JURISDICTIONAL WATER DELINEATION

JOSHUA TREE, SAN BERNARDINO COUNTY, CALIFORNIA (APN: 0602-361-04) (TPM: 20443)

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Project #2023-144 JD

December 19, 2023

TITLE PAGE

Date Report Written:	December 19, 2023	
Date Field Work Completed:	November 9, 2023	
Report Title:	Jurisdictional Waters Delineation	
Assessor's Parcel Number:	0602-361-04	
TTM:	20443	
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EXECUTIVE SUMMARY

RCA Associates, Inc. was retained by Mr. Axel Cramer to conduct a jurisdictional waters delineation (JD) along the eastern channel and northwestern channel in association with the proposed project located northwest of the intersection of Sunset Rd. and Alta Loma Dr. in Joshua Tree, California (Section 35, Township 1 North, Range 6 West) (Figures 1, 2, 3, 4 and 5). Portions of the site have been disturbed in the past due human activities in the form of vehicular traffic. The majority of the site supports vegetation consisting of a mix of native and nonnative species.

The delineation was conducted to evaluate and analyze the ordinary highwater mark (OHWM) of the two channels on the property; one located in the eastern section of the property that runs north through the site flowing outward toward the northern boundary and the other located in the northwest corner of the property as shown on Figure 3 & 4. This report is being prepared for submittal to the various local, State, and Federal agencies as part of the environmental requirements of the California Environmental Quality Act (CEQA), and will be forwarded to the appropriate agencies for their review and comments.

The purpose of this jurisdictional delineation was to determine the location and size of areas that may be defined as Waters of the U.S. (WoUS) and/or Waters of the State (WoS). The data provided in this report was utilized to determine if any permits may be required for the proposed project, including a California Department of Fish and Wildlife (CDFW) Section 1600 permit, a U.S. Army Corps of Engineers (COE) Section 404 Nationwide or Individual Permit, and a California Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification.

Based on the results of the delineation and the jurisdictional analysis, it was determined the drainage channels on the site do not meet the criteria as WoS, and does not meet the criteria to be deemed as WoUS based on several factors (See Section 2.4 for complete analysis.). Neither of the two drainage channels appear to have a direct nexus to a water source and neither channel meets the characteristics that define a channel as a nexus to the nearest Traditional Navigable Water (TNW).

RCA Associates, Inc. conducted a jurisdictional delineation on November 9, 2023, during which the ordinary high-water mark (OHWM) was evaluated and the centerline of the channels were flagged along the channel. Based on the proposed construction plans, the project would impact streambeds and/or banks corresponding with the small drainage channels, which it is considered to be jurisdictional. Therefore, Section 1600, USCOE

404, and RWQCB 401 permits may be required. The appropriate agencies should be contacted for concurrence with this conclusion.

1.0 INTRODUCTION

As part of the environmental process, a jurisdictional delineation (JD) was deemed necessary due to possible impacts to potential jurisdictional waters. The purpose of this jurisdictional delineation was to determine the location and size of any areas that may be defined as waters of the State (WoS) and waters of the U.S. (WoUS), and to identify the centerline of any jurisdictional areas. The data collected during the field investigation for this JD was used in conjunction with other technical documents to determine if the project would impact any jurisdictional waters. The following sections provide a summary of the data collected and the analysis performed for the proposed project.

1.1 PROPERTY DESCRIPTION

Surveys were conducted on a 19-acre parcel (approximate) located northwest from intersection of Sunset Road and Alta Loma Drive in Joshua Tree, San Bernardino County, California (APN: 0602-361-04). The project is specifically located in the SE ¼ of the SE ¼ of Section 35, Township 1 North, Range 6 West, as depicted on the USGS Joshua Tree South 7.5-minute quadrangle map. Existing residential homes border the property to the east, the north and south, and west by vacant land.

Portions of the site shows signs of disturbances associated with normal pedestrian and vehicular traffic. The site supports a scrub habitat, and the majority of the site supports both native and non-native vegetation consisting mostly of non-native grasses

No special status wildlife or plant species were observed during any of the field investigations. Two channels were located on the property, one in the northwestern portion that runs south to north from the western boundary to the northern boundary which will be referred to as the northwestern channel and one in the eastern portion that runs south to north from the southern boundary to the northern boundary which will be referred to as the eastern channel. There was no standing water present in either of the channels during the jurisdictional delineation conducted on November 9, 2023.

1.2 PROJECT DESCRIPTION

The project proponent is proposing to develop parcels for residential development which include 64 single family residential lots and various roadways associated to the project. The proponent is proposing to construct two access points, a fire access via Sunset Road and access to the tract via Hillview Road.

