Aquatic Resources Delineation

Vega SES 6 Solar Project

Imperial County, California

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December 2022

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LIST OF ACRONYMS AND ABBREVIATIONS

APT	Antecedent Precipitation Tool
CARI	California Aquatic Resource Inventory
CC	Constructed channel
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
Commission	California State Lands Commission
CWA	Clean Water Act
Gen-tie	Generator intertie
GIS	Geographic Information System
GPS	Global Positioning System
IC	Irrigation ditches
IID	Imperial Irrigation District
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWPR	Navigable Waters Protection Rule
OHWM	Ordinary high-water mark
Project	Stagecoach Solar Project
PV	Photovoltaic
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SFEI	San Francisco Estuary Institute
Study Area	Solar Field, Gen-tie lines, and Substations
sUAS	small Unmanned Aircraft System
SWQB	Surface Water Quality Bureau
SWRCB	State Water Resources Control Board
TOB	Top-of-bank
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

WDR	Waste discharge regulation

1.0 INTRODUCTION

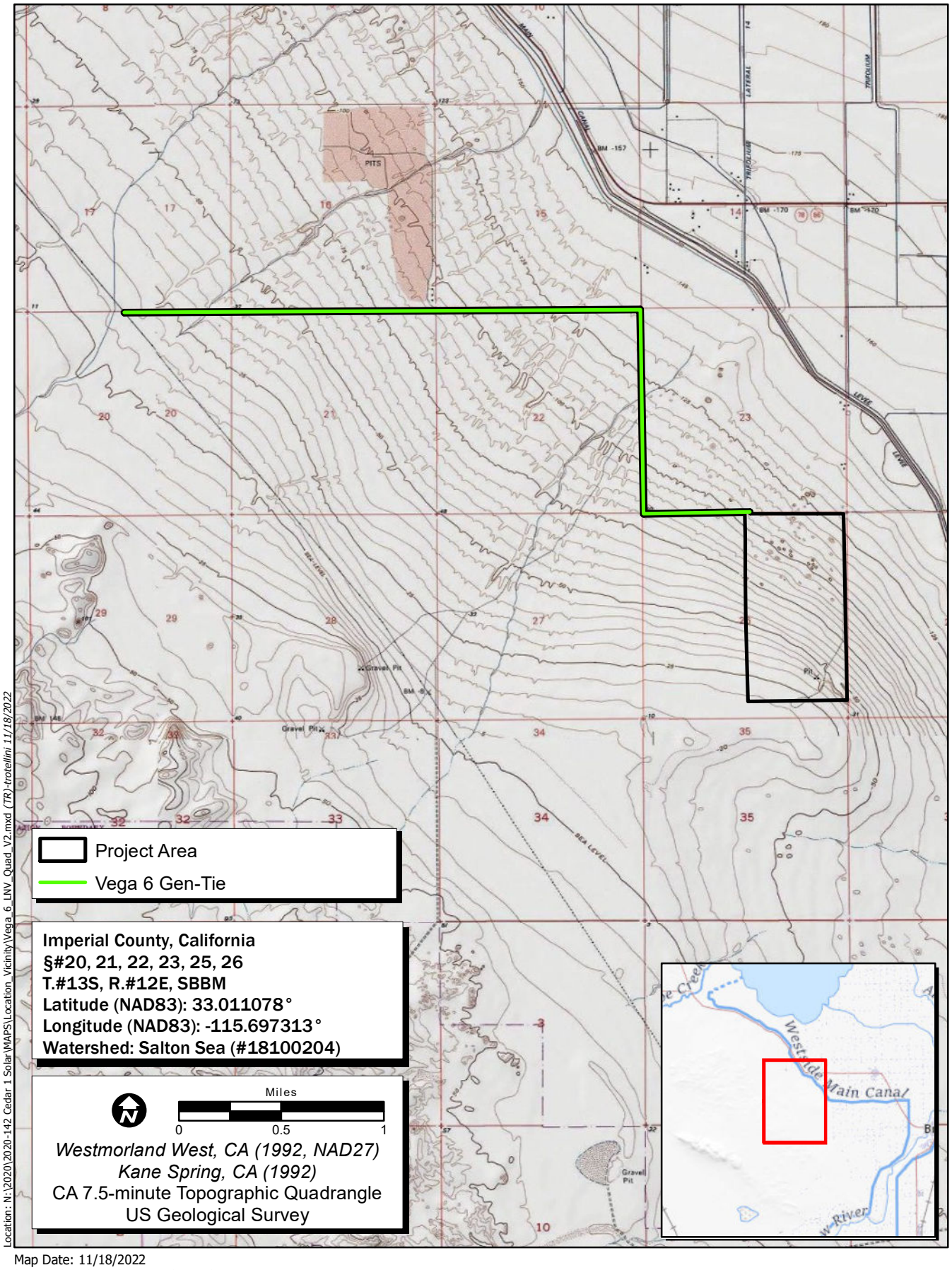
This aquatic resources delineation report was prepared to describe the aquatic resources at the Vega SES 6 Solar Project (Project). The Project is an 80 megawatt direct current and 320 megawatt-hour battery storage utility-scale solar undertaking located on approximately 283 acres of vacant land on a single parcel (Assessor Parcel Number 034-160-002) in Imperial County, California. The Proposed Project would include construction of a solar energy generation facility, battery storage, groundwater supply well, and an approximately 4-mile generator intertie (gen-tie) alignment. For the purposes of this report, the term *Project Area* refers to the areas likely to be directly affected by the Project implementation, including the gen-tie line, and corresponds to the client-supplied Project boundary. The term *Study Area* refers to the Project Area plus a 50-foot buffer (aquatic resource delineation) or a 500-foot buffer (background review).

The Project Area is located in Imperial County, approximately five miles southwest of the community of Westmorland, California, and 1.5 miles south of State Route 78. It is located directly south of Garvey Road and 0.50 mile west of the Westside Main Canal (Figure 1. *Project Location and Vicinity*). The Project Area is located within Sections 20, 21, 22, 23, 25, and 26 of Township 13 South, Range 12 East as depicted on the Westmorland West (Calipatria SW), California, Kane Spring, California, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles (USGS 1992).

This report describes aquatic resources identified within the Project Area that may be regulated by the Porter-Cologne Water Quality Act, California Fish and Game Code Sections 1600 and 1602, and the U.S. Army Corps of Engineers (USACE) pursuant to Sections 401 and 404 of the federal Clean Water Act (CWA). The information presented in this report provides data per the USACE Los Angeles District's *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* requirements (USACE 2016). The aquatic resource boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the Project Area and are subject to modification following a verification process by each regulating agency.

Table 1. Geographic Information Summary

Project Name	Sections	Approximate Center of Study Area
SES 6	26	33.009138, -115.697034
Gen-tie	20, 21, 22, 23, 25, 26	33.224760, -115.414804



Location: N:\2020\2020-142 Cedar 1 Solar\MAPS\Location_Vicinity\Vega_6_LNV_Quad_V2.mxd (TR)-trotellini 11/18/2022

Map Date: 11/18/2022

Figure 1. Project Location and Vicinity

2020-142 Vega SES 6

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2.0 REGULATORY SETTING

2.1 Clean Water Act

The USACE regulates discharge of dredged or fill material into waters of the U.S. under Section 404 of the CWA. "Discharges of fill material" is defined as the addition of fill material into waters of the U.S., including, but not limited to, the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 U.S. Code 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands, over 0.5 acre of impact, may require an individual permit. Projects that only minimally affect wetlands, less than 0.5 acre of impact, may meet the conditions of one of the existing Nationwide Permits. A RWQCB Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for USACE Section 404 permit actions.

Pursuant to the USEPA and USACE memorandum regarding CWA jurisdiction, issued following the U.S. Supreme Court's decision in the consolidated cases Rapanos v. United States and Carabell v. United States (herein referred to as Rapanos), the agencies will assert jurisdiction over the following waters: "Traditional Navigable Waters" (TNW), all wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are "relatively permanent" waters (RPW) (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally), and wetlands that directly abut such tributaries (USEPA and USACE 2007).

Waters requiring a significant nexus determination by the USACE and USEPA to establish jurisdiction include non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but do not directly abut a relatively permanent non-navigable tributary (USEPA and USACE 2007). The jurisdictional determination is a fact-based evaluation to establish whether a water has a significant nexus with a TNW. The significant nexus analysis will assess the flow characteristics and functions of the non-navigable tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs (USEPA and USACE 2007).

2.2 Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (hereafter referred to as Porter-Cologne Act) provides a framework to protect water quality in California. It was enacted in 1969 as Division 7 of the Water Code and is the primary water quality law in California. The Porter-Cologne Act addresses two primary functions: water quality control planning and waste discharge regulation (WDR). The state legislature, in adopting the Porter-Cologne Act, directed that California's waters "shall be regulated to attain the highest water quality which is reasonable" and charges the water boards with protecting all waters of California,

defined as "any surface water or groundwater, including saline waters, within the boundaries of the State." This encompasses all waters of the state, including those not under federal jurisdiction.

The Porter-Cologne Act regulates discharges that could affect the quality of water of surface or groundwater, wherever those discharges may occur. Under the Porter-Cologne Act, the water board regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The Porter Cologne Act defines "waters of the state" very broadly, with no physical descriptors, and no interstate commerce limitation.

The Porter-Cologne Act further requires that anyone who plans to discharge waste where it might affect waters of the state must first notify the water boards. The water boards identify the sources of pollutants that threaten water quality under the Porter-Cologne Act and issue WDRs to regulate waste discharges that could affect water quality. The State Water Resources Control Board (SWRCB) adopted the *State Wetland Definition and Procedures for Discharge of Dredged or Fill Material into Waters of the U.S.* in April 2019. The water board regulates all such activities, as well as dredging, filling, or discharging materials into waters of the state, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The water board may require issuance of a WDR for these activities. If a project impacts waters of the state that do not fall under federal jurisdiction, the applicant need not obtain a Section 404 permit or a Section 401 certification, but instead must receive approval from the water boards through the adoption of WDRs.

2.3 California Fish and Game Code Section 1602

Pursuant to Section 1602 of the California Fish and Game Code, a Streambed Alteration Agreement (SAA) application must be submitted for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake" (California Department of Fish and Wildlife [CDFW] 2021). In Title 14 of the California Code of Regulations, Section 1.72, the 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."

The CDFW's jurisdiction includes drainages with a definable bed, bank, or channel with the jurisdictional limit being the top-of-bank. It also includes areas that support intermittent, perennial, or subsurface flows; supports fish or other aquatic life; or supports riparian or hydrophytic vegetation. It also includes areas that have a hydrologic source.

The CDFW will determine if the proposed actions will result in diversion, obstruction, or change of the natural flow, bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The CDFW will submit an SAA that includes measures to protect affected fish and wildlife resources. The SAA is the final proposal agreed upon by the CDFW and the applicant.

A summary of federal, state, and local regulations and corresponding regulating agencies are summarized in Table 2.

Table 2. Summary of Federal, State, and Local Regulations

Federal Regulations		
Regulation	**Resource**	**Regulating Agency**
Federal Clean Water Act	Aquatic features meeting the definition of Waters of the US	USACE
State Regulations		
Regulation	**Resource**	**Regulating Agency**
California Fish and Game Code Section 1602	River, stream, or lake and associated riparian habitat	CDFW
Porter-Cologne Water Quality Act	Aquatic features meeting the definition of Waters of the State	SWRCB/RWQCB

3.0 METHODS

3.1 Pre-Survey Investigations

Due to the size of the area and limited road access, an initial survey using a small Unmanned Aircraft System (sUAS) was conducted to assess current site conditions and gather high-resolution imagery. Photos collected during the sUAS survey were then combined into a single orthomosaic image that was incorporated into mapping files in a Geographic Information System (GIS). The information gathered from the sUAS or drone survey were then used to assist ECORP delineation specialists with accurate mapping of potential aquatic resources onsite.

