

**RESERVOIRS 4711-3 AND 4711-4 PROJECT
UNINCORPORATED RIVERSIDE COUNTY**

AQUATIC RESOURCES DELINEATION



**Submitted to:
Coachella Valley Water District
Project No. 1755402009**

20 October 2020

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ACRONYMS AND ABBREVIATIONS

1MG	1,000,000-gallon
AJD	Approved Jurisdictional Determination
APN	Assessor Parcel Number
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CVWD	Coachella Valley Water District
CWA	Clean Water Act
GIS	Geographic Information System
HUC	Hydrologic Unit Code
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high-water mark
Rapanos	Rapanos v. U.S. and Carabell v. U.S.
RPW	relatively permanent waterway
RWQCB	Regional Water Quality Control Board
R4SBJ	Riverine, Intermittent, Streambed, Intermittently Flooded
SWANCC	Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers
SWRCB	State Water Resources Control Board
TNW	traditionally navigable waterway
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Wood	Wood Environment & Infrastructure Solutions, Inc.
WSC	Waters of the State of California
WUS	Waters of the U.S.

1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. (Wood) delineated aquatic resources that could be potentially affected by Coachella Valley Water District's (CVWD's) Reservoirs 4711-3 and 4711-4 Project (Project). This aquatic resources delineation report presents regulatory framework, methods, and results including a description of potentially jurisdictional waters, wetlands, and associated riparian habitat.

1.1 Purpose

The purpose of the aquatic resources delineation is to determine the extent of aquatic resources within the Project area that could be subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code.

1.2 Project Description

Under the proposed Project, CVWD would construct two 1,000,000-gallon (1MG) aboveground welded-steel tanks (Reservoirs 4711-3 and 4711-4) and subsequently demolish the existing 100,000-gallon aboveground bolted-steel tanks (Reservoirs 4711-1 and 4711-2), which were originally constructed in 1993 and 1999. The proposed Project would restore and improve water storage infrastructure and ensure reliable and sustainable domestic water supply and fire flow protection to CVWD's customers within the Sky Valley Domestic Water Production Zone / Indio Hills Pressure Zone, which serves the unincorporated community of Indio Hills.

The construction of the proposed Reservoirs 4711-3 and 4711-4 would include the following components:

- Excavation, grading, soil compaction, and construction of two 76-foot diameter by 5-foot deep foundations;
- Construction of two 1MG welded-steel tanks;
- Construction of all required aboveground and buried appurtenances (e.g., water meters, valves, 18-inch diameter connection to the existing Dillon Road Transmission Pipeline, etc.); and
- Construction of all required infrastructure (e.g., riprap revetment north/upstream of the new reservoirs, perimeter chain-link fence, etc.).

Following the completion of construction activities, the two existing bolted-steel water tanks, piping, and rip-rap berms will be demolished and removed.

1.3 Project Location

The Project site is located in the northwest portion of CVWD's service area within the unincorporated community of Indio Hills, Riverside County, California approximately 0.5 miles north of the intersection of 30th Avenue and Sunny Rock Road (Figure 1, Appendix A). The Project site is located within the southwest corner of Assessor Parcel Number (APN) 750-130-005, a 3.67-acre, CVWD-owned property located within a portion of Section 11, Township 4 south, Range 7 east, San Bernardino Base and Meridian.

2.0 REGULATORY FRAMEWORK

2.1 U.S. Army Corps of Engineers

The USACE regulates the discharge of dredged or fill material in waters of the U.S. (WUS) pursuant to Section 404 of the CWA.

2.1.1 Waters of the U.S.

CWA regulations (33 Code of Federal Regulations [CFR] §328.3[a]) define WUS as follows:

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

The USACE delineates non-wetland waters in the Arid West Region by identifying the ordinary high-water mark (OHWM) in intermittent and perennial channels (USACE 2008a). The OHWM is defined in 33 CFR §328.3(e) as:

“...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

Identification of the OHWM involves assessments of stream geomorphology and vegetation response to the dominant stream discharge. Determining whether any non-wetland water is a jurisdictional WUS involves further assessment in accordance with the regulations, case law, and clarifying guidance as discussed below.

2.1.2 Wetlands and Other Special Aquatic Sites

Wetlands are defined at 33 CFR §328.3(b) as *“those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”*

2.1.3 Supreme Court Decisions

2.1.3.1 Solid Waste Agency of Northern Cook County

On January 9, 2001, the Supreme Court issued a decision on Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et al. with respect to whether the USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County (SWANCC) ruling stated that the USACE does not have jurisdiction over “non-navigable, isolated, intrastate” waters.

2.1.3.2 Rapanos

In the Supreme Court cases of Rapanos v. U.S. and Carabell v. U.S. (herein referred to as Rapanos), the court attempted to clarify the extent of USACE jurisdiction under the CWA. The case resulted in the USACE asserting jurisdiction over all traditionally navigable waterways (TNWs), wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are a relatively permanent waterway (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months) and wetlands that directly abut such tributaries. The USACE decides jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not RPWs, and wetlands adjacent to but that do not directly abut a non-navigable RPW.

2.1.4 2015 Clean Water Rule

The Clean Water Rule was issued in 2015 but was soon put on hold by federal injunction. The rule was reinstated in California in August 2018 but was repealed in its entirety on December 23, 2019.

2.1.5 The Navigable Water Protection Rule

On January 23, 2020, the U.S. Environmental Protection Agency (USEPA) and the Department of the Army published a final rule called “The Navigable Water Protection Rule.”