1.3 REGULATORY OVERVIEW

Activities within streams, wetlands, and riparian areas are regulated by Federal, State, and regional agencies. The U.S. Army Corps of Engineers (COE) regulates Waters of the US (WoUS) and wetlands under Section 404 of the Clean Water Act. The California Department of Fish and Wildlife (CDFW) regulates activities within the streambed, bank, and associated habitat of stream channels under Fish and Game Code 1600-1616. The California Regional Water Quality Control Board regulates discharge into "waters of the U.S." under Section 401 of the Federal Clean Water Act and into "Waters of the State" under the California Porter-Cologne Water Quality Act.

1.3.1 U.S. ARMY CORPS OF ENGINEERS (COE)

The COE oversees activities associated with Section 404 which includes permits, jurisdictional determinations, and enforcing Section 404 regulations. Specifically, the jurisdictional scope of Section 404 of the Clean Water Act was defined by the U.S. Supreme Court in 2006 in their decision in Rapanos v. U.S. and Carbell v. U.S. The decisions in these two cases outlined the specific analytical standards for determining jurisdictional issues associated with WoUS. Since then, the U.S. Supreme Court has ruled in 2023 in their decision in Sackett v. EPA that at least one out of two criteria must be met to be deemed WoUS, the "relatively permanent standard" and the "Significant Nexus Standard". The relatively permanent standard refers to waters that have are relatively permanent, standing or continuously flowing bodies of water forming geological features. This excludes waters they are dry most times of the year (i.e., ephemeral waters). The significant nexus standard states that waters are considered jurisdictional under the Clean Water Act if it has a direct upstream or downstream surface connection to any WoUS. These accepted standards have been utilized in the analysis for this project in determining the presence or absence of WoUS.

1.3.2 REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

The State Water Resource Control Board (SWRCB) and its nine associated RWQCBs have adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State which took effect in May 2020. The SWRCB utilizes a broad definition of Waters of the State (WoS) to maintain consistency with regulatory changes at the federal level. The SWRCB considers all current and historic WoUS including those that fall under prior definitions of WoUS are considered WoS which include but are not limited to ephemeral features. The SWRCB and

RWQCB takes jurisdiction up to the ordinary high water mark (OHM) and relies on delineation methods of the U.S. Army Corps of Engineers. The only variance can be found during procedural delineation, that absence or lack of vegetation does not prohibit a water feature from meeting the definition of a jurisdictional wetland.

Waters of the State are defined as any surface water or groundwater that are within the boundaries of the State (Public Code Section 71200), which differs from the CWA definition of WoUS by its inclusion of groundwater and waters outside of the ordinary high-water mark in its jurisdiction.

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1.3.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

CDFW asserts jurisdiction over the bed and banks of a stream channel and associated wildlife and habitats as per CDFW Code Sections 1600-1616. The CDFW jurisdictional area is defined as the "top of bank" of a channel or to the limit (outer dripline) of the adjacent riparian vegetation. CDFW regulates any activities that would "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, ground pavement where it would pass into any river, stream, or lake" (Section 1602 of the CDFW Code [Streambed Alteration]).

2.0 DELINEATION METHODOLOGY

The initial steps in the delineation process involved conducting a literature review of all available data sources for the area prior to the start of field investigations. The literature review was used to determine where field surveys should be conducted and to locate areas of potential jurisdictional waters on available aerial photos. Following completion of the review of all available data, field surveys were conducted on November 9, 2023. Figure 3, 4 & 5 shows the location of both channelsin relation to the project boundaries.

2.1 LITERATURE REVIEW

The following literature was used to identify areas that may fall under agency jurisdiction and the following resources were reviewed or used prior to the field surveys.

- The Corps of Engineers Wetlands Delineation Manual (USACE 1987)
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008)
- A Field Guide to the Identification of the Ordinary High-Water mark (OHWM) in the Arid West Region of the Western United States (Lichvar and McColley 2008)
- U.S. Geological Survey 7.5 Minute Series Topographic Quadrangle for site.
- California Soils Resources Lab's Soil Web Google Earth interface
 http://casoilresource.lawr.ucdavis.edu/drupal/node/902
- U.S. Fish and Wildlife Service, Department of Habitat and Resource Conservation, Wetland Geodatabase: http://wetlandsfws.er.usgs.gov/NWI/index.html
- Natural Resources Conservation Services, Hydric Soils List of California, 2010: http://soils.usda.gov/use/hydric/lists/state.html

2.2 FIELD SURVEYS

Field investigations were conducted on November 9, 2023 to determine the structure and composition of the drainage channels on site in order to identify all potential jurisdictional areas. Vegetation communities observed during the surveys were initially viewed on aerial photos, evaluated during the field investigations, and described and classified using Holland's system (1986) (Appendix A: Table 1).

