

JURISDICTIONAL WATER DELINEATION

**APPLE VALLEY, SAN BERNARDINO COUNTY, CALIFORNIA
APN: 0463-231-06**

Prepared for:

Green Truck Solutions, LLC.

Prepared by:

**RCA Associates, Inc.
15555 Main St. #D4-235
Hesperia, California 92345
(760) 596-0017; (760) 956-9212**

Principal Investigator:

**Randall Arnold, Senior Biologist
Ryan Hunter, Lead Environmental Scientist/ Biologist
Jessica Hensley, Environmental Scientist/ Biologist
Brian Bunyi, Wildlife Biologist**



Project #2022-110 JD

August 1, 2022

TITLE PAGE

Date Report Written: August 1, 2022

Date Field Work Completed: July 14, 2022

Report Title: Jurisdictional Waters Delineation

Assessor's Parcel Number: 0463-231-06

Prepared for: Green Truck Solutions, LLC

Principal Investigators: Randall C. Arnold, Jr., Principal Biologist
Ryan Hunter, Environmental Scientist/Biologist
Jessica Hensley, Environmental Scientist/Biologist
Brian Bunyi, Wildlife Biologist

Contact Information: Randall C. Arnold, Jr.
RCA Associates, LLC
15555 Main Street, #D4-235
Hesperia, CA 92345
(760) 956-9212
rarnold@rcaassociatesllc.com
www.rcaassociatesllc.com

Ryan Hunter
RCA Associates, LLC
15555 Main Street, #D4-235
Hesperia, CA 92345
(760) 998-7165
rhunter@rcaassociatesllc.com
www.rcaassociatesllc.com

Table of Contents

Executive Summary	1
1.0 Introduction	3
1.1 Property Description	3
1.2 Project Description	4
1.3 Regulatory Overview	4
1.3.1 U.S. Army Corps of Engineers	4
1.3.2 Regional Water Quality Control Board (RWQCB)	4
1.3.3 California Department of Fish and Wildlife (CDFW)	5
2.0 Delineation Methodology	6
2.1 Literature Review	6
2.2 Field Surveys	6
2.3 Potential Waters of the US	7
3.0 Delineation Results	8
3.1 Jurisdictional Determination	8
3.1.1 U.S. Army Corps of Engineers Methodology Determination	8
3.1.2 Regional Water Quality Control Board Determination	9
3.1.3 California Department of Fish and Wildlife Determination	9
3.1.4 Significant Nexus Determination	9
3.2 US Army Corps of Engineers Permits	9
3.3 Regional Water Quality Control Board	9
3.4 California Department of Fish and Wildlife	10
4.0 Conclusion and Recommendations	11
5.0 References	12
Appendix A - Table and Figures	

EXECUTIVE SUMMARY

RCA Associates, Inc. was retained by Green Truck Solutions, LLC. to conduct a jurisdictional waters delineation (JD) along the northern channel in association with the proposed project located northwest from the intersection of Navajo Road and Lafayette Street in the city of Apple Valley, California (Section 21, Township 6 North, Range 3 West) (Figures 1, 2, 3, 4 and 5). The site has been disturbed in the past due construction activities. The majority of the site supports nonnative vegetation consisting of a mix of native and non-native species.

The delineation was conducted to evaluate and analyze the ordinary highwater mark (OHWM) of the channel located in the north section of the property that runs southwest through the site flowing outward toward the western boundary 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 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 does meet the criteria as WoS and WoUS based on several factors (See Section 2.4 for complete analysis.). The drainage channels appear to have a direct nexus to the nearest water source (Bell Mountain Wash) and do meet the characteristics that define a channel as a nexus to the nearest Traditional Navigable Water (TNW) (i.e., Mojave River) which is located approximately 6.7-miles southwest of the property site. Mojave River is considered a TNW since it supports habitats which may support populations of special status species, drains a large watershed, and is utilized by a wide variety of waterfowl when water is present.

RCA Associates, Inc. conducted a jurisdictional delineation on July 14, 2022, during which the ordinary high-water mark (OHWM) was evaluated and the centerline of the channels were flagged along the blueline 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

Initial biological surveys, performed on May 10, 2022, were conducted on an 18.77-acre parcel (approximate) located northwest from intersection of Navajo Rd. and Lafayette St. in the City of Apple Valley, San Bernardino County, California (APN: 0463-231-06). The project is specifically located in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 21, Township 6 North, Range 3 West, as depicted on the USGS Apple Valley North 7.5-minute quadrangle map. Existing commercial businesses border the property to the west and the north, east and south by vacant land.