In this final rule, the agencies interpret WUS to encompass:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries that contribute surface water flow to such waters;
- Certain lakes, ponds, and impoundments of jurisdictional waters; and
- Wetlands adjacent to other jurisdictional waters.

The final rule excludes from the definition of WUS all waters or features not mentioned above, specifically clarifying that WUS do not include the following:

- Groundwater, including groundwater drained through subsurface drainage systems;
- Ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse stormwater runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.

This rule was published in the Federal Register on April 21, 2020 and went into effect on June 22, 2020.

2.2 Waters of the State

2.2.1 Section 401 Water Quality Certification

The RWQCB regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit including a Section 404 permit. The RWQCB's delegated authority over Section 401 requires a Water Quality Certification consistent with the USACE of Engineers definition of waters of the US.

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State was adopted in April 2020 and put into effect statewide on May 28, 2020 (State Water Resources Control Board [SWRCB] 2020a).

The Water Boards define wetlands as follows:

"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."

The Water Code defines Waters of the State of California (WSC) broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." In the 2020 state wetland definition, the State did not define non-wetland WSC, rather they are relying on regional characterizations of jurisdiction was delegated to the Regional Boards.

The following wetlands are WSC based on the 2020 Procedures:

1. Natural wetlands;
2. Wetlands created by modification of a surface water of the state; and
3. Artificial wetlands that meet any of the following criteria:
 - a. Approved by an agency as compensatory mitigation for impacts to other WSC, except where the approving agency explicitly identifies the mitigation as being of limited duration;
 - b. Specifically identified in a water quality control plan as a wetland or other water of the state;
 - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
 - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not WSC unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal;
 - ii. Settling of sediment;

- iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
- iv. Treatment of surface waters;
- v. Agricultural crop irrigation or stock watering;
- vi. Fire suppression;
- vii. Industrial processing or cooling;
- viii. Active surface mining – even if the site is managed for interim wetlands functions and values;
- ix. Log storage;
- x. Treatment, storage, or distribution of recycled water;
- xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
- xii. Fields flooded for rice growing.

All artificial wetlands that are less than 1 acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not WSC.

2.2.2 Porter-Cologne Water Quality Control Act

The State Water Resource Control Board (SWRCB) and the RWQCB assert jurisdiction over WSC which is generally the same as WUS but may also include isolated waterbodies. The Porter Cologne Act defines WSC as “surface water or ground water, including saline waters, within the boundaries of the state”.

2.2.3 California Department of Fish and Wildlife

The CDFW regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake (CDFW 2020).”

Evaluation of CDFW jurisdiction followed guidance in the California Fish and Game Code and *A Review of Stream Processes and Forms in Dryland Watersheds*. In general, under Section 1602 of the California Fish and Game Code, CDFW jurisdiction extends to the maximum extent or expression of a stream on the landscape (CDFW 2010). It has been the practice of CDFW to define a stream as *“a body of water that flows perennially or episodically and that is defined by the area in a channel which water currently flows, or has flowed over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators”* (Brady and Vyverberg 2013). Thus, a channel is not defined by a specific flow event, nor by the path of surface water as this path might vary seasonally. Rather, it is CDFW's practice to define the channel based on the

topography or elevations of land that confine the water to a definite course when the waters of a creek rise to their highest point.

3.0 METHODS

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Aerial photographs at a scale of 1:1,200 to determine the potential locations of jurisdictional waters or wetlands (Nearmap 2017);
- U.S. Geological Survey (USGS) topographic map (Figure 2, Appendix A) to determine the presence of any “blue line” drainages or other mapped water features;
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map to identify areas mapped as wetland features (Figure 3, Appendix A);
- Assessment of watersheds by Hydrologic Unit Code (HUC) (Figure 4, Appendix A);
- U.S. Department of Agriculture (USDA) soil mapping data (Figure 5, Appendix A).

A field survey of the Project area was conducted by Wood’s wetland delineator Nick Ricono and Geographic Information Services (GIS) specialist Aaron Johnson on May 6, 2020. Surveys consisted of walking the entire survey area and identifying potentially jurisdictional water features based on hydrology and vegetation characteristics. Positional data was collected using ESRI’s Collector field data collection application on an iPhone paired to a Trimble R-1 global positioning system (GPS) receiver with one-meter real-time accuracy. The survey area consisted of the property boundary for the proposed Project (APN 750-130-005). All accessible portions of the survey area were walked to identify waterways and determine if they meet the criteria to be considered under the jurisdiction of USACE, RWQCB, and/or CDFW. Visual observations of vegetation types and changes in hydrology were used to locate areas for evaluation of potential wetlands and/or for assessment of riparian habitat. Weather conditions during delineation fieldwork were conducive for surveying with clear skies and temperatures over 100 degrees Fahrenheit.

WUS and WSC were delineated according to the methods outlined in *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008a). The extent of potential WUS was determined based on indicators of an OHWM. Erosional features (gullies and rills), and swales and ditches that are not tributaries or wetlands are generally not considered WUS.

All washes identified were typical of dryland fluvial systems common to the arid west with unvegetated, sand bottom channels. No wetlands were visibly identifiable by vegetation types or hydrology; therefore, no soil pits were dug and no wetland data forms were used to collect information.

CDFW jurisdiction was delineated by defining the upper limit of the bank on which an OWHM was identified. CDFW jurisdiction was delineated to be the same delineated boundary as WSC for this survey. No riparian habitats were detected, and therefore were not required for inclusion within boundaries of CDFW jurisdiction.