Transect data was collected using Juniper Systems Cedar CT8X2 GPS tablet. The GPS coordinates were recorded along the ordinary high-water mark (OHWM) on each side of the channel.

2.3 POTENTIAL WATERS OF THE U.S.

Federal jurisdiction over a non-wetland WoUS extends to the ordinary high-water mark (OHWM), defined in 33 CFR Part 328.3 of the Code of Federal regulations as "the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris." In the Arid West region of the United States, waters are variable and include ephemeral/intermittent and perennial channel forms. The most problematic ordinary high-water (OHW) delineations are associated with the commonly occurring ephemeral/intermittent channels that dominate the desert landscape.

The hydrology, channel-forming processes and distribution of OHWM indicators are significantly influenced by the desert climate which can make delineations difficult. Typically, the OHWM zone in a low-gradient, alluvial ephemeral/intermittent channel is considered the active floodplain. The dynamics of channels in the arid regions and the frequent transitory nature of traditional OHW indicators in arid environments render the limit of the active floodplain and is the only reliable and repeatable feature in terms of OHW delineation according to Lichvar and McColley (2008). This conclusion was also supported by recent additional research in Vegetation and Channel Morphology Responses to Ordinary High Water Discharge Events in Arid West Stream Channels (Lichvar et Al. 2009).

The location of the edge of the drainage channels in question were identified based on field investigations. The OHWM of the channels are very defined in most areas along the banks. During the surveys, RCA Associates, Inc. evaluated the characteristics of vegetation and substrate composition along the northern channel, and assessed its OHWMs (Figure 4). The boundaries of the OHWMs were walked while recording GPS data along the boundaries of the channel. A shapefile of the recorded data is available upon request.

3.0 DELINEATION RESULTS

Based on the results of the field investigations it was determined that the drainage channel within the northwestern corner of the site and the eastern channel meet the criteria as a jurisdictional channel based on several factors discussed below. The northwestern drainage channel on the site are the result of runoff and erosion coming from higher areas of the site and surrounding area to the southwest (Figure 3). Through the field investigation it was discovered that during major storm events, water will enter the eastern drainage channel from Alta Loma Dr. and flow north approximately 1000 ft. before running off the property on the northeastern edge which flows north along Sunset Rd. where it eventually meets the northwestern channel offsite (Figure 1).

3.1 PRELIMINARY JURISDICTIONAL DETERMINATION

3.1.1 U.S. ARMY CORPS OF ENGINEERS METHODOLOGY DETERMINATION

Based on a review of the U.S. Army Corps of Engineers Jurisdictional Delineation Instruction Guidebook (COE, 2007), 33 CFR Part 328, and the results of the field work conducted on November 9, 2023, i was determined that the northwestern channel and the eastern channel are not considered jurisdictional and do not have a direct nexus to a WoS, WoUS, or nearest TNW. The nearest TNW according to the USACE (per Section 404 Clean Water Act; 33 CFR Section 328.3(a)(1)) Big Bear Lake and channels on site have no direct connections to its water source. In addition to having no direct surface connection to a TNW, both channels do not exhibit any relatively permanent or standing water.

<u>Vegetation</u> - The majority of the site supports native vegetation consisting mostly of desert scrub habitat. The areas of the site that border the channels support Joshua Trees (*Yucca brevifolia*), creosote bush (*Larrea tridentata*), Mojave yucca (*Yucca schidigera*), water jacket (*Lycium andersonii*), Asian mustard (*Brassica tournefortii*), rattlesnake weed (*Euphorbia albomarginata*), Nevada jointfir (*Ephedra*) and pencil cholla (*Cylindropuntia leptocaulis*). The widths of the channels ranged in width from one to six feet and with depths of six inches to two feet.

Soils – Data for soil makeup and composition is not available for the site according to the USDA Web Soil Survey (WSS) Samples were taken at both features and only sandy alluvium was identified. Clay soils were not identified within the soil compositions.

<u>Hydrology</u> - The two channels vary greatly in size and as noted above in section 3.0 the channels are the result of runoff and erosion coming from higher areas of the site and surrounding areas.