Prior to conducting the field delineations, the following resources were reviewed to identify potentially jurisdictional areas: sUAS imagery, aerial imagery (U.S. Department of Agriculture 2018; Google Earth 2020; ESRI 2021), the National Wetlands Inventory (NWI; USFWS 2021), the online Web Soil Survey (Natural Resources Conservation Service [NRCS] 2021a), and hydric soils list for the area (NRCS 2021c). The aerial imagery was used to digitize potential aquatic features using ArcGIS™, a mapping and spatial analytics software. The imagery was analyzed during a preliminary desktop delineation effort to identify differences in vegetative cover, the presence of breaks in a slope, and other areas of potential water disturbance. The aerial imagery, combined with these other resources, was used to create a map with features that required further study during the field investigation. A data dictionary was developed using the criteria in the datasheet for the identification of the ordinary high-water mark (OHWM) in arid west regions and identification of state-regulated habitat using the ArcGIS™ suite software.

3.2 Field Survey Investigation

This aquatic resources delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (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 (USACE 2008b), the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010), and the State of New Mexico's *Hydrology Protocol for the Determination of Ephemeral, Intermittent, and Perennial Waters* (Surface Water Quality Bureau [SWQB] 2020). Field data were recorded on Wetland Determination Data Forms- Arid West Region and Arid West OHWM Datasheets. Google Earth, ESRI©, and sUAS aerial imageries were used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the Web Soil Survey (NRCS 2021a) were used to aid in identifying hydric soils in the field. The Jepson Manual, 2nd Edition (Baldwin et al. 2012) and the USACE National Wetland Plant List (USACE 2018) were used for plant nomenclature and identification.

Digitized feature boundaries identified during the pre-survey investigation were then verified in the field. Feature boundary modifications, if necessary, were made in the field using a post-processing capable global positioning system unit with sub-meter accuracy (EOS Arrow 100 GNSS). Where aquatic features were present, the extent of potential waters of the U.S. and CDFW-regulated streambed and top-of-bank limits were determined using the OHWM in accordance with USACE requirements and guidelines, as well as SWRCB and CDFW delineation guidance. Streambed widths were based on evidence of OHWM as observed during the field survey, and streambed widths and other lateral limits of jurisdiction were calculated and recorded. Bank-to-bank width measures were also recorded and used as a measure of CDFW jurisdictional boundary where features lacked riparian vegetation. The extent of associated riparian habitat was based on the canopy of the riparian community within or directly adjacent to the streambed that is likely deriving benefit from the hydrology of the streambed. In addition, stream conditions were assessed based on the SWQB protocol to classify features as ephemeral, intermittent, or perennial waters. A combination of hydrological, geomorphic, and biological indicators was used to determine the hydrologic nature of each drainage. Each channel was also evaluated for the presence or absence of OHWM field indicators such as bed and bank, a natural line impressed in the bank, sediment deposits, changes in the character of soil, destruction of terrestrial vegetation, litter/debris, leaf litter disturbance, water stains, soil shelving, and exposed roots indicating active hydrology within the channel.

The boundaries of suspected wetland aquatic resources were delineated through standard field methods (e.g., paired sample set analyses) and aerial photograph interpretation. Paired locations were sampled to evaluate whether the vegetation, hydrology, and soils data supported an aquatic resource determination. At each paired location, one point was located such that it was within the estimated aquatic resource area, and the other point was situated outside the limits of the estimated aquatic resource area. Additional non-paired locations were sampled to confirm boundaries. All aquatic features observed within the Study Area were recorded in the field using a post-processing capable Global Positioning System (GPS) unit with submeter accuracy (e.g., Juniper Geode™). Feature characteristics and measurements were recorded directly into the data dictionary in the GPS unit. Characteristics of mapped features were also documented in photographs.

ECORP delineation specialists conducted three field surveys in 2020 and 2021; the first being a general field reconnaissance of the Study Area to identify areas supporting potential state and federal jurisdictional waters. The initial survey was conducted in conjunction with the biological reconnaissance

survey on September 29-30, 2020, by Christina Clark, Caroline Garcia, Gregory Hampton, Christina Torres. The subsequent field surveys and formal delineations were conducted to verify preliminary results and to collect additional data and photographs. These surveys were conducted on August 3-4, and 25, 2021, by Christina Clark, Caroline Garcia, Gregory Hampton, and Christina Torres. The entire Study Area was visually surveyed to determine the location and extent of aquatic resources, and special attention was given to the features identified during the initial survey described above and preliminary desktop research.

3.3 Post-Processing

The data collected in the field utilized ArcGIS™ Collector on a device (smartphone or tablet) connected to a submeter external receiver. The submeter receiver applies differential correction instantaneously in the field using the Satellite Based Augmentation System. The data were then viewed and analyzed for verification, edited, and compiled in GIS format at the time of download. ArcGIS™ software was used to develop the geodatabase and the shapefiles depicted on the figures included in this report.

4.0 RESULTS

4.1 Existing Site Conditions

The Study Area is located within relatively flat terrain at an elevation range of approximately 39 meters (129 feet) to 6 meters (21 feet) below sea level in Imperial County, California. The average winter low temperature in the vicinity of the Study Area is 41.7˚ Fahrenheit and the average summer high temperature is 104.7˚ Fahrenheit. Average annual precipitation for Imperial, California, is approximately 2.90 inches, which falls as rain (National Oceanic and Atmospheric Administration [NOAA] 2021a).

During the 2019-2020 rain year, prior to the September 2020 field survey (October 1, 2019, to April 30, 2020), approximately 4.74 inches of precipitation were recorded at the Imperial, California, weather station, located approximately 13 miles southeast of the Study Area (NOAA 2021b). The most recent significant precipitation event prior to the surveys occurred April 8-11, 2020, with a total of 0.80 inch of rainfall accumulating over four days (NOAA 2021b). During the 2020-2021 rain year, prior to the August 2021 field surveys (October 1, 2020, to April 30, 2021), approximately 1.27 inches of precipitation were recorded at the Imperial, California, weather station. The most recent significant precipitation event prior to the surveys occurred on April 3, 2021, with a total of 0.02 inch of rainfall accumulating over one day (NOAA 2021b).

A typical year analysis of the Study Area via a single point method was conducted using the USACE Antecedent Precipitation Tool (APT; USACE 2021). The APT is an automation tool that utilizes standardized methodology to calculate precipitation normalcy at a given location using publicly available data sources. The APT analysis determines whether precipitation, drought, and other climatic conditions from the previous three months are “wet,” “normal,” or “dry” for the geographic area based on a rolling 30-year period (USEPA 2021). The APT was run for the dates the wetland delineation data were collected between September 29-30, 2020. The APT demonstrated the site conditions on these dates represent a time of year referenced as the dry season, that the general region and site were in a moderate drought, and that site conditions were normal to wetter than normal in climatic conditions. The APT was also run for the dates the wetland delineation data were collected between August 3-4 and 25, 2021. The APT demonstrated the

site conditions on these dates represent a time of year referenced as the dry season, that the general region and site were in an extreme drought, and that site conditions were normal to wetter than normal in climatic conditions (USACE 2021).

4.1.1 Vegetation

Vegetation within the Study Area is characteristic of agricultural land and creosote bush scrub habitat. There are three types of vegetation communities within the Project Area: creosote bush scrub, disturbed creosote bush scrub, and disturbed tamarisk thickets. Four land use types also occur within the Project Area: active agriculture, fallow agricultural land, disturbed land, and urban/developed. One additional vegetation community, disturbed fourwing saltbush scrub, was observed within the buffer, but not within the Project Area.

Vegetation Communities within the Project Area

Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance)

Creosote bush scrub is the most characteristic vegetation of the California desert and is found on alluvial fans, bajadas, upland slopes, and washes. Creosote bush scrub is dominated by a nearly monotypic stand of creosote bush with an open canopy and an herbaceous layer of seasonal annuals and perennials. This community is dominant in the parcel and western portion of the gen-tie alignment. This community has sparser vegetation overall. Other species that were observed within this community included mesquite (*Prosopis* sp.), burrobush (*Ambrosia dumosa*), narrow leaved cryptantha (*Cryptantha angustifolia*), alkali goldenbush (*Isocoma acradenia*), velvet turtleback (*Psathyrotes ramosissima*), cryptantha sp. (*Cryptantha* sp.), brittlebush (*Encelia farinosa*). and desert plantain (*Plantago ovata*). Earthen mounds dominated by mesquite were also present within this vegetation community in the northeastern portion of the parcel.

Disturbed Creosote Bush Scrub (Disturbed *Larrea tridentata* Shrubland Alliance)

Disturbed creosote bush scrub is creosote bush scrub that has been previously altered. On the Project, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few creosote bush shrubs. Other plant species observed included scattered individuals of tamarisk (*Tamarix* sp.) within ephemeral drainages.

Disturbed Tamarisk Thickets (Disturbed *Tamarix* spp. Shrubland Semi-Natural Alliance)

Tamarisk thickets are characterized by a weedy monoculture of tamarisk. This habitat is typically in ditches, washes, rivers, arroyo margins, lake margins, and other watercourses. In the Project Area, tamarisk and arrow weed were often codominant in this vegetation community. Other plant species observed included Disturbed tamarisk thickets are tamarisk thickets that have been previously altered. In the Project Area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few tamarisk shrubs. Other plant species observed included scattered individuals of alkali goldenbush, quailbush (*Atriplex lentiformis*), salt grass (*Distichlis spicata*), and bush seepweed (*Sueda nigra*) with the occasional Mexican palo verde (*Parkinsonia aculeata*) and screw bean mesquite (*Prosopis pubescens*).

Other Land Cover Types

Fallow Agriculture

Fallow agricultural lands include remnant signs of row crops with open space between rows. Agricultural lands often occur in upland areas with high soil quality, or floodplains, and are almost always artificially irrigated. This land cover was observed periodically along the gen-tie alignment. These areas were adjacent to active agriculture and consisted primarily of tilled land with no vegetation. One area of fallow agriculture appeared to be vegetated with remnant sorghum (*Sorghum* sp.).

Disturbed

Disturbed land includes areas where the native vegetation community has been heavily influenced by human actions, such as grading, trash dumping, equipment staging, and off-highway vehicle use, but lack development. Disturbed land is not a vegetation classification, but rather a land cover type and is not restricted by elevation. Within the Project Area, the disturbed lands consisted primarily of bare ground with quailbush, arrow weed, saltgrass, hairy crab grass (*Digitaria sanguinalis*), and Mediterranean grass (*Schismus barbatus),* mustard sp. (*Brassica* sp.), and Saharan mustard (*Brassica tournefortii*) at low cover. Some area exhibited regrowth of native species, such as creosote bush.

Urban/Developed

Urban/developed areas do not constitute a vegetation classification, but rather a land cover type. Areas mapped as developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. Along the gen-tie alignment, this land cover consisted of private residences and farming operations (not including the agricultural fields).

Vegetation Communities and Land Cover Types within Survey Area

One additional vegetation community was observed within the buffer, but not within the Project Area. No impacts to this vegetation community is expected as a result of Project-related activities.

Disturbed Fourwing Saltbush Scrub (Disturbed *Atriplex canescens* Shrubland Alliance)

Fourwing saltbush scrub is characterized by fourwing saltbush as a dominant within the shrub layer. The shrub canopy is open or intermittent, while the herbaceous layer can be variable, with seasonal herbs and nonnative grasses. It is found within playas, shores, lake deposits, dissected alluvial fans, or channel beds. Disturbed fourwing saltbush scrub is fourwing saltbush scrub that has been previously altered. In the Project Area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few fourwing saltbush shrubs. Other plant species observed included scattered individuals of alkali goldenbush.