To delineate boundaries along larger wash systems, the surveyors walked the bank to bank limits of the wash using the GPS. For smaller washes (less than approximately 6 feet in width), the surveyors walked the centerline of the drainage, marking transitions in bank to bank width along the channel. Other data recorded included bank height and substrate type. Upon completion of fieldwork, all data collected in the field were incorporated into a GIS file and overlaid on base maps. Centerlines were buffered to the appropriate width based on data collected. The GIS was then used to quantify the extent of jurisdictional waters and prepare graphical representations of that data.

4.0 ENVIRONMENTAL SETTING

4.1 Existing Conditions

The survey area is located on an alluvial fan located south of Pushawalla Canyon and the Little San Bernardino Mountains. The CVWD-owned parcel (APN 750-130-005) is currently partially developed with two bolted-steel reservoir tanks (Reservoirs 4711-3 and 4711-4) and accessory features, a driveway, and chain-link fence. The topography of the survey area is gently sloping in a generally north to south direction. The survey area is situated at an elevation of approximately 1,360 feet above mean sea level at the northern boundary and approximately 1,335 feet above mean sea level at the southern boundary (Figure 2, Appendix A). The average annual high temperature is 88.9 degrees Fahrenheit and the average minimum temperature is 58.2 degrees Fahrenheit (Western Regional Climate Center 2020). Surrounding land uses include open space to the north, west, and east. Residential areas and highway infrastructure lie to the south. Site photographs are included in Appendix B.

4.2 Hydrology

The annual mean rainfall for the region is 3.29 inches (Western Regional Climate Center 2020) based on data recorded from 1894 to 2016 at Indio Fire Station (COOP 044259) located approximately 7 miles south of the Project site. Table 1 identifies monthly rainfall totals for the 2020 rainy season at the Indio Fire Station (Natural Resources Conservation Service [NRCS] 2020).

Table 1 Monthly Rainfall for January through April 2020

Month/Year	Rainfall (inches)
January 2020	0.02
February 2020	0
March 2020	2.20
April 2020	0.85
Total	3.07

Surface hydrology in the survey area is dominated by ephemeral washes typical of dryland fluvial systems, flowing only during storm events and remaining dry for most of the year. The survey area lies within the Whitewater River Watershed (HUC 18100201) (Figure 4, Appendix A). Surface runoff during heavy rains has created many washes that transport water downstream and includes active and abandoned channels. Ephemeral drainages within the survey area generally flow in a north to south direction and are potentially hydrologically connected to the Salton Sea, located approximately 26 miles downstream.

4.3 Vegetation

Vegetation in the area is predominately of the creosote bush scrub community. Commonly-occurring plant species include creosote bush (*Larrea tridentata*), brittlebush (*Encelia farinosa*), white bur-sage (*Ambrosia dumosa*), bladderpod (*Peritoma arborea*), catclaw acacia (*Senegalia greggii*), paloverde (*Parkinsonia florida*), California barrel cactus (*Ferocactus cylindraceus*), pencil cholla (*Cylindropuntia ramosissima*), and teddy bear cholla (*Cylindropuntia bigelovii*).

All observed drainages are ephemeral desert washes situated among upland vegetation. No hydrophytic plants were observed that would prompt additional assessment for wetlands, in combination with hydrologic and known soil conditions.

4.4 Soils

Soils in the survey area are exclusively Carrizo stony sand, 2 to 9 percent slopes (USDA 2020) (Figure 5, Appendix A). The Carrizo series consists of excessively drained soils that form in very cobbly or very stony sandy alluvium. Carrizo soils are found on alluvial fans or cones with slopes of 2 to 9 percent.

The Carrizo soil series is not classified as a hydric soil by the National List of Hydric Soils (USDA 2020).

4.5 National Wetlands Inventory

The NWI Mapper (USFWS 2020) was accessed online to review mapped wetlands in the vicinity of the survey area. The NWI mapper shows multiple desert washes to the north and

northwest of the survey area that are classified as Riverine, Intermittent, Streambed, Intermittently Flooded (R4SBJ) (Cowardin et. al. 1979) (Figure 3, Appendix A). There are no wetlands mapped within the survey area.

5.0 RESULTS

The Project site contains 12 segments of ephemeral drainages within the survey area. The Jurisdictional Waters maps (Figure 6, Appendix A) identify all observed drainages. Table 2 includes a list of waterways identified in the survey area, their location, potential jurisdictional status, and area of delineation.

The USACE, in combination with the USEPA, reserves the ultimate authority in making the final jurisdictional determination of WUS and the RWQCB reserves the ultimate authority in making the final jurisdictional determination of WSC. Additionally, CDFW has ultimate discretion in the determination of their jurisdiction.

Based on field efforts, all 12 drainage segments meet the requirements for CDFW and RWQCB jurisdiction as WSC as they have defined bed and bank and OHWM characteristics. An OHWM datasheet (Appendix C) was prepared for a cross section of the survey area as shown in Figure 6 (Appendix A). These characteristics include presence of defined bed and bank, sediment sorting with fine grain sands present in the drainage channels, and vegetation cover changes. No wetland or riparian communities were observed in the Project area.