The entire site shows significant signs of past disturbances associated with some grading and normal pedestrian and vehicular traffic. The site supports a scrub habitat, and has areas of the site that has been previously cleared of vegetation approximately five to ten years ago, 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. Numerous minor channels are located on the northern portion of the property that runs southwest toward the western boundary and will be referred to as the northern channel. There was no water present in the channels during the jurisdictional delineation conducted on July 14, 2022.

1.2 PROJECT DESCRIPTION

The project proponent (Green Truck Solutions, LLC) is proposing to develop a warehouse which will act as a cold storage and will include an office and loading dock on site totaling 385,004 sq. ft. The proponent is proposing to construct two access points via Navajo Road and Lafayette Street.

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. 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)

Based on the field investigations conducted on the site by RCA Associates, Inc. on July 14, 2022, the northern channel bisecting the northeast corner of the 18.77-acre property does meet the criteria for “Waters of the State” (WoS) based on several factors.

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.

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 July 14, 2022. Figure 3 shows the location of the wash in 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 July 14, 2022 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 channels bisecting the northeastern corner of the site do meet the criteria as a jurisdictional channel based on several factors discussed below. The drainage channels on the site are the result of runoff and erosion coming from higher areas of the site and surrounding area to the north and east. Additionally, water enters the drainage channels on the northeast part of the property where they run southwest towards the western boundary. Through the field investigation it was discovered that during major storm events, water will enter the drainage channels and flow in a southwest direction approximately 942 ft. before running off the property on the western edge which flows toward a cement culvert that diverts flow west toward the Bell Mountain Wash eventually running south into the Mojave River (Figure 4).

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 July 14, 2022, it was determined that the northern channel bisecting the northeast portion of the property is considered jurisdictional and has a direct nexus to one of WoS, WoUS, or the nearest TNW (Mojave River), which is located about 6.7-miles southwest of the site. A brief discussion of characteristics of the Waters of the United States follows:

Vegetation - The majority of the site supports native vegetation consisting mostly of scrub habitat. The areas of the site that border the channels support big sage brush (*Artemisia tridentata*), creosote bush (*Larrea tridentata*), desert wire lettuce (*Stephanomeria pauciflora*), Asian mustard (*Brassica tournefortii*), rattlesnake weed (*Euphorbia albomarginata*) and California buckwheat (*Eriogonum fasciculatum*). The widths of the channels ranged in width from one to three feet and with depths of six inches to one foot.

Soils - The soils within the channels were not hydric. The soils surrounding the channels include:

- Helendale Bryman Loamy Sand - 2 to 5 percent slope, no frequency of flooding, no ponding, well-draining, low runoff, and moderate water supply.

Hydrology - The channels are small 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.

3.1.2 REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

Based on the field investigations and a review of available data, the USGS does show the northern channel as a blueline channel bisecting the property on the northeast portion.

3.1.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE DETERMINATION

The delineation summarized in this report indicates that the northern channel does meet the criteria to be considered a WoUS and WoS. However, the USACOE and 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, Mojave River is a seasonally flooded streambed which may contain State and Federally listed biological species, funnels numerous channels, supports various recreational uses and is used by waterfowl. These characteristics, in total, result in Mojave River being classified as a Traditional Navigable Water (TNW) which is considered by Corps of Engineers Guidelines a Water of the United States. Based on the analysis of the Corps Guidelines, a nexus with a TNW (i.e., Mojave River) does exist. As described in Section 3.0, water flows into the Northern channel from the northeast and flows for approximately 942 feet before flowing southwest onto the adjacent property containing a cement culvert that directs flow downstream west toward the Bell Mountain Wash which flows into the Mojave River. The channel on the site connects to a nexus that belongs to WoS, WoUS, or TNW (Mojave River).

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 may be required. The COE District office will be contacted during the environmental review process for concurrence with this conclusion and for additional discussions.

3.3 REGIONAL 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. However, a Section 401 permit may be required due to the Channels being considered WoUS.

3.4 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Based on the field investigations conducted on July 14, 2022, the northern channel is considered to be jurisdictional waters 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 two buildings which will both include an office, parking space, loading dock and cold storage. The total amount of impacts to the channel would be approximately 0.22-Acres (9,698.7 square feet). Therefore, the following mitigation measures are recommended for the project to compensate for the impacts to the intermittent blueline 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 “waters of the State” within the Santa Ana watershed **at a ratio of no less than 2:1 onsite for permanent impacts to 0.22-acres (9,698 square feet) of an ephemeral stream channel.**

- (2) Prior to issuance of a grading permit, the developer shall obtain a Clean Water Act Section 404 Nation-Wide Permit from the U.S. Army Corps of Engineers and **compensate for the loss of 0.22-acres (9,698 square feet) of ephemeral stream channel,** and a Clean Water Act Section 401 Certification from the Santa Ana Regional Water Quality Control Board. These permits will address impacts to identified jurisdictional resources on the project site and appropriate on-site mitigation. The developer shall implement this measure to the satisfaction of the City Planning Department.