4.1.2 Soils

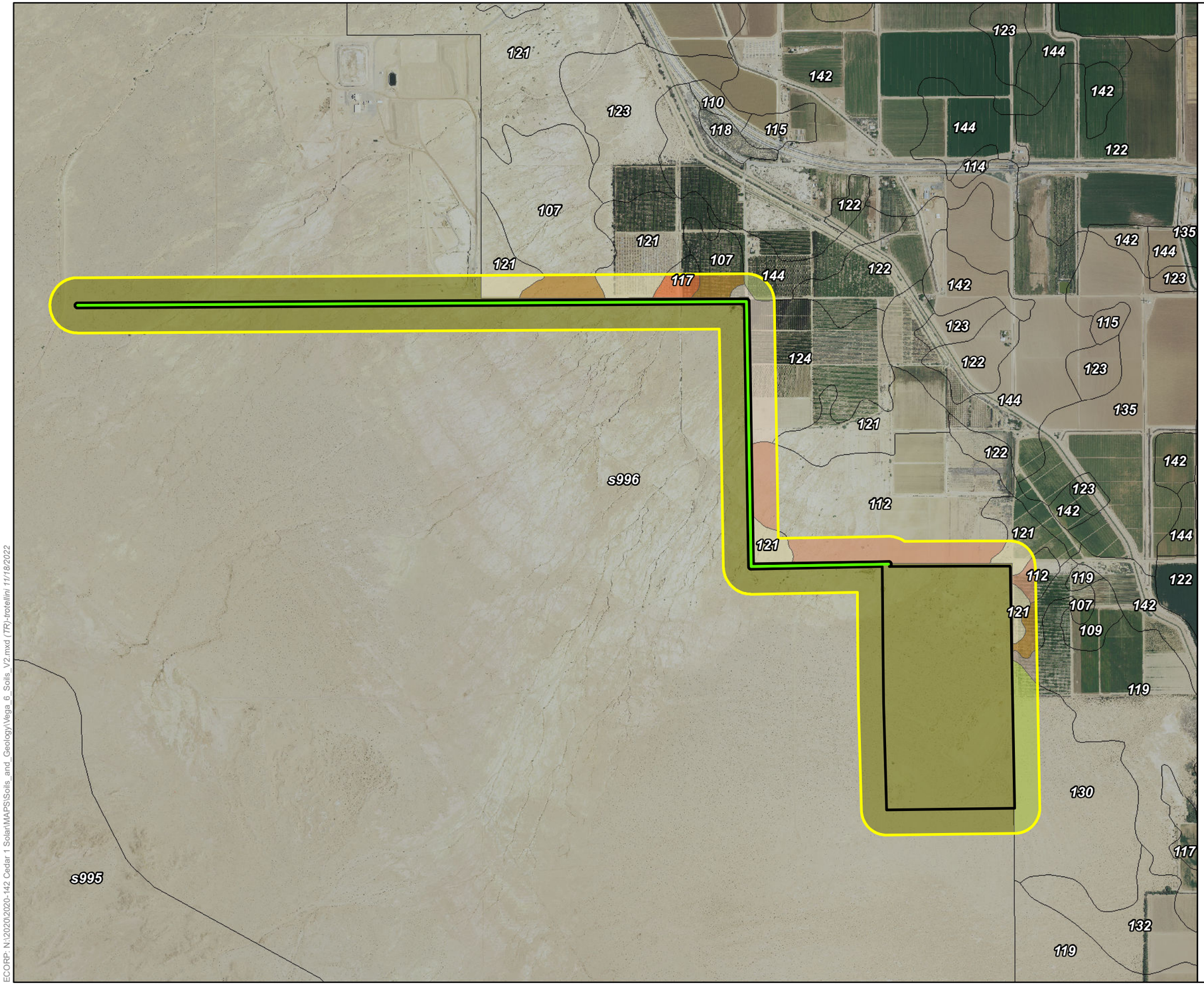
A soils analysis search was conducted using NRCS soil survey data (NRCS 2021a). The majority of the site falls within the Anza Borrego Area soil survey area in which there are no digital data available. Therefore, the Digital General Soil Map of the United States database (STATSGO2; NRCS 2021b) was searched for

this area. Fifteen soil units, or types, occur within the Study Area (Figure 2. *Natural Resources Conservation Service Soil Types*). These include:

107 - Glenbar complex

- 109 - Holtville silty clay112 - Imperial silty clay
- 117 - Indio loam
- 118 - Indio loam, wet
- 119 - Indio-Vint complex
- 121 - Meloland fine sand
- 122 - Meloland very fine sandy loam, wet
- 123 - Meloland and Holtville loams, wet
- 124 - Niland gravelly sand
- 130 - Rositas sand, 0 percent to 2 percent slopes
- 135 - Rositas fine sand, wet, 0 percent to 2 percent slopes
- 142 - Vint loamy very fine sand, wet
- 144 - Vint and Indio very fine sandy loams, wet
- s996 - Vint-Meloland-Indio

The Niland gravelly sand (124) map units contain minor hydric components (NRCS 2021c). Three water state classes (dry, moist, and wet) are used as soil moisture status entries for map unit components and designate a mean monthly soil water state at a specified depth. Soil map units with a *wet* designation are commonly used for irrigated agriculture purposes, and in some cases are indicative of areas that could support perched water in irrigated conditions. Summary characteristics based on official series descriptions for each of the soil series mapped within the alignment are provided below (NRCS 2021d).



ECORP: N:\2020\2020-142 Cedar 1 Solar\MAPS\Soils_and_Geology\Vega_6_Soils_V2.mxd (TR)-trotellini 11/18/2022

Map Date: 8/12/2021

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Scale in Feet
0 2,000

Figure 2. Natural Resources Conservation Service Soil Types

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Glenbar Series

The Glenbar series consists of very deep, well drained soils formed in stratified stream alluvium. Indio soils are on flood plains and alluvial fans and have slopes of 0 percent to 3 percent. The mean annual precipitation is approximately 7 inches and the mean annual air temperature is approximately 71˚ Fahrenheit. These soils have very slow permeability and slow to very slow runoff, except on low scarps.

Holtville Series

The Holtville series consists of very deep, well drained soils formed in mixed and stratified alluvium. Holtville soils are on flood plains and basins and have slopes of 0 percent to 3 percent. The mean annual precipitation is about four inches and the mean annual temperature is about 76° Fahrenheit. These soils have low runoff and slow permeability.

Imperial Series

The Imperial series consists of well or moderately well drained soils formed in calcareous alluvium from mixed sources. Indio soils are on flood plains and in old lake beds. The mean annual precipitation is approximately 4 inches and the mean annual air temperature is approximately 72˚ Fahrenheit. These soils have moderate permeability and slow runoff.

Indio Series

The Indio series consists of very deep, well or moderately well drained soils formed in alluvium derived from mixed rock sources. Indio soils are on alluvial fans, flood plains, and lacustrine basins. The mean annual precipitation is approximately 4 inches and the mean annual air temperature is approximately 72˚ Fahrenheit. These soils have moderate permeability and slow runoff.

Meloland Series

The Meloland series consists of naturally well-drained soils with slopes that are 0 percent to 1 percent. This series is a member of the sandy over clayey, mixed (calcareous), hyperthermic family of Typic Torrifluvents. These soils are in nearly level lacustrine basins and flood plains in the deserts and have slow permeability and low to medium surface runoff.

Niland Series

The Niland series consists of well and moderately well-drained soils with slopes that are typically less than 1 percent, but can range up to 5 percent. This series is a member of the sandy over clayey, mixed (calcareous), hyperthermic family of Typic Torrifluvents. These soils have very pale brown, stratified, gravelly sand and sand overlying pale brown, silty clay at a depth of 23 inches. These soils have slow runoff and permeability of the sandy portion is rapid and permeability of the clayey portion is slow.

Rositas Series

The Rositas series consists of very deep, somewhat excessively drained soils. These soils are formed in sandy eolian material and have less than 15 percent coarse and very coarse sand. The mean annual

precipitation is about 4 inches and the mean annual air temperature is about 72˚ Fahrenheit. Their slope ranges from 0 percent to 30 percent and have rapid permeability with negligible to low runoff.

Vint Series

The Vint series consists of very deep, somewhat excessively drained soils formed in stratified stream alluvium. These soils are on flood plains with a mean annual precipitation is about 7 inches and the mean annual air temperature is about 71˚ Fahrenheit. These soils have moderately rapid permeability and very slow runoff.

4.1.3 National Wetlands Inventory

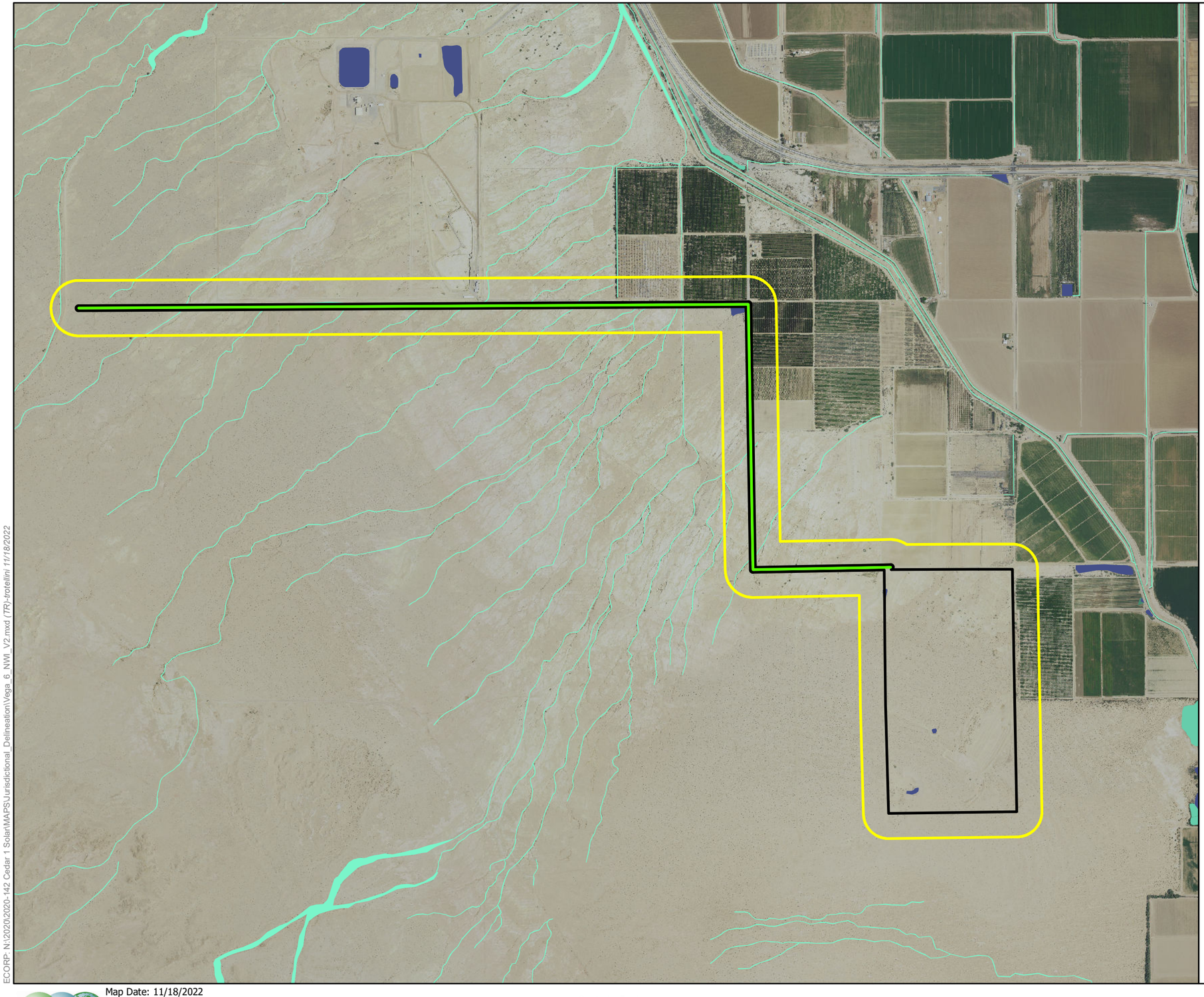
According to the NWI (USFWS 2021), there are several Riverine, Freshwater Forested/Shrub Wetland, and Freshwater Pond features mapped within the Study Area (Figure 3. *National Wetlands Inventory*). There were two freshwater pond features within NWI that did not contain hydrophytic vegetation, hydrological indicators, and/or hydric soil indicators and were therefore not included as aquatic resources.