Table 2 Summary of Delineated Waters Within Survey Area

Drainage Number	Channel Length within Survey Area (feet)	Channel Area within Survey Area (acre)	Latitude	Longitude
1	288	0.022	33.8399	-116.2147
1a	77	0.005	33.8397	-116.2146
1b	53	0.004	33.8399	-116.2149
2	300	0.186	33.8399	-116.2144
2a	234	0.018	33.8397	-116.2142
3	468	0.291	33.8399	-116.2137
3a	60	0.006	33.8399	-116.2139
3b	150	0.014	33.8399	-116.2140
3c	165	0.011	33.8396	-116.2141
4	278	0.031	33.8395	-116.2137
5	136	0.067	33.8391	-116.2137
5a	96	0.007	33.8392	-116.2137
Total	2,307	0.663	N/A	N/A

Under the Navigable Waters Protection Rule which came into effect on June 22, 2020, these ephemeral waters were removed from USACE jurisdiction. CVWD should request an Approved Jurisdictional Determination (AJD) from the USACE for a definitive determination of federal jurisdiction for these ephemeral washes.

6.0 IMPACT ASSESSMENT

The proposed Project would impact drainages within the designated work areas during grading, excavation, and construction of the water tank and berm construction in the western portion of the Project area (Figure 7, Appendix A). Impacts to waters delineated within work areas are described in Table 3 below.

Table 3 Impacts to Drainages within Project Work Area

Drainage Number	Impact Area (acre)	Channel Length (feet)	Potential Jurisdiction
1	0.021	280	WSC
1a	0.005	77	WSC
1b	0.003	47	WSC
Total	0.030	404	N/A

WSC – Waters of the State of California

There are approximately 0.030 acre and 404 linear feet of ephemeral drainage impacts within proposed work area. Impacts to these areas include grading and fill with onsite soil materials excavated during construction. The ephemeral flows would be re-established to the west along the northern border of the protective berm proposed along the north side of the proposed tanks (Figure 7, Appendix A). Impacts from the proposed Project would not drastically alter the drainages pattern in the surrounding vicinity.

6.1 Permitting Requirements

The proposed Project requires permanent impacts to 0.030 acre and 404 linear feet of ephemeral drainages that would likely be considered WSC by the CDFW and potentially the RWQCB. The USACE would not take jurisdiction over these ephemeral waters under the Navigable Waters Protection Rule that went into effect June 22, 2020. CVWD should seek verification from the USACE through the AJD process. The CDFW and RWQCB would likely permit impacts to WSC as described below.

6.1.1 Regional Water Quality Control Board

The Project occurs in the Colorado River RWQCB (Region 7). The RWQCB regulates impacts to WSC under the Porter Cologne Water Quality Control Act through issuance of Waste Discharge Requirements (WDR). A permit application should be filled out as described by Region 7 and a fee submitted for WDR (based on area of impact as determined by the Dredge and Fill Fee Calculator).

The Project may qualify for the SWRCB Water Quality Order No. 2004-0004-DWQ (SWRCB 2020b). This general permit grants WDRs for projects with minimal impacts to waters deemed by the USACE to be outside of federal jurisdiction. Acreage restrictions for this general permit include 0.20 acre and 400 linear feet for fill and excavation discharges, and not more than 50 cubic yards for dredging discharges. Projects that may be covered under these general WDRs include land development, bank stabilization, channelization, and other similar projects (SWRCB 2020b).

In addition to the formal application and fee (based on area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

6.1.2 California Department of Fish and Wildlife

State Fish and Game Code section 1602 requires any entity to notify the CDFW before beginning any activity that will do one or more of the following:

1. Substantially divert or obstruct the natural flow of any river, stream, or lake.
2. Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake.
3. Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

This Project would require notification to CDFW for a Section 1602 Streambed Alteration Agreement. In addition to the formal application materials and fee (based on cost of the project), CEQA documentation must be provided prior to issuance of the Agreement.

7.0 REFERENCES AND LITERATURE CITED

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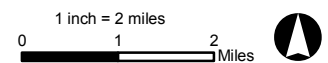
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APPENDIX A