5.0 REFERENCES

- Hickman, James C., (ed.). 1993. *The Jepson Manual: Higher Plants of California*. Berkeley: University of California Press.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game (Sacramento), Nongame Heritage Program Report.
- Hurt, G.W., and L.M. Vasilas (eds.). 2006. *Field Indicators of Hydric Soils in the United States, Version 6.0*. United States of Department of Agriculture, Natural Resources Conservation Service, in cooperation with the National Technical Committee for Hydric Soils.
- Lichvar, R.W., and S.M. McColley. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. Army Engineer Research and Development Center. ERDC/CRREL TR-08-12.
- Lichvar, R.W., B. Allen, J. Byersdorfer, D. Cate, L. Dixon, and C. Photos. *Vegetation and Channel Morphology Responses to Ordinary High Water Discharge Events in Arid West Stream Channels*. U.S. Army Engineer Research and Development Center. ERDC/CRREL TR-09-5.
- Planert, M., and J.S. Wouldiams. 1995. *Ground Water Atlas of the United States, California, Nevada, HA 730-B-Basin and Range Aquifers*. United States Geological Survey. Available at: http://capp.water.usgs.gov/gwa/ch_b/index.html. Accessed January 11,2010.
- United States Army Corps of Engineers (USACE). 1987. *Wetlands Delineation Manual-Technical Report Y-87-1* (online edition). U.S. Army Corps of Engineers Waterways Experiment Station.
- United States Army Corps of Engineers (USACE). 2007. *Jurisdictional Delineation Form Instructional Guidebook*. Available at: <http://www.usace.army.mil/CECW/Pages/home.aspx>. Accessed January 11, 2010.
- United States Army Corps of Engineers (USACE). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* U.S. Army Engineer Research and Development Center. ERDC/EL TR-08-28.
- Western Regional Climate Center (WRCC). 2010. *Palm Springs, California (046635)*. Available at: <http://www.wrcc.dri.edu/>. Accessed January 11, 2010.

