sheetflow. Although these features are ephemeral in nature and do not contain any downstream connectivity to other waters of the state, they may be subject to the jurisdiction of CDFW and/or RWQCB based on the presence of bed and bank.

#### 5.2.1.2 Erosional Features

Four features were investigated that comprised discontinuous, erosional features (E-1 through E-4). E-1 and E-2 are located in the southeastern portion of the review area, and E-3 and E-4 are located within the northern portion of the review area. These erosional features clearly were formed from runoff from the adjacent road and were not formed from natural water flows. These erosional features would not constitute jurisdictional resources regulated by the CDFW and/or RWQCB.

- Review Area
- Photo Point
- Jurisdictional Delineation**
- CDFW / RWQCB Jurisdictional Resources - Non-Riparian Streambed
- Erosional Feature



Coordinate System: California State Plane (Zone VI)  
 Projection: Lambert Conformal Conic  
 Datum: North American 1983  
 1 inch = 400 feet

Created on June 28<sup>th</sup>, 2021

Made in accordance with the  
*Updated Map and Drawing Standards for the  
 South Pacific Division Regulatory Program,*  
 as amended on February 10, 2016, by:  
 U.S. Army Corps of Engineers  
 South Pacific Division  
 Los Angeles District, Regulatory Division  
 915 Wilshire Boulevard  
 Los Angeles, California 90017

INTENTIONALLY LEFT BLANK

## 5.2.2 Summary of State Aquatic Resources

Table 3 provides a summary of the aquatic resources within the review area, including their classification, locations, areas, and lengths.

**Table 3. Summary of State Aquatic Resources in the Review Area**

Aquatic Resources			Location		Total Area (acres)	Total Length (linear feet)
ID <sup>1</sup>	Name	Cowardin Classification <sup>2</sup>	Latitude	Longitude		
<i>Potential Waters of the State</i>						
NWW-1	Unnamed	R6	33.92828923	-116.57968	0.01	552
NWW-2	Unnamed	R6	33.92949064	-116.5787817	3.14	3,681
NWW-2a	Unnamed	R6	33.93259576	-116.5791809	0.02	287
NWW-2b	Unnamed	R6	33.92989039	-116.5793335	0.08	1,865
NWW-3	Unnamed	R6	33.92836597	-116.5777609	0.01	643
NWW-4	Unnamed	R6	33.92607615	-116.5757373	0.03	1,047
NWW-5	Unnamed	R6	33.92739142	-116.5747444	0.02	913
NWW-6	Unnamed	R6	33.92950824	-116.5747429	0.66	1,501
NWW-7	Unnamed	R6	33.92936492	-116.5742776	0.50	3,333
NWW-7a	Unnamed	R6	33.92940933	-116.5738653	0.09	392
NWW-8	Unnamed	R6	33.9334219	-116.5716511	0.08	90
E-1	Unnamed	R6	33.92532654	-116.5708734	N/A	N/A
E-2	Unnamed	R6	33.925284	-116.5732105	N/A	N/A
E-3	Unnamed	R6	33.93158488	-116.5773105	N/A	N/A
E-4	Unnamed	R6	33.93285592	-116.5738113	N/A	N/A
<b>Total</b>					<b>4.65</b>	<b>14,302</b>

**Notes:**

<sup>1</sup> ID Type: NWW = non-wetland waters (ephemeral drainage); E = erosional feature.

<sup>2</sup> Cowardin Classification Code (USFWS 1992): R6 = riverine, ephemeral.

Results of eight representative stream transects are summarized in Table 4 below.

**Table 4. Channel Transect Data Summary**

Transect	OHWB Field Indicators	Location (Latitude, Longitude)	Feature
T-01	Natural line impressed on bank; shelving; changes in soil texture; wracking; break in slope; sediment sorting; bed and bank	33.92555113, -116.5777794	NWW-2
T-02	Natural line impressed on bank; break in slope; bed and bank	33.9288447, -116.5798426	NWW-1
MDS-01	None	33.92542813, -116.57873	N/A (no feature)
MDS-02	Flow lineation; sediment ramps; sediment sorting; wracking	33.9306594, -116.5788681	NWW-2
MDS-03	Bar forms; sediment sheets; sediment sorting	33.93256334, -116.5794897	NWW-2 and NWW-2a

**Table 4. Channel Transect Data Summary**

<b>Transect</b>	<b>OHWL Field Indicators</b>	<b>Location (Latitude, Longitude)</b>	<b>Feature</b>
MDS-04	None	33.93223656, -116.578175	N/A (no feature)
MDS-05	Flow lineation; sediment ramps; sediment sorting; wracking	33.93230141, -116.574938	NWW-7
MDS-06	Flow lineation; sediment sorting; shelving	33.93325953, -116.5714506	NWW-8

# 6 Conclusions

---

On May 11, 2021, Dudek conducted a Delineation within the 352.6 acres of review area to field verify site conditions and resources present. This Delineation was completed in accordance with the Manual, Regional Supplement, the OHWM Guide, the MESA guidelines, and other accepted practices for determining waters of the state. This Delineation yielded a total of 4.65 acres (14,302 linear feet) of ephemeral drainages. All of these features are likely subject to CDFW and/or RWQCB jurisdiction based on evidence of bed and bank or ephemeral flow. No additional functional assessment or other evaluations were completed in conjunction with this Delineation. The results of this Delineation are preliminary until verified by the CDFW and RWQCB.

INTENTIONALLY LEFT BLANK

# 7 References Cited

---

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual: Vascular Plants of California*. 2nd ed. Berkeley, California: University of California Press.
- CEC (California Energy Commission). 2014. *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants*. Prepared by California State University, Fresno, and the California Department of Fish and Wildlife. February 2014.
- CNPS. 2021. *Inventory of Rare and Endangered Plants of California* (online ed., version 9-01 0.0). Sacramento, California: CNPS. Accessed June 2021. <http://www.rareplants.cnps.org>.
- CVAG (Coachella Valley Association of Governments). 2016. *Coachella Valley Multiple Species Habit Conservation Plan*. As amended August 2016. Accessed October 2018. [http://www.cvmshcp.org/Plan\\_Documents\\_old.htm#plan](http://www.cvmshcp.org/Plan_Documents_old.htm#plan).
- Google. 2021. Google Earth Pro (version 7.3.2.5776). Palm Springs, California: Google Earth Mapping Service. Accessed June 2021. <https://www.google.com/earth/index.html>.
- Historic Aerials. 2021. Aerial Images. [www.historicaerials.com](http://www.historicaerials.com).
- Jepson Flora Project. 2021. *Jepson eFlora*. Berkeley, California: University of California. Accessed June 2021. <http://ucjeps.berkeley.edu/IJM.html>.
- Mazor, R.D., B. Topping, T.L. Nadeau, K.M. Fritz, J. Kelso, R. Harrington, W. Beck, K. McCune, H. Lowman, A. Allen, R. Leidy, J.T. Robb, and G.C.L. David. 2021. User Manual for a Beta Streamflow Duration Assessment Method for the Arid West of the United States (version 1.0). Document No. EPA-800-5-21001
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. March 2008. Accessed October 2018. [http://www.sdcanyonlands.org/pdfs/veg\\_comm\\_sdcounty\\_2008\\_doc.pdf](http://www.sdcanyonlands.org/pdfs/veg_comm_sdcounty_2008_doc.pdf).
- RWQCB (California Regional Water Quality Control Board). 2019. *Water Quality Control Plan for the Colorado River Basin Region*. January 8, 2019. Accessed July 7, 2021. [https://www.waterboards.ca.gov/coloradoriver/water\\_issues/programs/basin\\_planning/docs/2020/rb7bp\\_e2019.pdf](https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/2020/rb7bp_e2019.pdf).
- Sawyer, J.O., T. Keeler-Wolf, and J. Evans. 2009. *A Manual of California Vegetation*. Second edition. Sacramento, California: California Native Plant Society.
- USACE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: United States Army Engineer Waterways Experiment Station. January 1987.
- USACE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: United States Army Engineer Research and Development Center.
- USACE. 2008b. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*. Accessed March 2020. <http://www.dtic.mil/dtic/tr/fulltext/u2/a486603.pdf>.

USDA (U.S. Department of Agriculture). 2021a. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed June 2021. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

USDA. 2021b. "California." State PLANTS Checklist. Accessed June 2021. [http://plants.usda.gov/dl\\_state.html](http://plants.usda.gov/dl_state.html).

USFWS (U.S. Fish and Wildlife Service). 1992.

USFWS. 2021. "The National Wetlands Inventory." Accessed June 2021. [fws.gov/wetlands/NWI/index.html](https://fws.gov/wetlands/NWI/index.html).

USGS (U.S. Geological Survey). 2021a. "Historical Topographic Map Explorer." Accessed June 2021. <https://livingatlas.arcgis.com/topoexplorer/index.html>.

USGS. 2021b. "National Hydrography Dataset: GIS Online viewer." Accessed June 2021. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>.

Vyverberg, K. 2010. *A Review of Stream Processes and Forms in Dryland Watersheds*. California Department of Fish and Wildlife. December 2010.

# Appendix A

---

## OHW M Datasheets



# Appendix B

---

## MESA Datasheets



# Appendix C

---

Beta Arid West SDAM Form



# Appendix D

---

## Representative Site Photographs



# Appendix E

---

APT Table