FIGURES



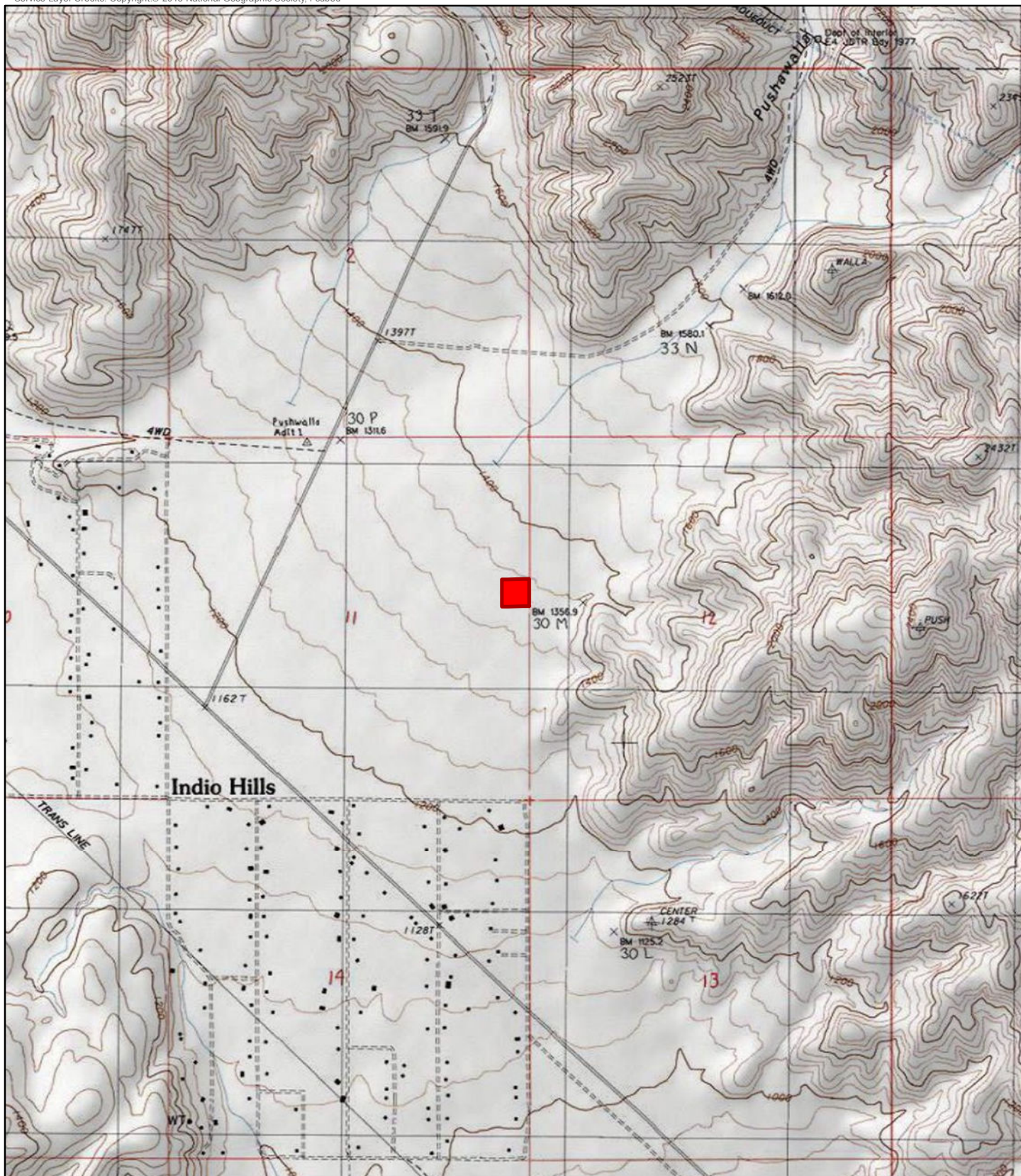
Path: Q:\3554_NaturalResources\CVWD_IndioHills_WetlandDelineation_17554020009\MXD\ReportFigures\Regional.mxd, aaron.johnson 6/3/2020



wood.


 Project Area

FIGURE 1
Regional Location
Wetland Delineation
CVWD Indio Hills
Riverside County, CA



Path: Q:\3554_NaturalResources\CVWD_IndioHills_WetlandDelineation_17554020009\MXD\ReportFigures\Topo_Regional.mxd, aaron.johnson 6/3/2020

wood.