APPENDIX A

Table and Figures



Legend
 Project Boundary

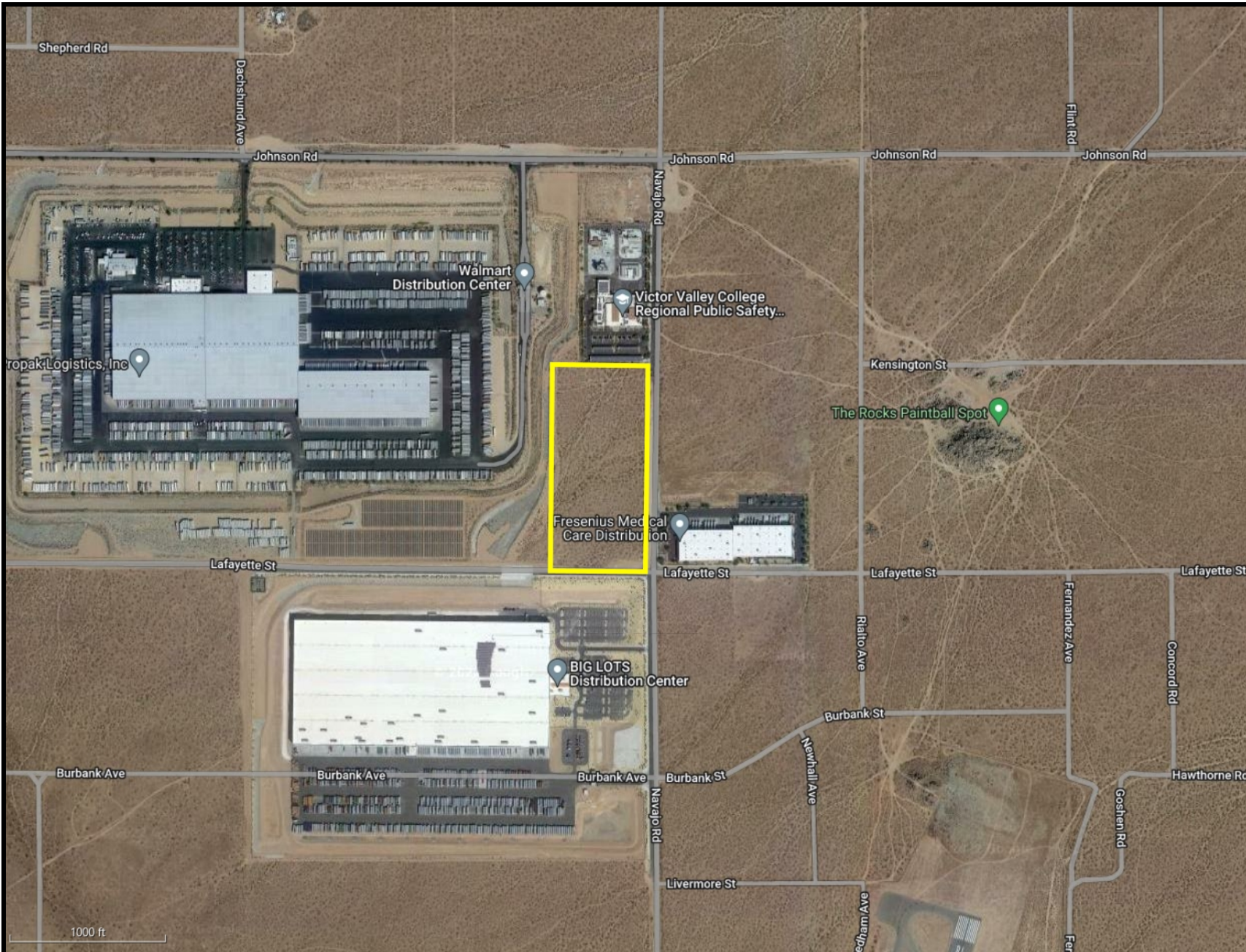


Figure 1: Regional Exhibit
 Produced By: RCA Associates, Inc.

**NW of the Intersection of
 Lafayette Street and Navajo
 Road**

Source:	Uinta Software
Acreage:	18.77 Acres (Approximately)
Project #:	2022-110 JD





Legend


 Project Boundary



Figure 2: Vicinity Exhibit

Produced By: RCA Associates, Inc.

NW of the Intersection of Lafayette Street and Navajo Road

Source:	Uinta Software
Acreage:	18.77 Acres (Approximately)
Project #:	2022-110 JD