4.1.4 Hydrology

The Study Area is within the Salton Sea watershed, Hydrologic Unit Code 18100204 (Figure 4. *Hydrology*). The undeveloped proposed solar field parcel and western portion of the gen-tie are a part of an alluvial fan system. Alluvial fans occur when stream flow feeds into a system of distributary channels. Infrequent yet intense rainfall causes sheetflood across the fan surface, in which sediment-laden water overflows from the confines of its channel and eventually results in gravel deposits that have the appearance of a network of braided channels (Blatt et. al 1980). A number of these braided channels are fluid in nature and are relic scars that do not actively transport water during rain events. These relic channels would, therefore, be considered inactive, whereas channels that actively transport water during rain events would be considered active. The alluvial fan drainage system produces ephemeral conditions within the Study Areas following large rain events and contains a network of inactive and active braided channels.

The Westside Main Canal divert waters from the All-American Canal located south of the Study Area along the U.S.-Mexico border, which brings water from the Colorado River at the Imperial Dam. It then supplies water throughout the Imperial Valley via a network of smaller irrigation channels, which ultimately drain to the Salton Sea. Section 404 of the CWA considers the Salton Sea a traditional navigable water.

There are several concrete lined lateral canals, unlined irrigation channels, and stormwater drains that either bisect or run parallel to the Study Area throughout most of the gen-tie alignment. These channels are primarily used for agriculture, with some being managed by the Imperial Irrigation District (IID) and others being privately owned by farmland operations.



Map Features

- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Sources: NAIP(2020), NWI (2021)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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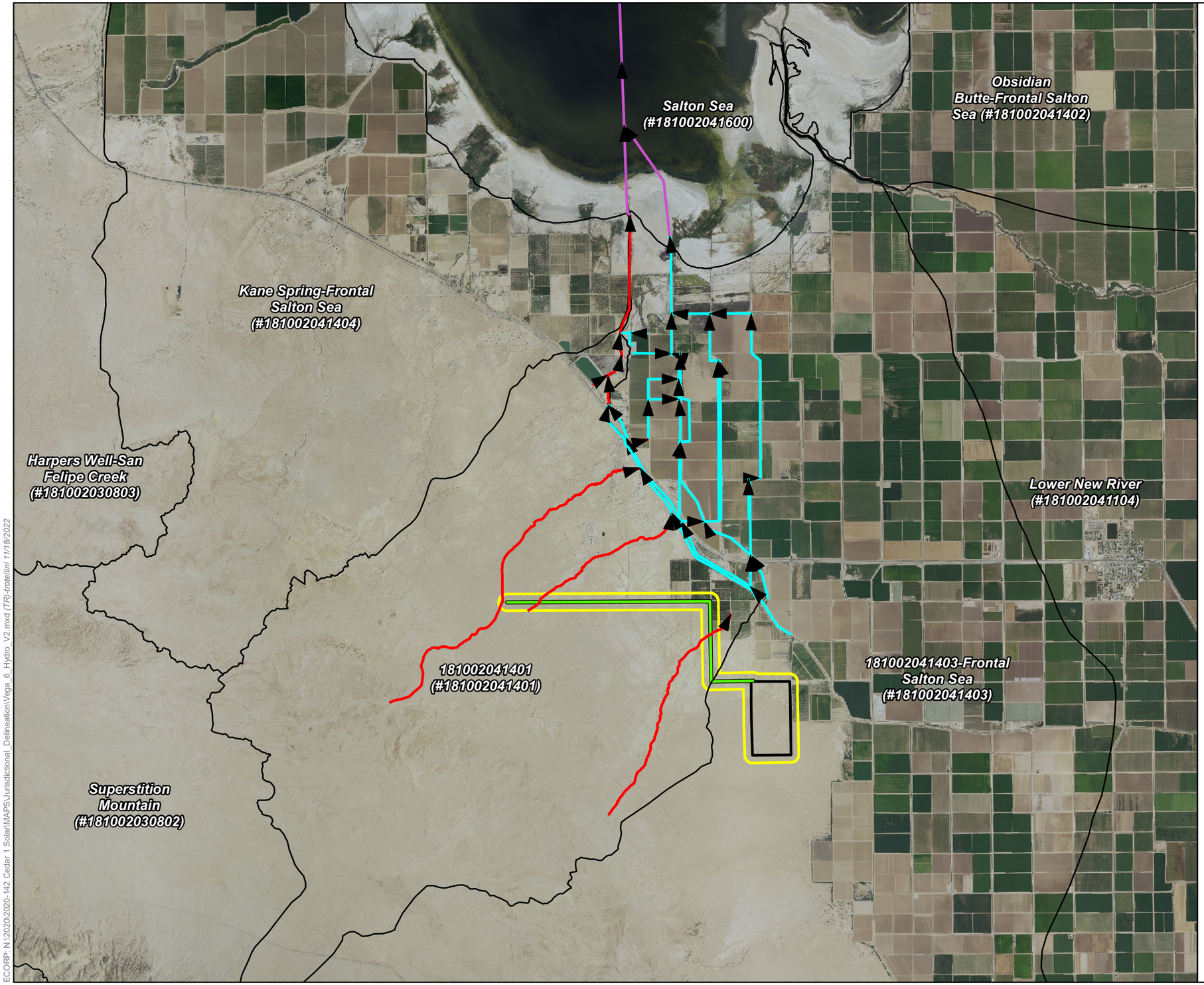
Scale in Feet
0 2,000

Figure 3. National Wetlands Inventory

2020-145 Vega SES 6



Map Features

- Project Area
- Vega 6 Gen-Tie
- 500' Buffer
- Sub Watersheds (HUC12)

NHD Flowlines

- Artificial Path
- Canal/Ditch
- Stream/River

Sources: NAIP(2020), NWI (2021)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

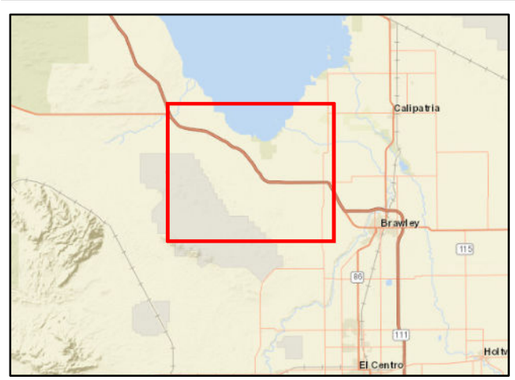


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Figure 4. Hydrology

2020-145 Vega SES 6

4.2 Aquatic Resources

Aquatic resources have been mapped within the Project Area; each resource is summarized by feature in Table 3 and depicted on Figure 5. The regulated limits that are presented in Table 3 serve as an estimate and are subject to agency verification. Features identified as an aquatic resource had physical evidence of flow, including at least two OHWM field indicators: defined bed and bank, scour, presence of a clear and natural line impressed on the bank, presence of leaf litter and/or debris, sediment sorting, shelving, destruction of terrestrial vegetation, and/or vegetation matted down, bent, or missing indicating active hydrology within the channel.

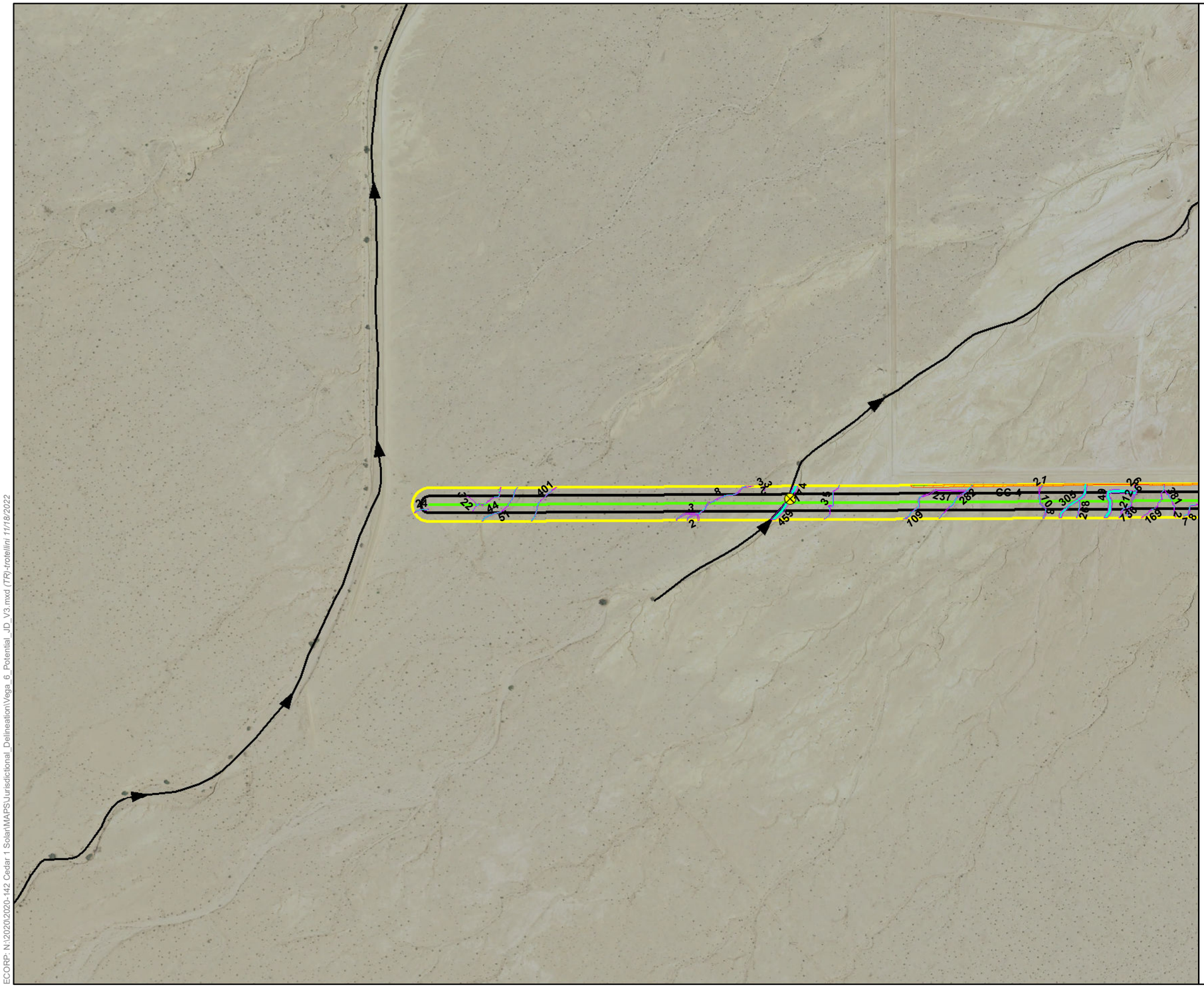
All riparian habitat was mapped, including riparian habitat not associated with aquatic features. OHWM and Wetland Determination Data Forms are included as Attachment A, representative site photographs are included as Attachment B, the USACE OMBIL Regulatory Module (ORM) aquatic resources table is included as Attachment C, digital data are provided as Attachment D, and driving directions to the Study Area are provided as Attachment E.

4.2.1 Aquatic Resources (Non-Wetland Waters)

Ephemeral Drainage

Ephemeral drainages are linear features that exhibit a bed and bank and an OHWM. These features typically convey runoff for short periods of time, during and immediately following rain events, and are not influenced by groundwater sources at any time during the year. As previously described, the Project Area and adjacent upslope areas are within an alluvial fan drainage system that produces ephemeral conditions with surface waters flowing in direct response to large rain events for short durations. A number of these ephemeral drainages were determined to be inactive, as they do not actively transport water during rain events and are, therefore, assumed to be relic features on the landscape. Drainages determined to be active transport surface flow water from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

At the time of the field assessment, all ephemeral features contained no surface flow. The OHWM was delineated in the field primarily by the changes in vegetation, sediment changes, and the break in bank slope. Other features observed included mud cracks and surface relief caused by flowing water. Channel surface features within ephemeral drainages indicated weak bed and bank along with a narrow-scoured area that varied in width. Sampling points were not taken within the ephemeral features, as the presence of a wetland was not expected. If drainages had the potential to be intermittent, i.e., follow historic NWI blue line features, had riparian vegetation associated with them, and/or had more than three OHWM indicators, flow duration was determined using the New Mexico's Water Quality Management Planning and Continuing Planning Process – Hydrology Protocol datasheets (SWQB 2020).



Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Flow Lines

Sample Points

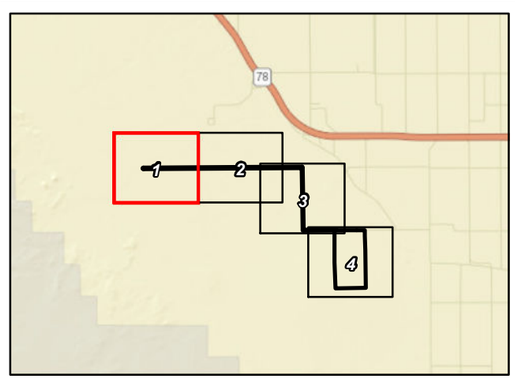
- OHWM Cross Section

Aquatic Resources

- Constructed Channel - Bank-to-Bank
- Constructed Channel - OHWM
- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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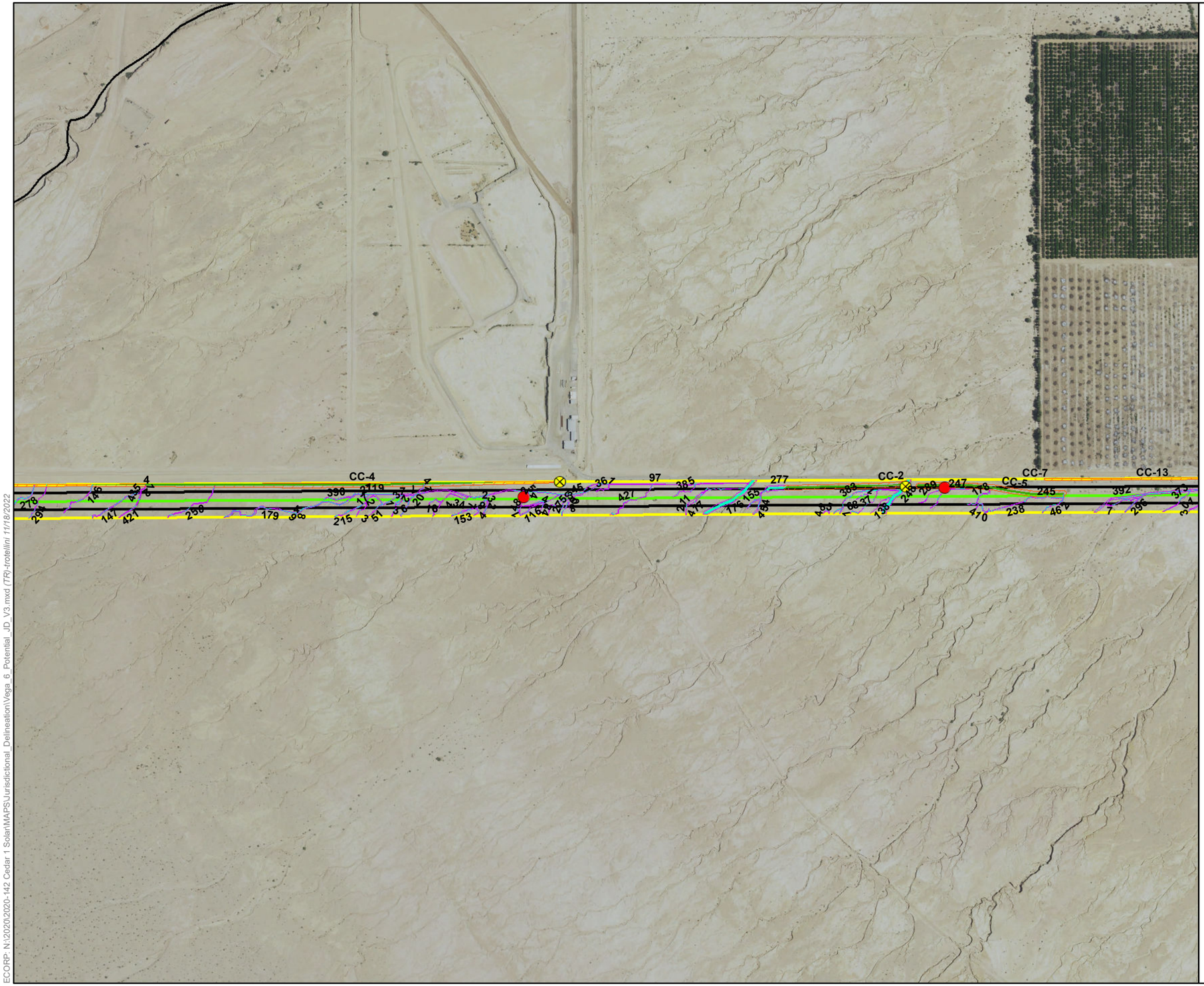
Scale in Feet
0 600

Figure 5. Aquatic Resources Delineation
Sheet 1 of 4
2020-145 Vega SES 6



Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Flow Lines
- Riparian Trees (*Tamarix* sp.)

Sample Points

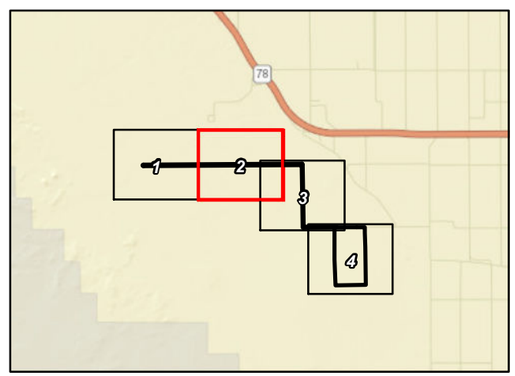
- OHWM Cross Section

Aquatic Resources

- Constructed Channel - Bank-to-Bank
- Constructed Channel - OHWM
- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 11/18/2022

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Scale in Feet
0 600

Figure 5. Aquatic Resources Delineation
Sheet 2 of 4
2020-145 Vega SES 6

Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Flow Lines
- Riparian Trees (*Tamarix* sp.)

Sample Points

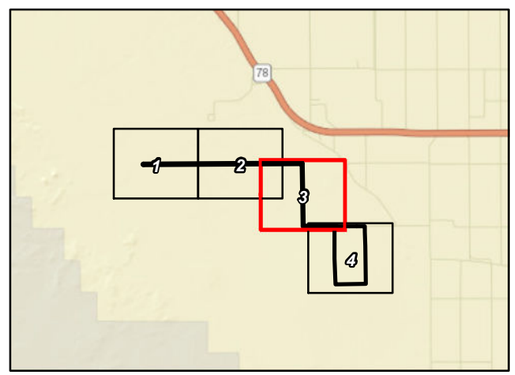
- Upland Point
- OHWM Cross Section

Aquatic Resources

- Constructed Channel - Bank-to-Bank
- Constructed Channel - OHWM
- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM
- Riparian Habitat

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Scale in Feet
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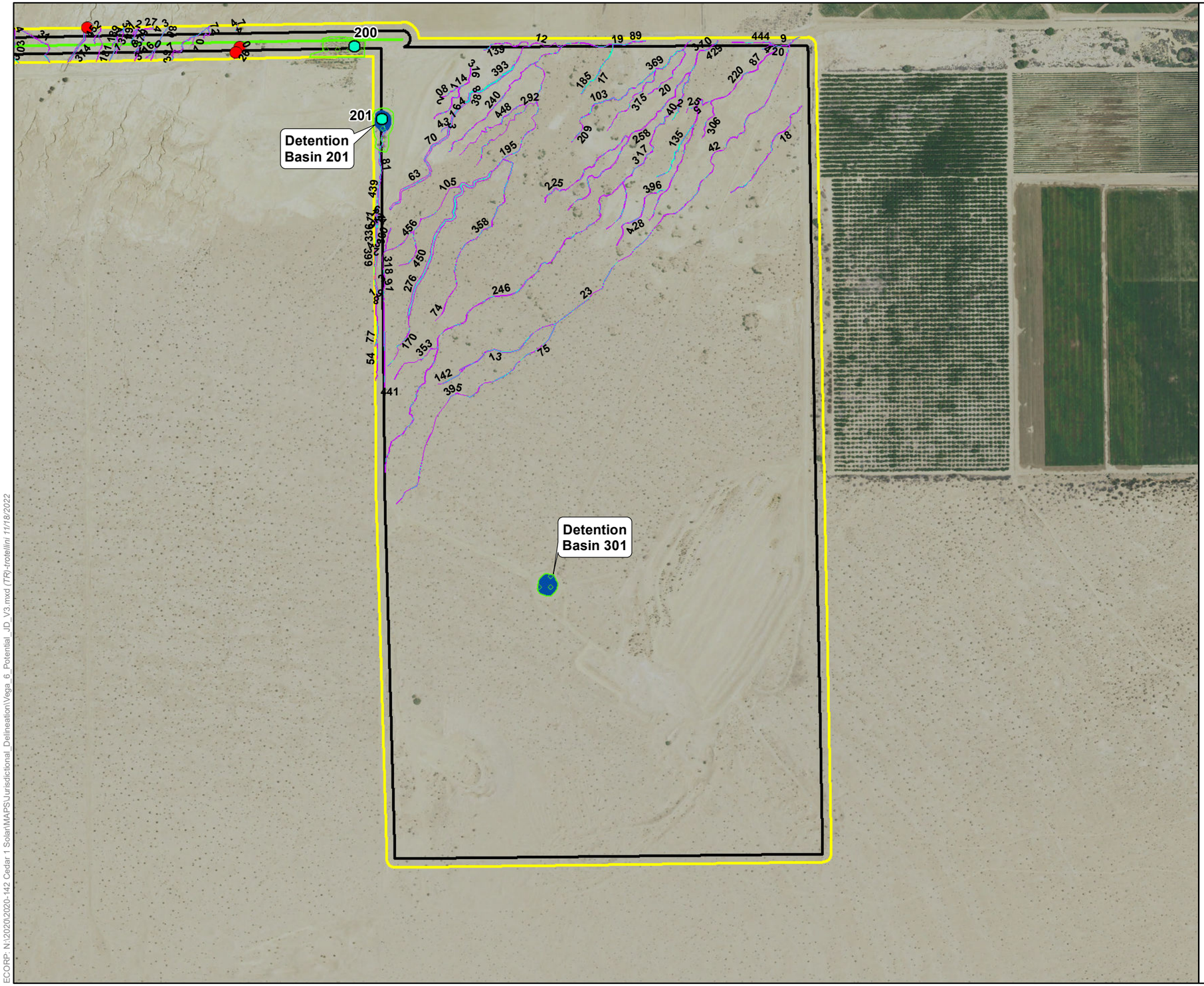
Figure 5. Aquatic Resources Delineation
Sheet 3 of 4
2020-145 Vega SES 6



Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Riparian Trees (*Tamarix* sp.)