 Survey Area


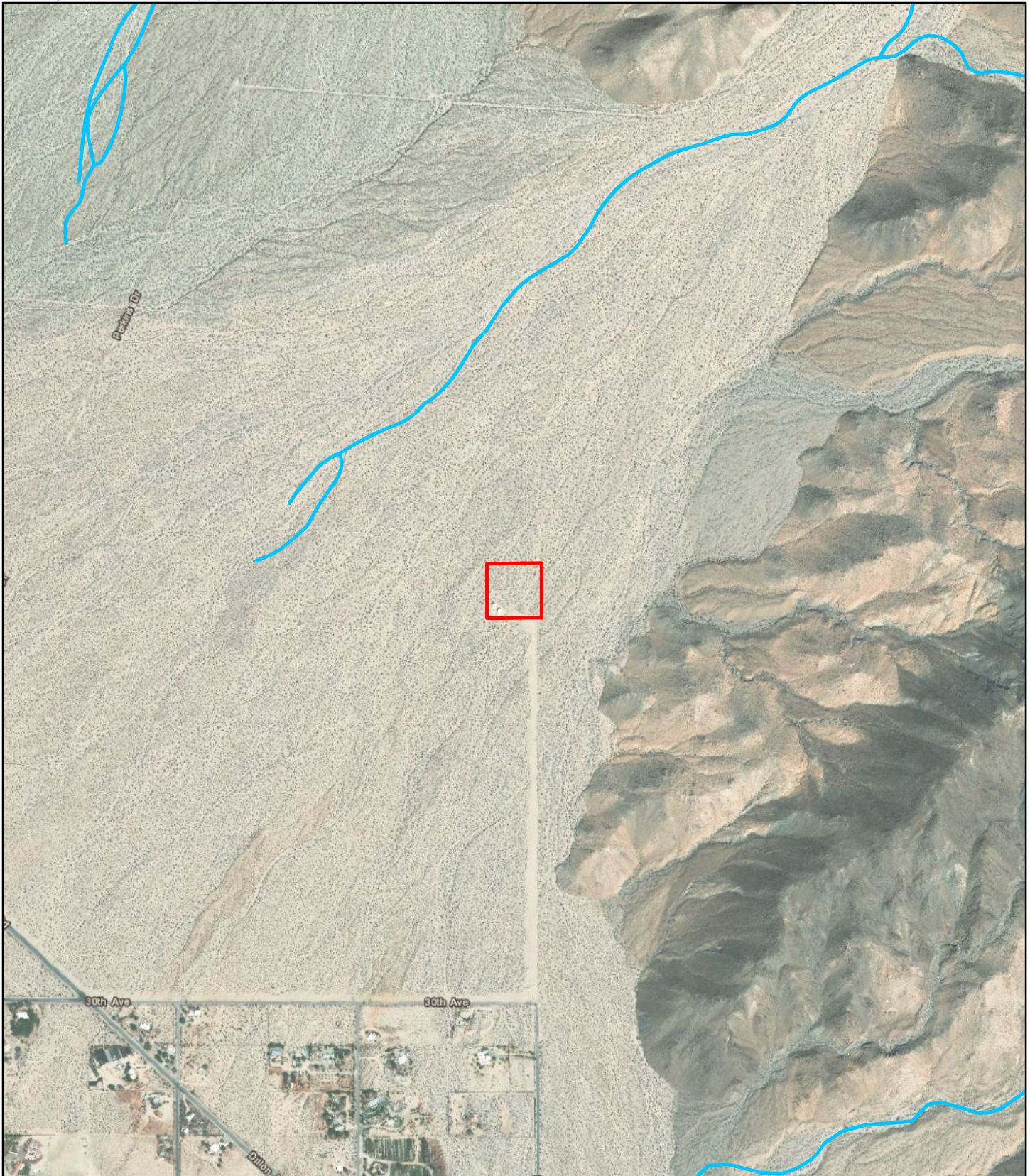
1 inch = 2,000 feet
0 1,000 2,000 Feet 

FIGURE 2

Project Vicinity
USGS 7.5' Topo: West Berdoo Canyon
Wetland Delineation
CVWD Indio Hills
Riverside County, CA



Path: Q:\3554_NaturalResources\CVWD_IndioHills_WetlandDelineation_17554020009\MXD\ReportFigures\NWI.mxd, aaron.johnson 6/3/2020

wood.



1 inch = 1,000 feet
0 500 1,000
Feet



FIGURE 3

NWI

Wetland Delineation
CVWD Indio Hills
Riverside County, CA



Path: Q:\3554_NaturalResources\CVWD_IndioHills_WetlandDelineation_1755402009\MXD\ReportFigures\Watersheds.mxd, aaron.johnson 6/3/2020

wood.

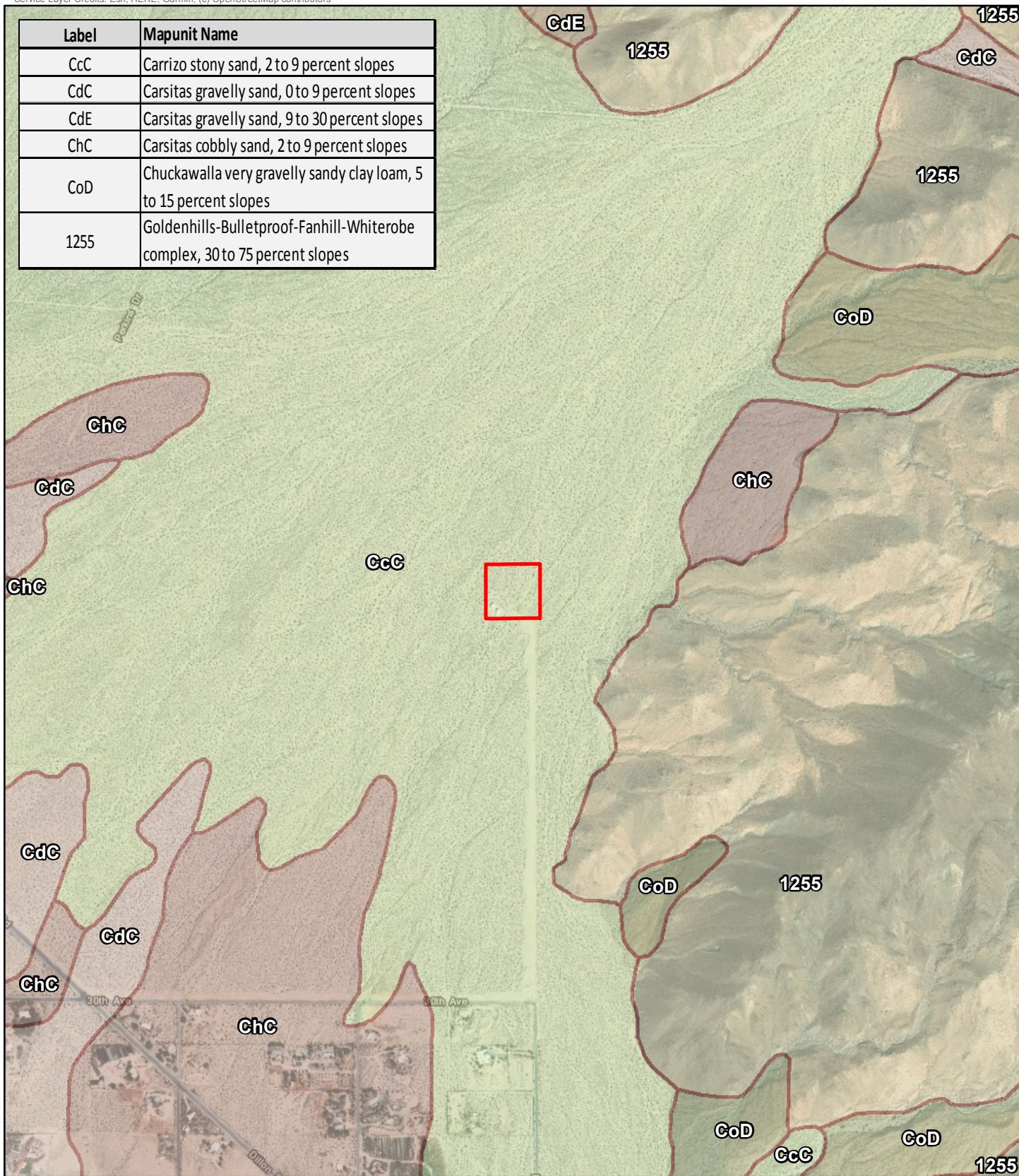
- Project Area
- Watersheds - HUC8
- Watersheds - HUC10