Legend



-  Center Line of Channels
-  Project Boundary

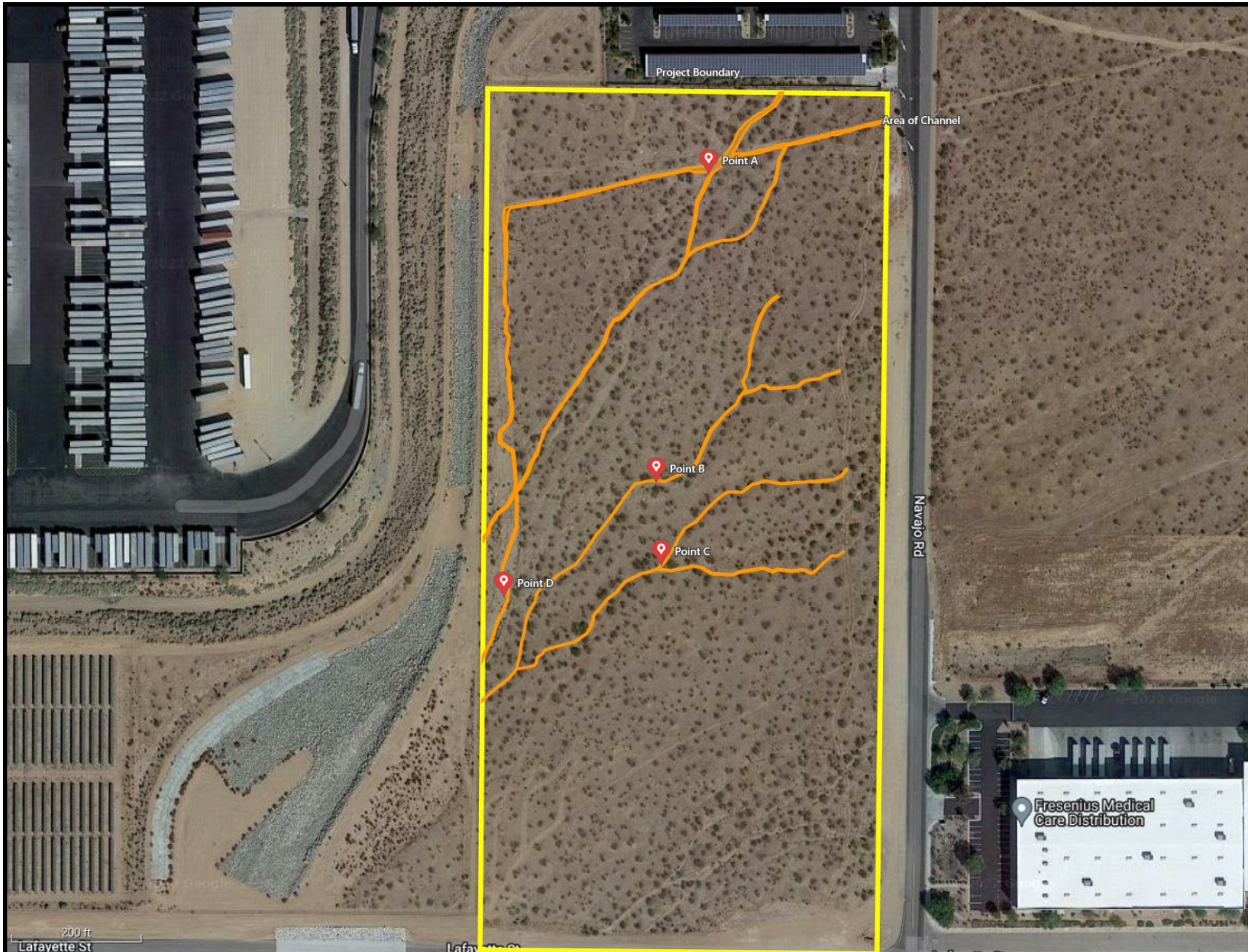


Figure 3: Centerline of Channels

NW of Lafayette Street and Navajo Road

Date	Uinta Software
Acreage:	18.77 Acres (Approximately)
Project #:	2022-110 JD








- ### Legend
-  PC High Water Marks
 -  Photo Capture Point
 -  Project Boundary

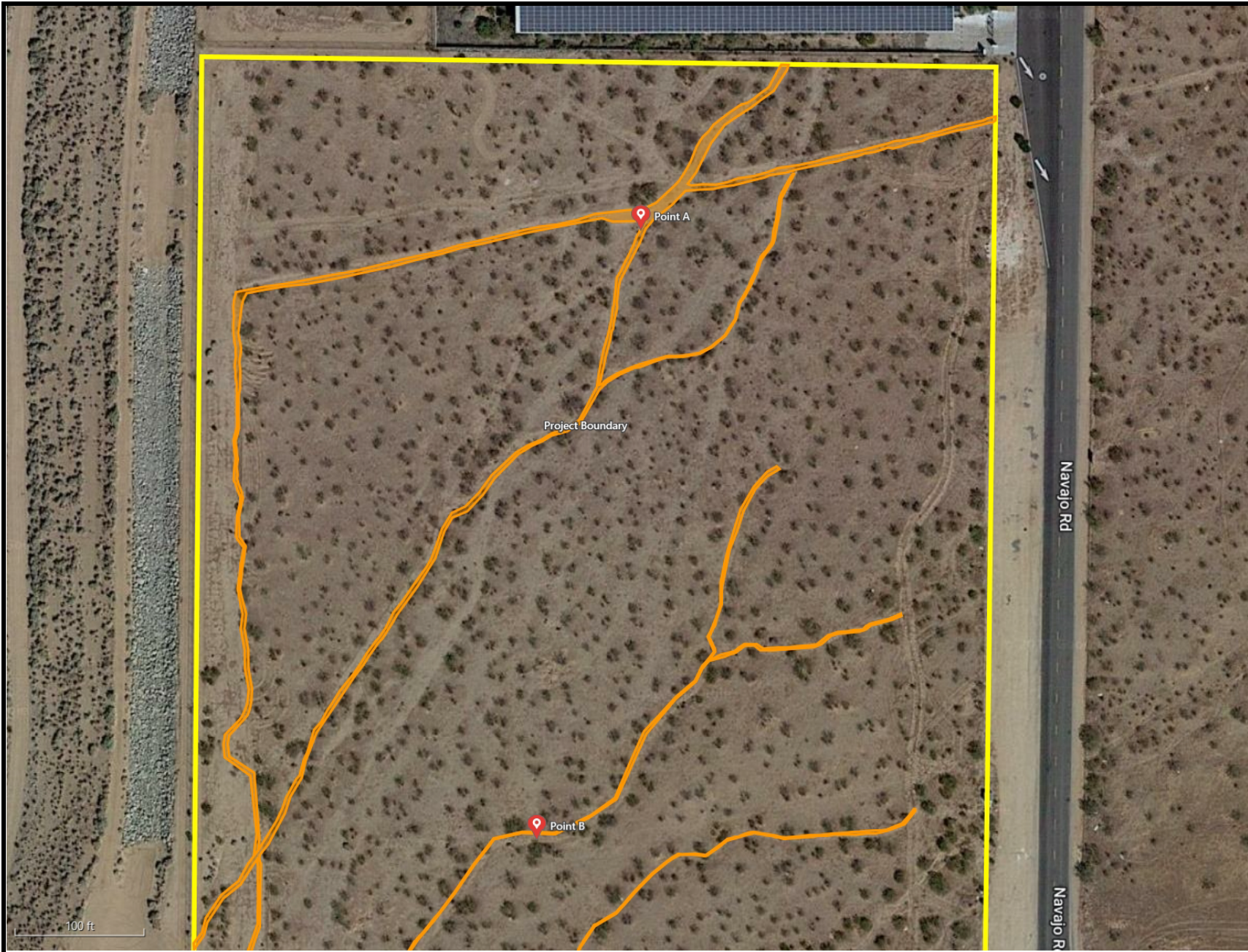


Figure 4: Ordinary High Water Mark

NW of Lafayette Street and Navajo Road

Source:	Uinta Software
Acreage:	18.77 Acres (Approximately)
Project #:	2022-110 JD