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3.1.2 REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

Based on the field investigations and a review of available data, the USGS does not show either the northwestern channel or eastern channel as a blueline and the channel is not significant that it contains a direct upstream or downstream nexus to a TNW. Based on the findings that both channels contain no direct connection to a TNW or body of water that meets the definition of WoUS/WoS, the channel is not considered jurisdictional under RWQCB.

3.1.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE DETERMINATION

The delineation summarized in this report indicates that both the northwestern and eastern channel meet the criteria to be considered jurisdictional. CDFW jurisdiction falls within channels with a definable bed and bank Any proposed changes, disruptions or activities in a streambed or bank that change the flow or composition of the channel will require a Lake and Streambed Alteration (LSA) Agreement. However, CDFW should be contacted to discuss the results of the delineation and for concurrence with the conclusions presented in this report, as per CEQA requirements.

3.1.4 SIGNIFICANT NEXUS DETERMINATION

As referenced above, the two channels within the property do not have any significant upstream or downstream nexus. This characteristic, in total, result in that neither channel falls under the category of a Water of the United States. Based on the analysis of the Corps Guidelines, a nexus with a TNW does not exist. As described in Section 3.0, water flows into the eastern channel from the south and flows for approximately 1000 feet before flowing north onto the northeast corner of the property. The northwest channel runs from the western boundary to the northwest corner of the site and exits the northern boundary after flowing for approximately 125 feet. Both channels on the site do not connect to a nexus that belongs to WoS, WoUS, or TNW.

3.2 US ARMY COPRS OF ENGINEERS PERMITS

The COE regulates discharge of dredged fill materials into WoUS pursuant to Section 404 of the Clean Water Act. Based on the data collected and presented in this report, a 404 permit from the San Bernardino COE District office will not be required. The COE District office may be contacted during the environmental review process for concurrence with this conclusion and for additional discussions.

3.3 **RE**GIONAL WATER QUALITY CONTROL BOARD

The RWQCB regulates discharge to surface waters under the CWA and the California Porter-Cologne Water

Quality Act. Effective July 1, 2010, all dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009 if any impacts occur to WoUS. A CWA section 401 Water Quality Certification (WQC) will not be required.

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3.4 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Based on the field investigations conducted on November 9, 2023, the northwestern and eastern channel is considered to be jurisdictional based on several factors discussed in section 3.0. CDFW regulates streambeds and banks, and issues streambed alteration permits (Section 1600-1616) for those projects which impact jurisdictional channel; however, a 1602 Permit may be required for the project since the channels are considered to be jurisdictional.

4.0 CONCLUSION AND RECOMMENDATIONS

State and federal regulations typically recommend avoiding riparian/riverine resources, and as discussed in the above sections, the proposed project would develop the property to allow for construction of 64 residential lots and associated roadways. The amount of impacts to the eastern channel would be approximately 0.117-Acres (5,120.1 square feet) and northwestern channel would be approximately 0.083-Acres (3,630.2 square feet). The two channels combined impact would be 0.200-Acres (8,750.3 square feet). Therefore, the following mitigation measures are recommended for the project to compensate for the impacts to the intermittent channel.

(1) Prior to the issuance of a grading permit, the project applicant shall obtain a Streambed Alteration Agreement under Section 1602 of the California Fish and Game Code from the California Department of Fish and Wildlife. The following shall be incorporated into the permitting, subject to approval by the regulatory agencies: (a) Replacement and/or restoration of jurisdictional channels within the watershed at a ratio of no less than 2:1 onsite for permanent impacts to 0.117-Acres (5,120.1 square feet) for the ephemeral eastern channel and 0.083-Acres (3,630.2 square feet) for the northwestern ephemeral stream channels. If both channels are to be impacted during construction, the combined impact would be 0.200-Acres (8,750.3 square feet).

5.0 REFERENCES

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APPENDIX A

Table and Figures

















FIGURE 6: PHOTOGRAPHS OF SITE



FIGURE 6, cont: PHOTOGRAPHS OF SITE



FIGURE 6: PHOTOGRAPHS OF SITE



FIGURE 6, cont: PHOTOGRAPHS OF SITE



FIGURE 6: PHOTOGRAPHS OF SITE



FIGURE 6, cont: PHOTOGRAPHS OF SITE

Common Name	Scientific Name	Indicator
Indian rice grass	Achnatherum hymenoides	UPL
Ca. buckwheat	Eriogonum fasciculatum	UPL
Rattlesnake weed	Euphorbia albomarginata	UPL
Shortpod mustard	Hirschfeldia incana	UPL

Table 1 - Plants observed on the site and known to occur in the immediate surrounding area.

Note: The above list is not intended to be a comprehensive list of every plant which may occur on the site or in the zone of influence