1 inch = 2 miles
0 1 2 Miles



FIGURE 4
Watersheds
Wetland Delineation
CVWD Indio Hills
Riverside County, CA

Label	Mapunit Name
CcC	Carrizo stony sand, 2 to 9 percent slopes
CdC	Carsitas gravelly sand, 0 to 9 percent slopes
CdE	Carsitas gravelly sand, 9 to 30 percent slopes
ChC	Carsitas cobbly sand, 2 to 9 percent slopes
CoD	Chuckawalla very gravelly sandy clay loam, 5 to 15 percent slopes
1255	Goldenhills-Bulletproof-Fanhill-Whiterobe complex, 30 to 75 percent slopes



Path: Q:\3654_NaturalResources\CVWD_IndioHills_WetlandDelineation_17554020009\MXD\ReportFigures\Soils.mxd, aaron.johnson 6/3/2020

wood.

 Project Area


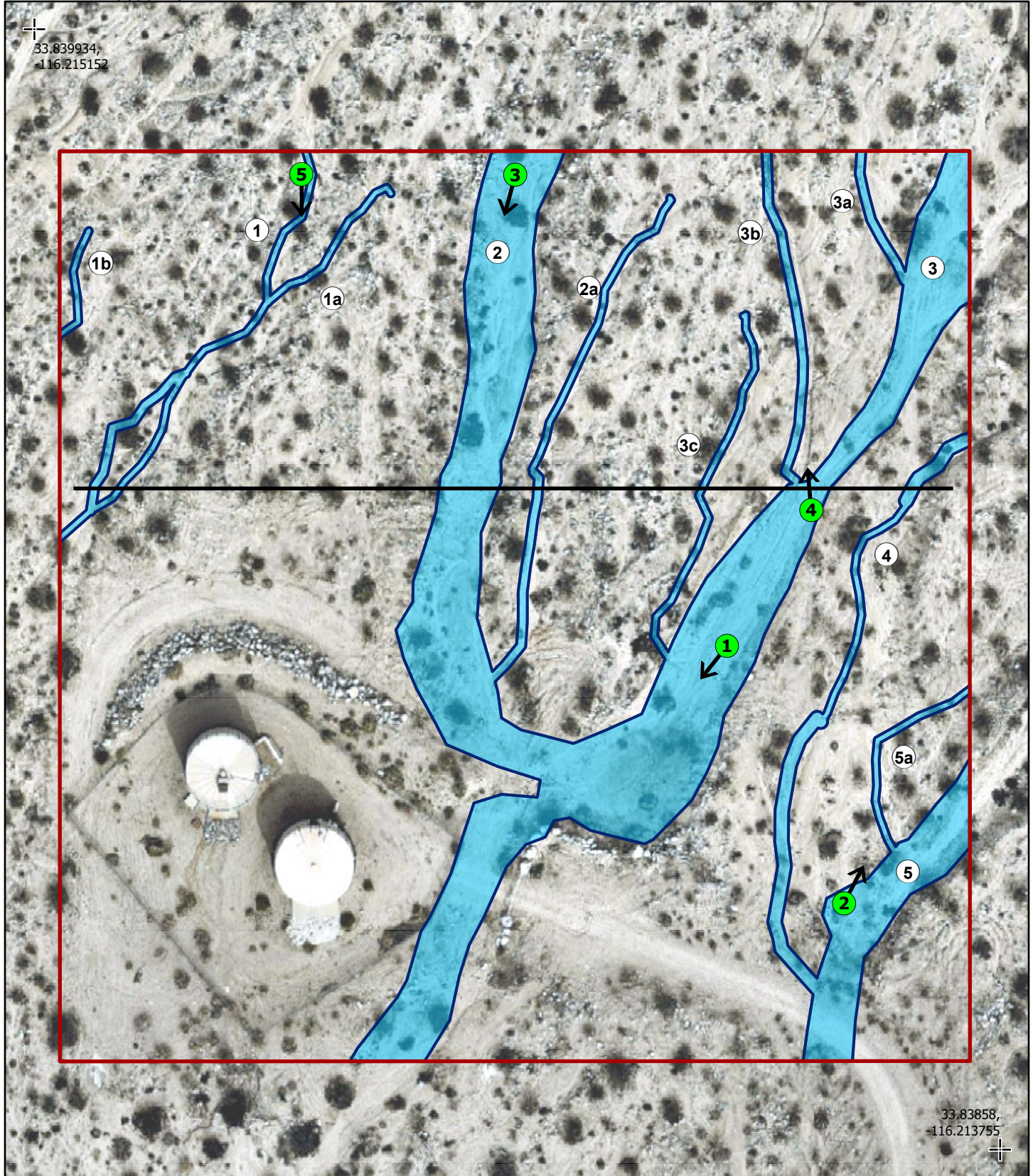
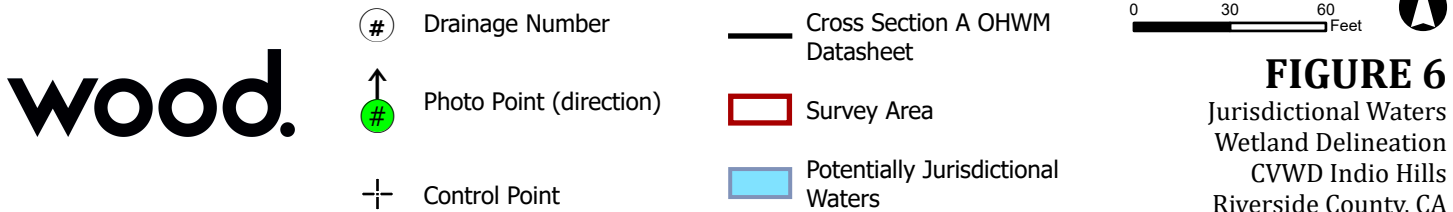
1 inch = 1,000 feet
0 500 1,000 Feet 