- ### Legend
-  PC High Water Marks
 -  Photo Capture Point
 -  Project Boundary



Figure 4A: Ordinary High Water Mark (Magnified View North)

NW of Lafayette Street and Navajo Road

Source:	Uinta Software
Acreage:	18.77 Acres (Approximately)
Project #:	2022-110 JD





Legend




-  PC High Water Marks
-  Photo Capture Point
-  Project Boundary

	Figure 4B: Ordinary High Water Mark (Magnified View South)	NW of Lafayette Street and Navajo Road	Source: Uinta Software	
			Acreage: 18.77 Acres (Approximately)	
			Project #: 2022-110 JD	

POINT A UPSTREAM VIEW



POINT A DOWNSTREAM VIEW

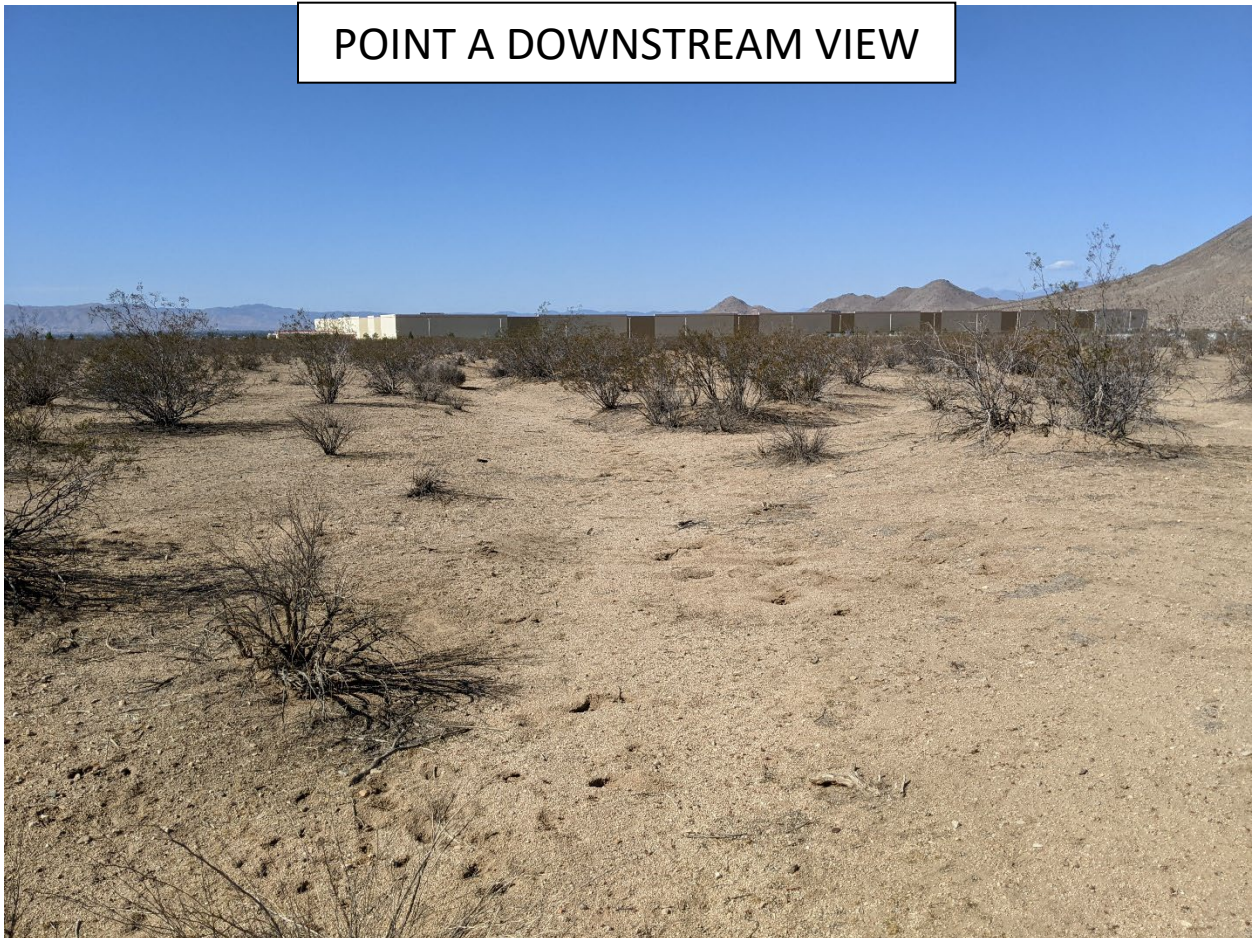
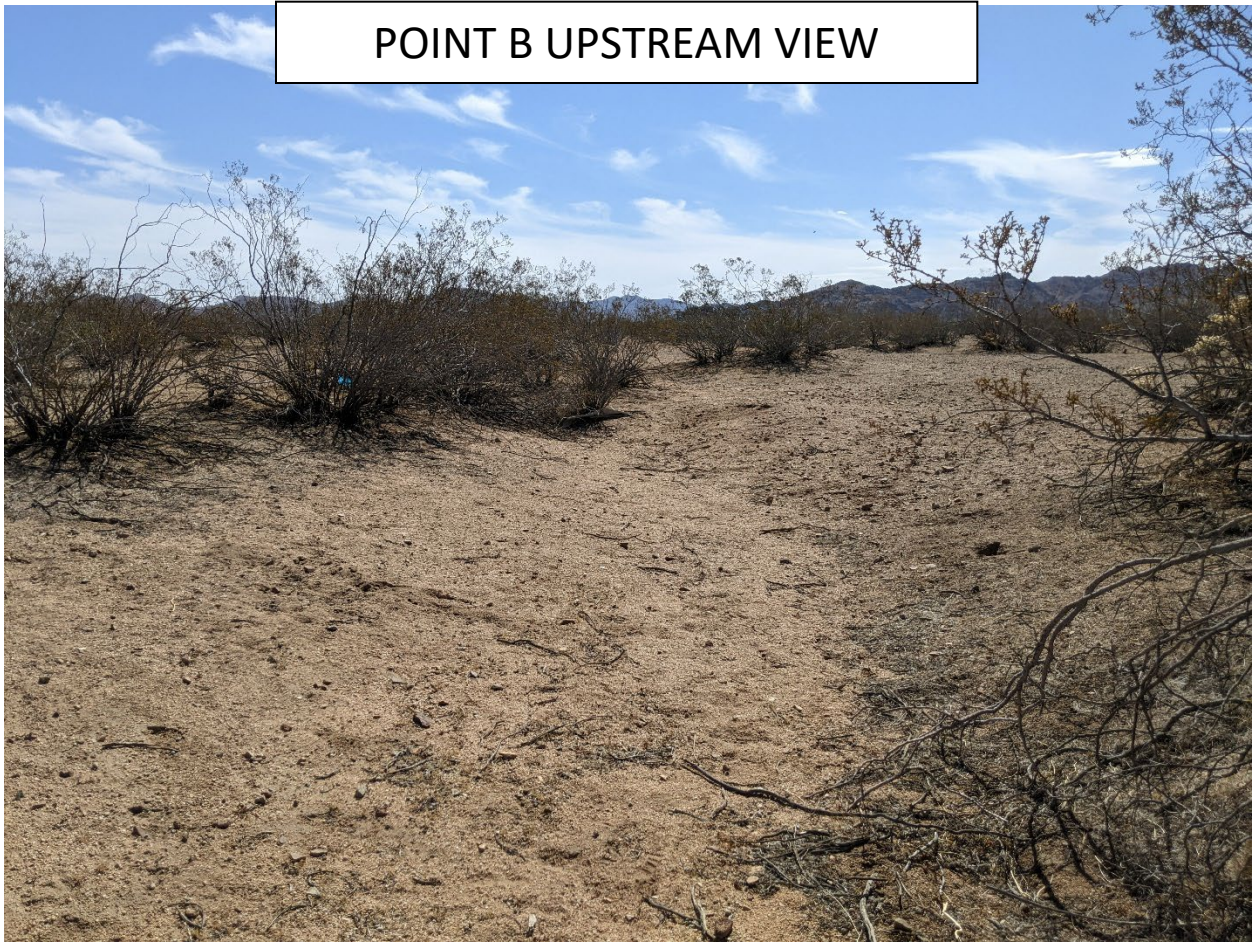


FIGURE 5: PHOTOGRAPHS OF SITE

POINT B UPSTREAM VIEW



POINT B DOWNSTREAM VIEW

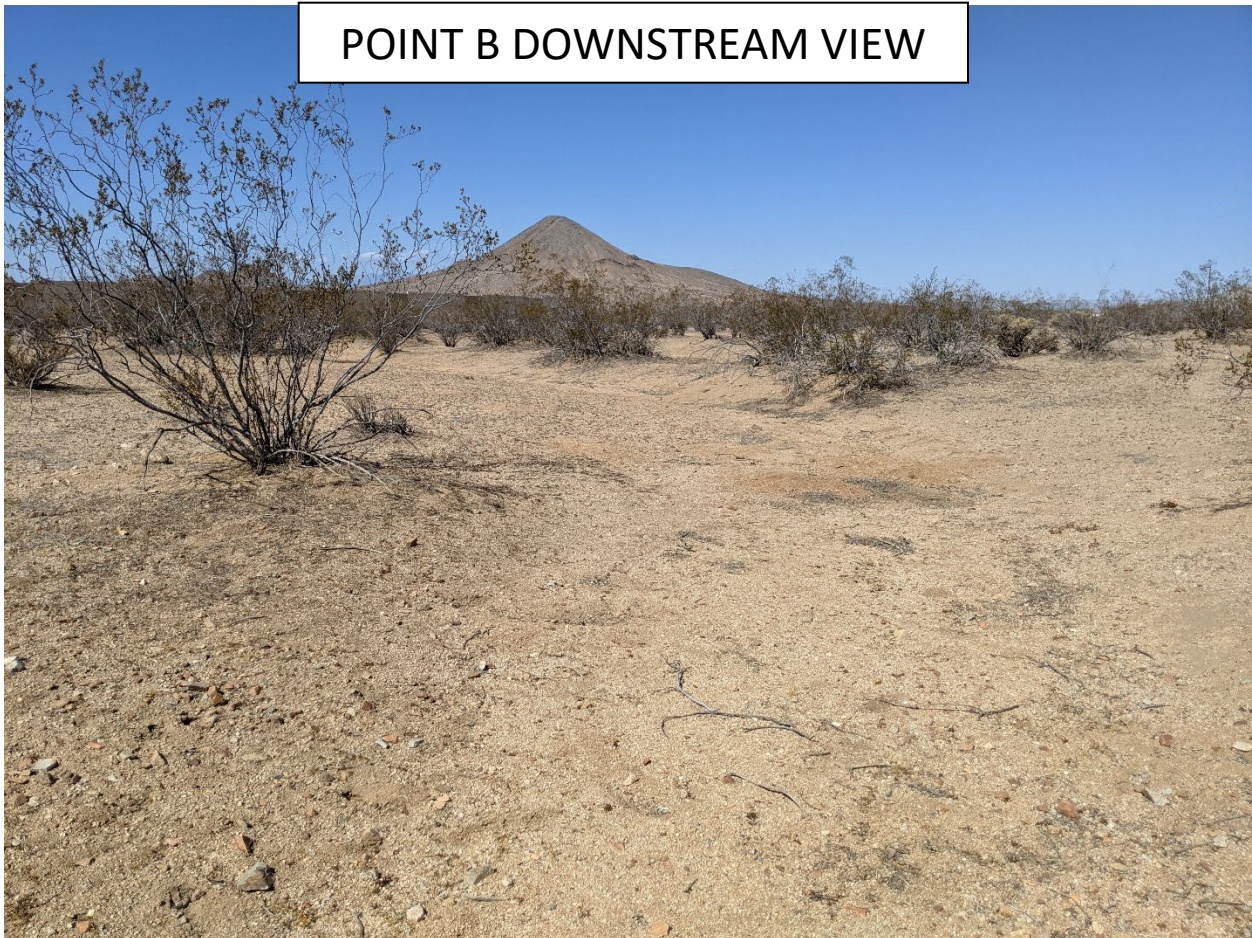


FIGURE 5, cont: PHOTOGRAPHS OF SITE

POINT C UPSTREAM VIEW



POINT C DOWNSTREAM VIEW



FIGURE 5, cont: PHOTOGRAPHS OF SITE

POINT D UPSTREAM VIEW



POINT D DOWNSTREAM VIEW



FIGURE 5, cont: PHOTOGRAPHS OF SITE



- ### Legend
- Area of Channels
(9,698.7 sq. ft.)
 - Project Boundary



Figure 6: Area of Channels NW of Lafayette Street and Navajo Road
 Produced By: RCA Associates, Inc.

Source:	Uinta Software
Acreage:	18.77 Acres (Approximately)
Project #:	#2022-110 JD



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

Common Name	Scientific Name	Indicator
Desert willow	<i>Chilopsis linearis</i>	FAC
Indian rice grass	<i>Achnatherum hymenoides</i>	UPL
Ca. buckwheat	<i>Eriogonum fasciculatum</i>	UPL
Rattlesnake weed	<i>Euphorbia albomarginata</i>	UPL
Shortpod mustard	<i>Hirschfeldia incana</i>	UPL

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