Sample Points

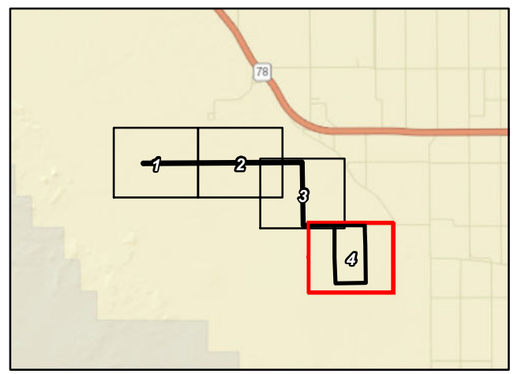
- Upland Point

Aquatic Resources

- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM
- Detention Basin
- Riparian Habitat

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 11/18/2022

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Scale in Feet
0 600

Figure 5. Aquatic Resources Delineation
Sheet 4 of 4
2020-145 Vega SES 6

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
CC-2	R4SBCx	33.0304349660293, -115.72257577224	Ephemeral; clear OHWM indicators observed, evidence of flow; non-wetland.	Unvegetated	0.056	533.924	30	None
CC-5	R4SBCx	33.0303424839635, -115.718699690964	Ephemeral; clear OHWM indicators observed, evidence of flow; non-wetland.	Unvegetated	0.345	419.567	32	None
CC-11	R4SBC	33.0303022788573, -115.714212201424	Ephemeral; clear OHWM indicators observed, evidence of flow; non-wetland.	Unvegetated	0.087	99.967	38	None
7	R6	33.0302271996173, -115.716771703212	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	148.681	3	None
8	R6	33.0304082951727, -115.74758696167	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.032	235.833	6	None
9	R6	33.0157664034074, -115.693476368982	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	86.698	4	None
10	R6	33.0159039740521, -115.704910525169	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	73.939	1	None
12	R6	33.0156571737403, -115.698545731332	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	157.433	2	None
13	R6	33.0108214684912, -115.699045754583	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.061	525.970	5	None
16	R6	33.0302903221536, -115.730227680431	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	94.955	4	None
17	R6	33.0153576550456, -115.697019161622	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.024	349.203	3	None
18	R6	33.0140406356584, -115.693689903381	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.049	714.883	3	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
19	R6	33.0157663716296, -115.696984141736	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	50.259	4	None
20	R6	33.0152690049901, -115.695601535915	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.022	380.407	2.5	None
21	R6	33.0305711653119, -115.741433185801	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	12.951	6	None
23	R6	33.0118024190642, -115.69701486999	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.035	1003.096	1.5	None
24	R6	33.0301897931142, -115.753460918922	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	39.075	3.5	None
27	R6	33.0303371196554, -115.73161173361	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	80.606	4	None
31	R6	33.0158743391448, -115.707788134821	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	159.622	4	None
35	R6	33.0304046435859, -115.74553925779	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	134.452	3.5	None
41	R6	33.0303997335623, -115.730559162688	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	24.453	4	None
42	R6	33.014196402273, -115.694537428575	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.068	1486.871	2	None
44	R6	33.0304859879378, -115.752010547489	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	196.544	2.5	None
49	R6	33.0303338420208, -115.740182374971	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.087	134.660	20	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
51	R6	33.0303903166856, -115.751757519536	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.016	142.952	5	None
53	R6	33.0161401661543, -115.709773957261	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.032	231.558	6	None
63	R6	33.0135251792896, -115.70065347516	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.103	440.724	10	None
65	R6	33.0190631279039, -115.709934677673	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	55.740	2	None
67	R6	33.0183455906046, -115.709669498306	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	158.936	3	None
70	R6	33.0143585208327, -115.69995760825	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.104	444.337	10	None
72	R6	33.0160110792805, -115.704647656999	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	56.146	3	None
74	R6	33.0116816581253, -115.699971713926	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	327.760	2	None
75	R6	33.0106495988216, -115.698568739023	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.035	612.440	2.5	None
81	R6	33.0144594353985, -115.701183176268	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.022	131.158	7	None
83	R6	33.019323841279, -115.70987040853	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	111.375	2	None
87	R6	33.0147463775049, -115.6951230699	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.100	1456.833	3	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
92	R6	33.0302401886272, -115.727702309003	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	71.538	4	None
97	R6	33.0304192058702, -115.72732683842	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.001	9.735	3.5	None
103	R6	33.0148591448726, -115.696988265156	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.025	217.396	5	None
104	R6	33.0157572038805, -115.708794732995	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	87.428	4	None
105	R6	33.0132184441282, -115.700091994659	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	338.716	1	None
108	R6	33.030245413627, -115.741506706738	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.014	102.333	6	None
109	R6	33.0303371205114, -115.743861781813	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.023	164.487	6	None
111	R6	33.0191835591846, -115.70976460354	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	250.198	2	None
114	R6	33.0151547108817, -115.699664534387	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	122.807	3	None
116	R6	33.0302413717934, -115.728072032224	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	190.373	3.5	None
119	R6	33.0303211568545, -115.729443399368	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.152	1321.928	5	None
130	R6	33.0301784453787, -115.739825390371	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	50.937	7	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
131	R6	33.0221902636487, -115.709802806545	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.012	102.030	5	None
132	R6	33.0158999124328, -115.706416340312	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	73.413	2.5	None
135	R6	33.0140413706502, -115.695554434424	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.037	398.834	4	None
136	R6	33.0302642091617, -115.730882135575	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	100.583	4	None
138	R6	33.0302439838, -115.721489077543	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	99.096	2	None
139	R6	33.0157433018839, -115.699196975608	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	45.818	2	None
142	R6	33.0103601791313, -115.699903228825	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	189.171	3	None
146	R6	33.030278615948, -115.737220604478	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	186.374	4	None
147	R6	33.0303267422296, -115.736284329722	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.024	232.092	4.5	None
148	R6	33.0302015183503, -115.72832561325	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	159.550	3.5	None
153	R6	33.0302387981531, -115.729289987293	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	94.836	5	None
155	R6	33.0302504441493, -115.724024767497	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	91.852	6	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
160	R6	33.0157640270646, -115.705657818367	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	35.637	4.5	None
164	R6	33.0149537292506, -115.69987661796	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.034	366.574	4	None
168	R6	33.0302317030119, -115.721701391378	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	136.806	1	None
169	R6	33.0302900143992, -115.739166304888	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	126.823	3	None
170	R6	33.0109368206814, -115.700887219408	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	353.624	1	None
172	R6	33.0301971865775, -115.731566348155	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	39.100	2	None
176	R6	33.0303727496133, -115.724253895957	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.111	192.918	25	None
178	R6	33.0302785408798, -115.719675279594	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	183.512	4	None
179	R6	33.0302593677607, -115.732370219585	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.058	410.703	6	None
181	R6	33.0158501434135, -115.706671556258	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	110.967	2	None
185	R6	33.0152099997597, -115.697172499814	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	193.885	2	None
189	R6	33.0158501285303, -115.70638137008	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	106.711	3	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
195	R6	33.0147261167239, -115.698213018103	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.060	1045.299	2.5	None
199	R6	33.0205059804501, -115.709831120364	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	137.506	3	None
207	R6	33.0302873534694, -115.730714814651	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	109.329	4	None
208	R6	33.0150564893584, -115.699913625812	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	128.615	3	None
209	R6	33.014466918328, -115.697348218776	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	225.687	2	None
210	R6	33.0158117886293, -115.709581996176	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.036	131.292	12	None
211	R6	33.0303123716978, -115.725148288977	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	167.397	2	None
212	R6	33.0302907227307, -115.739733818457	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.020	108.708	8	None
215	R6	33.0303195632185, -115.731499964769	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.019	203.375	4	None
220	R6	33.0150584784334, -115.694416057788	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.073	792.389	4	None
225	R6	33.013763582842, -115.697308913172	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.066	717.004	4	None
232	R6	33.0302303620769, -115.72920888318	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	55.024	5.5	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
238	R6	33.0301845889256, -115.71884836818	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	62.767	3	None
239	R6	33.0157432506979, -115.708564097501	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	42.440	4	None
240	R6	33.014789395583, -115.699075455159	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.054	784.085	3	None
245	R6	33.0302715410423, -115.718374681822	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.032	271.338	5	None
246	R6	33.0115941176703, -115.699316398161	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.232	2523.605	4	None
247	R6	33.030415804906, -115.720209372367	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.016	283.703	2.5	None
248	R6	33.0304260053566, -115.721128004555	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.077	147.348	23	None
250	R6	33.0302477970648, -115.734750626117	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	195.033	3	None
254	R6	33.0302645814737, -115.728478643845	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	126.482	3	None
255	R6	33.0147624114752, -115.695250182408	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	83.945	2	None
258	R6	33.0141777758638, -115.69650489495	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.112	1218.000	4	None
260	R6	33.0157687150853, -115.70397823059	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	21.531	3.5	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
268	R6	33.0302307529384, -115.740748501535	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.006	62.198	4	None
274	R6	33.0158630296836, -115.705922415386	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	109.161	4.5	None
275	R6	33.0302004952343, -115.727659834885	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	33.933	4.5	None
276	R6	33.0128700127456, -115.70007861393	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.393	1130.495	15	None
277	R6	33.0304348676583, -115.722739005227	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.037	634.310	30	None
278	R6	33.0303396625915, -115.738328693498	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.026	227.581	5	None
282	R6	33.0303358186211, -115.743144243681	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	146.481	5	None
283	R6	33.0221233447592, -115.709936333904	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	57.487	5	None
289	R6	33.0303408548687, -115.720617416098	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	190.169	2	None
292	R6	33.0144135957553, -115.698833638064	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.014	598.798	1	None
294	R6	33.0303327185736, -115.737928544587	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.006	122.659	2	None
295	R6	33.027692766277, -115.710034933383	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	46.617	4	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
296	R6	33.0302378156887, -115.71655412079	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	86.468	5	None
301	R6	33.0302427930102, -115.715115733118	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.016	175.566	4	None
303	R6	33.0158247166706, -115.708383672941	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	94.128	4	None
305	R6	33.0302897208857, -115.740791820985	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.055	159.000	15	None
306	R6	33.014581929703, -115.694891218933	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.018	257.737	3	None
308	R6	33.0302195548949, -115.727627157807	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.001	43.933	1	None
310	R6	33.0144150176164, -115.695942678623	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.129	1407.928	4	None
311	R6	33.0161760199498, -115.70986487824	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	81.155	2	None
314	R6	33.0158015172161, -115.708546165852	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.019	162.054	5	None
316	R6	33.0153438908507, -115.699513233052	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	74.807	4	None
317	R6	33.0134849491235, -115.696548674859	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.041	594.297	3	None
318	R6	33.01202971875, -115.701211280392	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.006	125.567	2	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
322	R6	33.0303094629248, -115.752499512643	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	119.946	1	None
326	R6	33.0213066237679, -115.709840124926	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	136.882	1.5	None
333	R6	33.020266775186, -115.709760666597	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.014	199.391	3	None
351	R6	33.0302956336892, -115.731039948387	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.021	223.024	4	None
353	R6	33.0106287060234, -115.70062129821	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	350.975	1	None
358	R6	33.0129656012924, -115.699096611132	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.059	860.333	3	None
359	R6	33.015757649993, -115.706002817712	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	34.874	4.5	None
360	R6	33.0126339835425, -115.701150328915	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	142.320	2	None
361	R6	33.0304293969944, -115.727055488566	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	34.274	4	None
364	R6	33.0158445067719, -115.706295452454	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	115.211	2	None
369	R6	33.0153337789061, -115.695998271393	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.051	554.807	4	None
370	R6	33.0159359322087, -115.706077428109	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	50.487	4.5	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
371	R6	33.0302996545708, -115.721929821318	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	87.801	2	None
372	R6	33.0302613452955, -115.730943356225	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	94.054	4	None
373	R6	33.030265903443, -115.71567107196	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	108.827	4	None
374	R6	33.0158498167733, -115.707108698267	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.028	123.333	10	None
375	R6	33.0149038520767, -115.696368127569	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.024	521.174	2	None
378	R6	33.0225560988003, -115.709836323441	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	135.910	1	None
380	R6	33.0158666346482, -115.70558230728	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.012	111.428	4.5	None
381	R6	33.0303053883255, -115.738964195111	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	123.604	4	None
383	R6	33.0303960225192, -115.721779800612	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.027	395.201	3	None
385	R6	33.0304019493657, -115.725419955475	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	144.666	2	None
388	R6	33.0149453351461, -115.699543004096	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.022	77.313	11	None
390	R6	33.030297686066, -115.73212494697	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.012	172.964	3	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
391	R6	33.0118514764645, -115.701218214299	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	58.918	2	None
392	R6	33.0303597329243, -115.715811767351	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.220	878.904	11	None
393	R6	33.0151915308877, -115.699060264689	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.080	308.358	11	None
395	R6	33.0094515331539, -115.700321275418	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.033	968.938	1.5	None
396	R6	33.0133756678305, -115.695954840759	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	149.646	2	None
397	R6	33.0158995113318, -115.705056234918	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.023	198.244	5	None
400	R6	33.0303066693993, -115.714584889055	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	108.415	6	None
401	R6	33.0305562603885, -115.750909707473	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	122.029	4	None
402	R6	33.0146761051353, -115.695518416997	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	94.626	2	None
406	R6	33.0163895633296, -115.709719311671	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.037	202.909	8	None
410	R6	33.0301729888743, -115.719630137048	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	25.016	5	None
417	R6	33.0302627347832, -115.725147659808	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	229.434	2	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
420	R6	33.0157860416588, -115.693341616334	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	46.053	4	None
421	R6	33.0301671838034, -115.736098666657	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	22.432	4	None
423	R6	33.0188678976019, -115.709798159727	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	144.703	3	None
427	R6	33.0302713289653, -115.726309413786	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	221.351	2	None
428	R6	33.0128945294378, -115.696425784335	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.034	369.731	4	None
429	R6	33.0149535774901, -115.695396631509	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.056	813.631	3	None
433	R6	33.0144557586389, -115.70002860545	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	59.896	2	None
434	R6	33.0303735465833, -115.72990989235	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.021	228.043	4	None
435	R6	33.0302983738161, -115.735991740616	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	97.416	4	None
438	R6	33.0302954342887, -115.71478422137	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	114.443	4	None
441	R6	33.0102256358381, -115.701229827974	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.054	1242.163	2	None
448	R6	33.0144577614311, -115.699157741635	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.027	584.277	2	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
450	R6	33.0123875490778, -115.700618051797	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	264.428	1.5	None
451	R6	33.0303177132782, -115.72767148512	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	279.084	2	None
452	R6	33.0159332781663, -115.706823029673	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	52.482	2.5	None
453	R6	33.0195406720364, -115.709794769408	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	171.924	2	None
454	R6	33.0303276520456, -115.72390993549	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	121.509	6	None
456	R6	33.0126355590637, -115.700788858805	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	315.838	2	None
459	R6	33.0302764657528, -115.746437165	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.068	118.733	25	None
462	R6	33.0302096336093, -115.718054200365	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	47.533	3.5	None
465	R6	33.0198894668701, -115.709830032192	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	116.330	3.5	None
484	R6	33.0301931303845, -115.728128473629	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	28.764	3.5	None
Detention Basin 201	PUSA	33.01457416, -115.7011688	Ephemeral, hydrophytic vegetation, hydrology, non-hydric soils, non-wetland.	Disturbed tamarisk thickets	0.141	N/A	N/A	0.318
Detention Basin 301	PUSA	33.00696819, -115.6980746	Ephemeral, hydrophytic vegetation, no hydrology, non-hydric soils, non-wetland.	Disturbed tamarisk thickets	0.287	N/A	N/A	0.287

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
Unassociated Riparian Habitat	N/A	33.03014234, -115.7105209; 33.01585369, -115.7019851	N/A	Disturbed tamarisk thickets	N/A	N/A	N/A	1.342
Total	N/A	N/A	N/A	N/A	**7.810**	**48189.959**	N/A	**1.948**

[1] CC=Constructed Channel

[2] Cowardin Codes: (R4SBC[x]) Riverine, Intermittent, Streambed, Seasonally Flooded, [Excavated]; (R6) Riverine, Ephemeral; (PUSA) Palustrine, Unconsolidated Shore, Temporary Flooded (USFWS 2021b)

[3]Bank-to-bank widths were used to calculate resource acreages

[4] Widths provided are bank-to-bank widths

4.2.2 Manmade Features

Detention Basin

Detention basins are man-made surface storage basins in upland areas that provide flow control of stormwater runoff. They are typically dry most of the year and can also be used for recreational or agricultural purposes. There are two detention basins located within the Study Area. Detention Basin 201, which is located in the northwest corner of the parcel, has soil cracks and rows of young tamarisk trees but lacks hydric soils. Detention Basin 301, which is located in the southern section of the parcel, appears to be abandoned with remnant disturbed tamarisk thickets and no signs of hydrology.

Constructed Channel

Constructed channels (CC) are manufactured features constructed for the purpose of channeling stormwater and ephemeral features to a desired location. Within the Study Area, these include ephemeral ditches that retain water within their berms, as well as ephemeral drainage systems that convey water through culverts to natural drainage features that eventually drain into the Salton Sea. CC-2, CC-5, and CC-11 appear to have been created to catch stormwater runoff and man-made berms are present where the features are intersected by roads and canals, so the water remains within the features.

4.2.3 Potential CDFW Regulated Habitats

Riparian Habitat

Riparian habitat is present primarily within the eastern and southern portions of the Study Area. There is riparian habitat associated with the detention basins within the parcel. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Riparian habitat associated with Detention Basins 201 and 301 appear in historic aerials dating as early as 1992, which appear to have been part of agriculture systems (Nationwide Environmental Title Research Online [NETROnline] 2021). Both detention basins no longer appear to be in use, though the riparian habitat associated with the relic basins has persisted.

Sampling Point 200 was collected in a stand of isolated riparian habitat that appeared to be relic agricultural rows. Plant species observed included tamarisk with old annual skeletons including goosefoot (*Chenopodium* sp.) and spurry (*Spergularia* sp.). The soil matrix color at a depth of 0 inch to more than 12 inches was 2.5Y 6/4 with 1 percent redox features in the matrix colored 2.5YR 4/8. Hydric soil indicators were determined to be absent at this sampling point. Wetland hydrology indicators observed at Sampling Point 200 included drift deposits (B3), surface soil cracks (B6) and the FAC-neutral test (D5).

Sampling Point 201 was collected in a detention basin (201) located in the northeastern portion of the parcel within the Study Area. Monotypic stands of tamarisk were present throughout the feature. The soil matrix color at a depth of 0 inch to more than 12 inches was 2.5YR 6/3 with 1 percent redox features in the matrix colored 5YR 5/6. Hydric soil indicators were determined to be absent at this sampling point. Wetland hydrology indicators observed at Sampling Point 201 included drift deposits (B3), surface soil cracks (B6), and the FAC-neutral test (D5).

5.0 JURISDICTIONAL ASSESSMENT

Aquatic resources that are potentially regulated under the CWA, the Porter-Cologne Act, and California Fish and Game Code Section 1602 are summarized below. These results are subject to modification following agency verification.

5.1 Clean Water Act

Per Regulatory Guidance Letter 16-01, an applicant may request a PJD "in order to move ahead expeditiously to obtain a Corps permit authorization where the requestor determin*es that it is in his or her best interest to do so … even where initial indications are that the aquatic resources on a parcel may not be jurisdictional*" (USACE 2016b). The following information on connectivity of wetlands and other waters in the Survey Area to TNW is provided should an Approved Jurisdictional Determination (AJD) be necessary.

The ephemeral drainages within the Project Area are tributary to the Salton Sea, which is a TNW. Under the current definition of waters of the U.S., the *Rapanos* guidance, the ephemeral drainages onsite would be considered non-navigable tributaries that are not relatively permanent. In which, case, a significant nexus evaluation of the ephemeral drainages would be necessary to determine jurisdiction if seeking an AJD.

5.2 Porter-Cologne Water Quality Control Act

The following categories meet the definition of waters of the state and are regulated pursuant to the Porter-Cologne Act. The Porter-Cologne Act defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The Porter-Cologne Act defines "Waters of the State" very broadly, with no physical descriptors, and no interstate commerce limitation. The categories are:

- Ephemeral Drainages
- Detention Basins
- Constructed Channels

The remaining features are excluded from the definition of waters of the state pursuant to current guidance from the SWRCB and include the inactive ephemeral drainages. Impacts to features that fall under the definition of waters of the state would trigger the need for permits through the WDR process.

5.3 California Fish and Game Code Section 1600-1602

The following categories meet the criteria for resources that are regulated under Section 1600 of the California Fish and Game Code. This includes all resources with surface or subsurface flow, and 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." Areas with associated riparian vegetation that is supported by the surface and subsurface flow through these streambeds that are also added to CDFW's jurisdiction under Section 1600. The categories are:

- Ephemeral Drainages
- Detention Basins
- Constructed Channels
- Associated Riparian Habitat

The remaining features are excluded from Sections 1600-1602 pursuant to current guidance from CDFW and include the inactive ephemeral drainages, because they do not meet the definition of a bed, channel, or bank of any river, stream, or lake and associated riparian habitat. Impacts to features that fall under the definition of streambed and associated riparian habitat would trigger the need for Streambed Alteration Notification and the Project may need to enter into formal Agreements with CDFW. Additional areas mapped as riparian habitat, such as those located within the parcel, are not associated with any streams with flow but have likely established opportunistically in areas that were recently left fallow, previously irrigated and farmed, and are in artificially moist areas where surface and subsurface flow are unlikely.

6.0 REFERENCES

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LIST OF ATTACHMENTS

Attachment A – OHWM and Wetland Determination Data Forms - Arid West

Attachment B – Representative Site Photographs

Attachment C – USACE ORM Aquatic Resources Table

Attachment D – Digital Data

Attachment E – Driving Directions to Study Area

ATTACHMENT A

OHWM and Wetland Determination Data Forms – Arid West Region

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 81
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 1200
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details: Drainage bisects the northwestern gen-tie alignment located adjacent to waste storage facility.

Projection: **Datum:**
Coordinates:

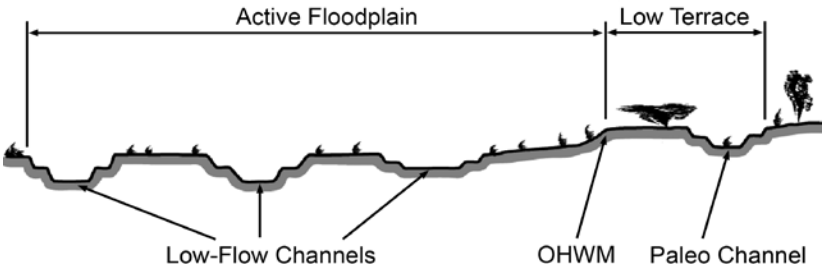
Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [x] Aerial photography
  Dates: 1953-2020
- [x] Topographic maps
- [ ] Geologic maps
- [x] Vegetation maps
- [x] Soils maps
- [x] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [x] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

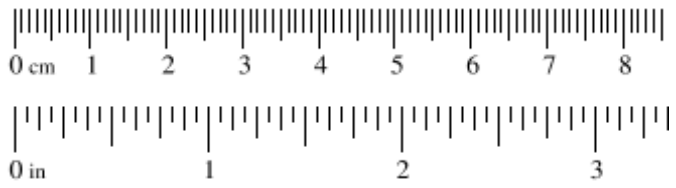


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

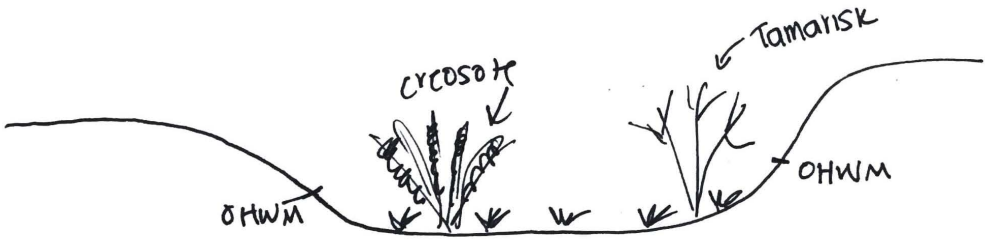
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 81 **Date:** 8/4/2021 **Time:** 1200

Cross section drawing:



OHWM

GPS point: 33.030348, -115.746382

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Large drainage bisects gen-tie and continues northeast.
OHWM: 15' width
B2B: 25' width

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 33.030348, -115.746382

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 12 % Tree: 0 % Shrub: 2 % Herb: 10 %
Community successional stage:

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

Indicators:

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

Comments:

Channel itself is primarily unvegetated, with some upland vegetation existing within the channel bed.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 149
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 0830
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details: Drainage bisects a road along the north-western gen-tie alignment located adjacent to active farmland.

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

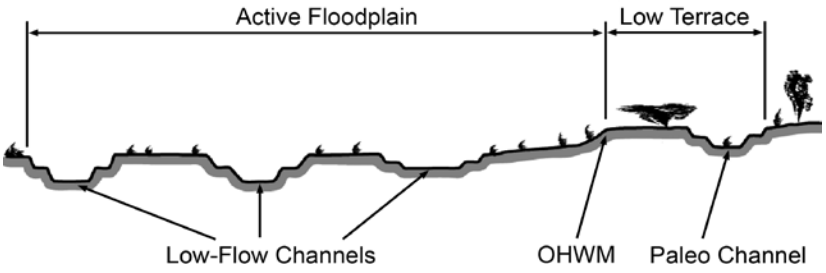
Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [x] Aerial photography
  Dates: 1953-2020
- [x] Topographic maps
- [ ] Geologic maps
- [x] Vegetation maps
- [x] Soils maps
- [x] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [x] Global positioning system (GPS)
- [ ] Other studies

- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

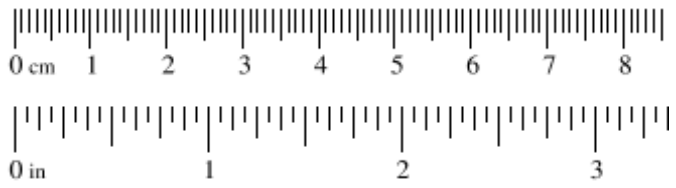


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

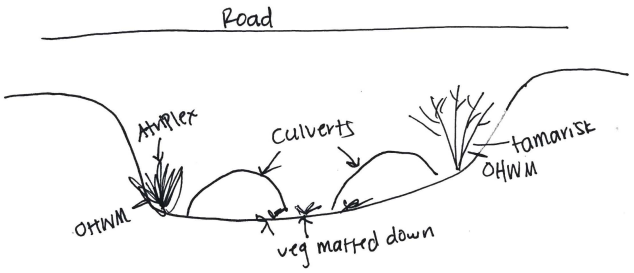
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 149 **Date:** 8/4/2021 **Time:** 0900

Cross section drawing:



OHWM

GPS point: 33.030627, -115.723983

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Large drainage bisects road via two culverts from the south end.
OHWM: 14' width
B2B: 25' width

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 33.030627, -115.723983

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 5 % Tree: 0 % Shrub: 5 % Herb: 0 %
Community successional stage:

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

Indicators:

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

Comments:

Channel itself is primarily unvegetated, with some upland vegetation existing within the channel bed. Very defined bed and bank with shelving and scour present.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 150
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 0730
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Drainage bisects a road along the north-western gen-tie alignment located adjacent to active farmland.

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

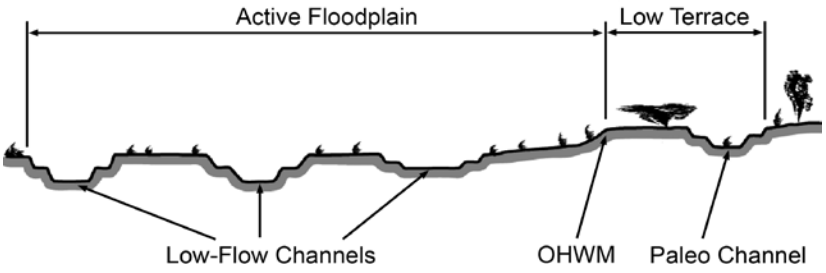
Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: 1953-2020
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [X] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies

- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

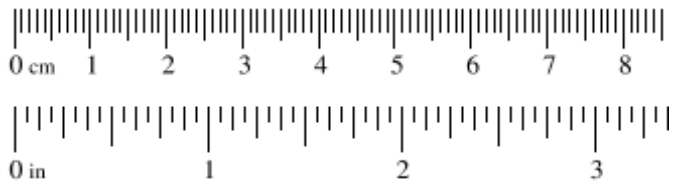


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

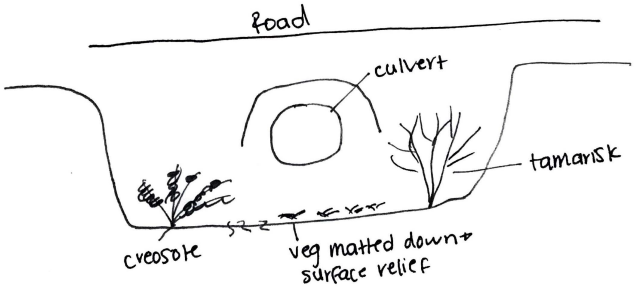
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 150 **Date:** 8/4/2021 **Time:** 0730

Cross section drawing:



OHWM

GPS point: 33.030462, -115.721091

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Large drainage bisects road via a culvert from the south end.
OHWM: 15' width
B2B: 23' width

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 33.030462, -115.721091

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 7 % Tree: 0 % Shrub: 7 % Herb: 0 %
Community successional stage:

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

Indicators:

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

Comments:

Channel itself is unvegetated, with some upland vegetation existing within the channel bed. Very defined bed and bank with shelving and scour present.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 154
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 0652
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Drainage bisects a road along the north-western gen-tie alignment located adjacent to active farmland

Projection: **Datum:**
Coordinates:

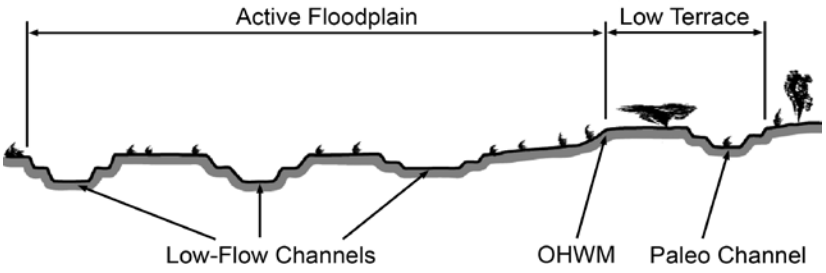
Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: 1953-2020
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [X] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

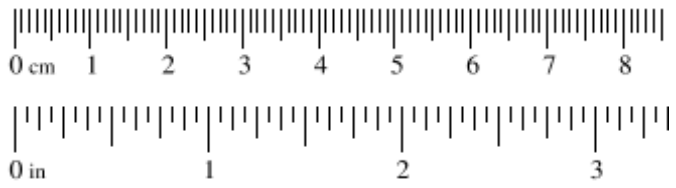


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

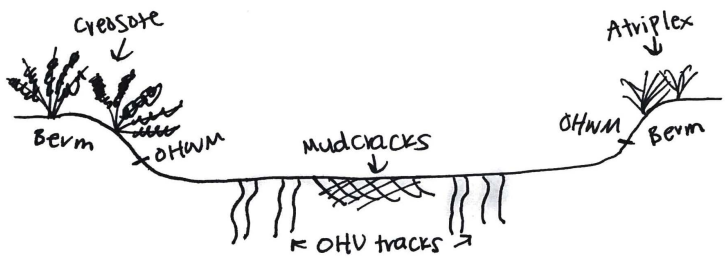
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 154 **Date:** 8/4/2021 **Time:** 0652

Cross section drawing:



OHWM

GPS point: 33.030478, -115.714232

Indicators:

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Large drainage bisects road and is also being used as a road for OHV. It is bermed on either side of the channel, except where the drainage bisects the access road.
OHWM: 25' width
B2B: 38' width

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: 33.030478, -115.714232

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 10 % Tree: 0 % Shrub: 10 % Herb: 0 %
Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Channel itself is unvegetated. Upland vegetation present along banks, with scattered individuals of creosote bush. A number of tributaries offshoot from this main drainage that eventually travels north of the project area towards the Westside Main Canal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vega SES 6 City/County: Imperial County Sampling Date: 8/5/2021

Applicant/Owner: Apex Energy Solutions, LLC. State: CA Sampling Point: 200

Investigator(s): C. Clark, C. Torres Section, Township, Range: S26, T13S, R12E

Landform (hillslope, terrace, etc.): Toeslope- roadside Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR): D Lat: 33.015795 Long: -115.701781 Datum: NAD83

Soil Map Unit Name: NOTCOM: No Digital Data Available (2600446) NWI classification: None

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

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

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

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

Remarks:

Point taken within a small patch of tamarisk thicket.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10')			
1. Tamarix sp.	5	Yes	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 10')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

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 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 5 (A)	15 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Old annual skeletons present within plot, including goosefoot (Chenopodium sp.) and spurry (Spergularia sp.).

SOIL

Sampling Point: 200

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5Y 6/4	99	2.5YR 4/8	1	C	M	Slt Cly	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]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)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ✓ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Moist at 3" depth and deep soil cracks within area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vega SES 6 City/County: Imperial County Sampling Date: 8/5/2021

Applicant/Owner: Apex Energy Solutions, LLC. State: CA Sampling Point: 201

Investigator(s): C. Clark, C. Torres Section, Township, Range: S26, T13S, R12E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): D Lat: 33.014611 Long: -115.701255 Datum: NAD83

Soil Map Unit Name: NOTCOM: No Digital Data Available (2600446) NWI classification: PUSAx

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

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

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

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

Remarks:

Ponded area with tamarisk and bermed all the way around.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10')			
1. Tamarix sp.	5	Yes	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 10')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

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	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	5 (A)		15 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 201

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5YR 6/3	99	5YR 5/6	1	C	M	Slt Cly	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]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)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ✓ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

Soils moist at 1" depth.

ATTACHMENT B

Representative Site Photographs

Photo 1. Representative photo of an ephemeral drainage within the proposed solar field parcel; photo facing northeast. (Photo coordinates: 33.011272°N, -115.697849°W, August 3, 2021).

Photo 2. Detention Basin 201 within the northwestern portion of the proposed solar field parcel; photo facing northwest. (Photo coordinates: 33.014611°N, -115.701255°W, August 5, 2021).

Photo 3. Constructed Channel 2 within the western portion of the gen-tie line; photo facing east. (Photo coordinates: 33.030496°N, - 115.722701°W, August 4, 2021).

Photo 4. Representative photo of an ephemeral drainage within the proposed solar field parcel; photo facing north. (Photo coordinates: 33.012429°N, -115.700629°W, August 4, 2021).

Photo 5. Representation of an ephemeral drainage with riparian tree (tamarisk) situated in the southeastern portion of the gen-tie line; photo facing northeast. (Photo coordinates: 33.015872°N, -115.707104°W, August 5, 2021).

Photo 6. Feature determined to be non jurisdictional due to lack of OHWM indicators located in the southern portion of the proposed solar field parcel; photo facing southwest. (Photo coordinates: 33.007796°N, - 115.700369°W, August 4, 2021).

ATTACHMENT C

USACE ORM Aquatic Resources Table
(Provided as an accompanying electronic file)

ATTACHMENT D

Digital Data
(Provided as accompanying electronic files)

ATTACHMENT E

Driving Directions to Study Area

Google Maps I-8, San Diego, CA 92116 to Imperial County, California Drive 128 miles, 1 hr 58 min

I-8
San Diego, CA 92116

Follow I-8 E to Forrester Rd in Imperial County. Take exit 111 from I-8 E

1 hr 31 min (105 mi)

1. Head east on I-8 E
14.1 mi
2. Keep left to stay on I-8 E
90.2 mi
3. Take exit 111 for Forrester Rd
0.2 mi
4. Keep left at the fork, follow signs for Westmorland
98 ft

Continue on Forrester Rd. Drive to Garvey Rd

27 min (23.3 mi)

5. Turn left onto Forrester Rd
14.2 mi
6. Turn left onto W Cady Rd
2.0 mi
7. Continue onto Wieman Rd
2.1 mi
8. Continue onto Hoskins Rd
2.3 mi
9. Turn left onto CA-78 W/CA-86 N
2.5 mi
10. Turn left onto Vendel Rd
423 ft
11. Turn right toward Garvey Rd
0.1 mi
12. Turn left onto Garvey Rd
Destination will be on the left
62 ft

33.03746064736512, -115.70990872428219
California

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.