FIGURE 5
Soils
Wetland Delineation
CVWD Indio Hills
Riverside County, CA



Path: Q:\3554_NaturalResources\CVWD_IndioHills_WetlandDelineation_17554020009\ArcPro\CVWD_IndioHills_JD\CVWD_IndioHills_JD.aprx, aaron.johnson 10/13/2020





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wood.

- | | | | |
|------------------------------|---|---------------|-------------------------|
| # | Drainage Number | — | Proposed Berm |
| Blue outline | Potentially Jurisdictional Waters | Yellow fill | Buffer of Proposed Berm |
| Red outline | Project Disturbance Area | Black circle | New Tank - Proposed |
| Red outline with cross-hatch | Impacted Jurisdictional Waters (0.030 acre) | Yellow border | Survey Area |

0 1:720 30 60 Feet



FIGURE 7
Impacts to Jurisdictional Waters
Wetland Delineation
CVWD Indio Hills
Riverside County, CA

APPENDIX B

SITE PHOTOGRAPHS

Appendix B Site Photographs



Photo 1 facing southwest showing the downstream view of ephemeral Drainage 3 as it flows toward the existing tank protection berm (bounders stacked along fenced tank facility).



Photo 2 facing northeast showing upstream view of ephemeral Drainage 5 at the eastern edge of the project area.

Appendix B Site Photographs



Photo 3 facing south showing downstream view of ephemeral Drainage 2.



Photo 4 facing northwest showing upstream view of ephemeral Drainage 3b.

Appendix B Site Photographs



Photo 5 facing south showing downstream view of ephemeral Drainage 1.

APPENDIX C

ORDINARY HIGH-WATER MARK DATASHEET

10-19-7

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: CUPD Reservoirs 4711-3 and -4 Project Number: 1755402009 Stream: unnamed ephemeral washes Investigator(s): Nick Ricard (Wood)		Date: May 6, 2020 Time: 1300 Town: State: CA Photo begin file#: 1 Photo end file#: 5	
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		Location Details: 3.67 acre property, desert alluvial fan. Projection: Datum: Coordinates: 33.	
Potential anthropogenic influences on the channel system: tank location, None upstream of existing			
Brief site description: Ephemeral desert washes created by alluvial fan as water travels from mountainous terrain into flatter area.			
Checklist of resources (if available): <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> Aerial photography Dates: 2017 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Soils maps <input checked="" type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </div> <div style="width: 48%;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>			
<div style="text-align: center;"> <p>Hydrogeomorphic Floodplain Units</p> </div>			
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: <ol style="list-style-type: none"> 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. <ol style="list-style-type: none"> 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: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input checked="" type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other: </div> </div> 			

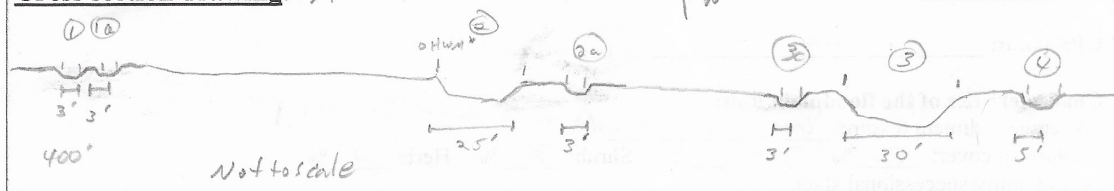
Project ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: Multiple points

Indicators:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments: Low Flow channels identified for ephemeral desert washes across the cross section A. Multiple braided channels cutting through desert with various width + depth. Channels identified by defined banks, sediment sorting (sandy channels), and veg cover.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: Multiple

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 5 % Herb: 0 %

Community successional stage:

- | | |
|---|--|
| <input checked="" type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris | <input checked="" type="checkbox"/> Other: <u>fine sandy soils</u> |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments: low flow channels were identified by cut banks and sediment sorting with fine sand present in base of channels opposed to gravelly upland areas.

Project ID:

Cross section ID:

Date:

Time:

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☒ Low Terrace

GPS point:

Multiple

Characteristics of the floodplain unit:

Average sediment texture:

Very coarse sand with cobbles and boulders

Total veg cover: 30 % Tree: 0 % Shrub: 30 % 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:

upland of OTHM, soils included coarse sand and cobbles w/ 50% veg cover including Creosote bush scrub.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point:

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: _____

☐ Other: _____

☐ Other: _____

Comments: