U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 10/14/2020
ORM Number: SPA-2017-00142
Associated JDs: N/A
Review Area Location[1]: State/Territory: NM City: Albuquerque County/Parish/Borough: Bernalillo
Center Coordinates of Review Area: Latitude 35.009299 Longitude -106.629878

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
See attached Jurisdictional Determination Crossing Table	N/A.	N/A.	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	See Section III. C below for information supporting the exclusion determination.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- ☒ Information submitted by, or on behalf of, the applicant/consultant: Title(s) and date(s)
  This information is sufficient for purposes of this AJD.
  Rationale: N/A or describe rationale for insufficiency (including partial insufficiency).
- ☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
- ☒ Photographs: Aerial and Other: Title(s) and/or date(s).
- ☐ Corps site visit(s) conducted on: Date(s).
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- ☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
- ☒ USDA NRCS Soil Survey: Title(s) and/or date(s).
- ☐ USFWS NWI maps: Title(s) and/or date(s).
- ☐ USGS topographic maps: Title(s) and/or date(s).

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	NRCS Ecological site R042XA054NM - Deep Sand-description
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	A. Park Williams, Edward R. Cook, Jason E. Smerdon, Benjamin I. Cook, John T. Abatzoglou, Kasey Bolles, Seung H. Baek, Andrew M. Badger, Ben Livneh. 2018. Large Contribution from Anthropogenic Warming to an Emerging North American Megadrought. Science. Vol. 368 Issue 6488. Pp. 314-318.

B. Typical year assessment(s): According to the Antecedent Precipitation Tool (APT), July through October is the time of year with the most precipitation over a 30-year rolling period for the review area; and the monsoon season occurs between mid-June and the end of September. However, regarding the date, the APT tool was run across four consective years for October 14th (2020, 2019, 2018, and 2017) in conjunction with reviewing satellite imagery of the review area for those same dates, the tool

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

indicates there is a trend from wetter condtions under mild drought to dry contions under moderate drought in 2020. Based on this information the evaluation of the review area was conducted during a drier than normal year within the 30 year rolling period. Therefore, additional data has been obtained and reviewed to support our jurisdictional determination, and is provided in Section III.C below.

It is worth noting that a study by Columbia University concludes that the American Southwest is experiencing a historic “megadrought” not seen in centuries. In fact, for several western states, including New Mexico and Texas, the last twenty years ranks as the second-driest period in the past 1,200 years (A. Park. Williams, 2018).

C. **Additional comments to support AJD:** The proposed project that comprises the review area has been a pre-application action since May 31st, 2017, which is when the first site visit was conducted. A previous jurisdictional determination was made on August 10, 2017 in accordance with the 2008 Rapanos guidance. Under this determination, the Tijeras Arroyo and its feeder drainages were found to be jurisdictional within the review area. This previous AJD also noted that these waterways were ephemeral stream channels.

The review area for this AJD includes 8,818 linear feet of stream bed across 6 waterways. The location of each stream can be found in the Jurisdictional Determination Crossing Table attached to this AJD. The aquatic resource designated as SPA-2017-00142-1 is the Tijeras Arroyo, and the remaining 5 aquatic features are unnamed arroyos that feed into the Tijeras Arroyo. The Tijeras Arroyo drains out of Tijeras Canyon to the east of Albuquerque. This canyon separates the Sandia Mountains to the north from the Manzano Mountains to the south. The Tijeras Arroyo, which runs through Kirtland Air Force Base after leaving Tijeras Canyon, passes just south of the Albuquerque International Airport, and then connects to the Rio Grande. The upper reaches of the arroyo are situated at an elevation of approximately 7,040 feet and are considered to be intermittent. However, as the flow path of the stream channel travels west toward its confluence with the Rio Grande the area dries up and any connection to the groundwater is lost. The 5 unnamed arroyos that feed into the Tijeras Arroyo within the review area are small localized arroyos that drain the immediate area adjacent to the Tijeras Arroyo.

The APT was run for the following additional dates in conjunction with reviewing satellite imagery of the review area: The date of October 14th, 2017 was chosen since that was the date that the jurisdictional determination review began and it was run for that date through 2020 as there was consecutive aerial imagery available for that date. Furthermore, this date in 2017 was a wetter than normal year; and is which is an appropriate starting point when trying to determine the precipitation trend for the review area (and when determining trends it is best to choose periods of time that include the more extreme conditions). Upon review of satellite imagery for these dates, no surface water or indication of recent flows was observed in the stream channel.

According to information provided by the Natural Resources Conservation Service, the review area has an arid climate with distinct seasonal temperature variations and large annual and diurnal temperature changes characteristic of a continental climate. Precipitation averages 8 to 10 inches annually; however, deviations of 4 inches or more from the average are common. Approximately 50 percent of the precipitation occurs between July and November, which is the dominant growing season of native plants. Summer precipitation is characterized by high intensity, short-duration rainstorms. Winter precipitation averages less than one-half inch per month, usually in the form of rain.

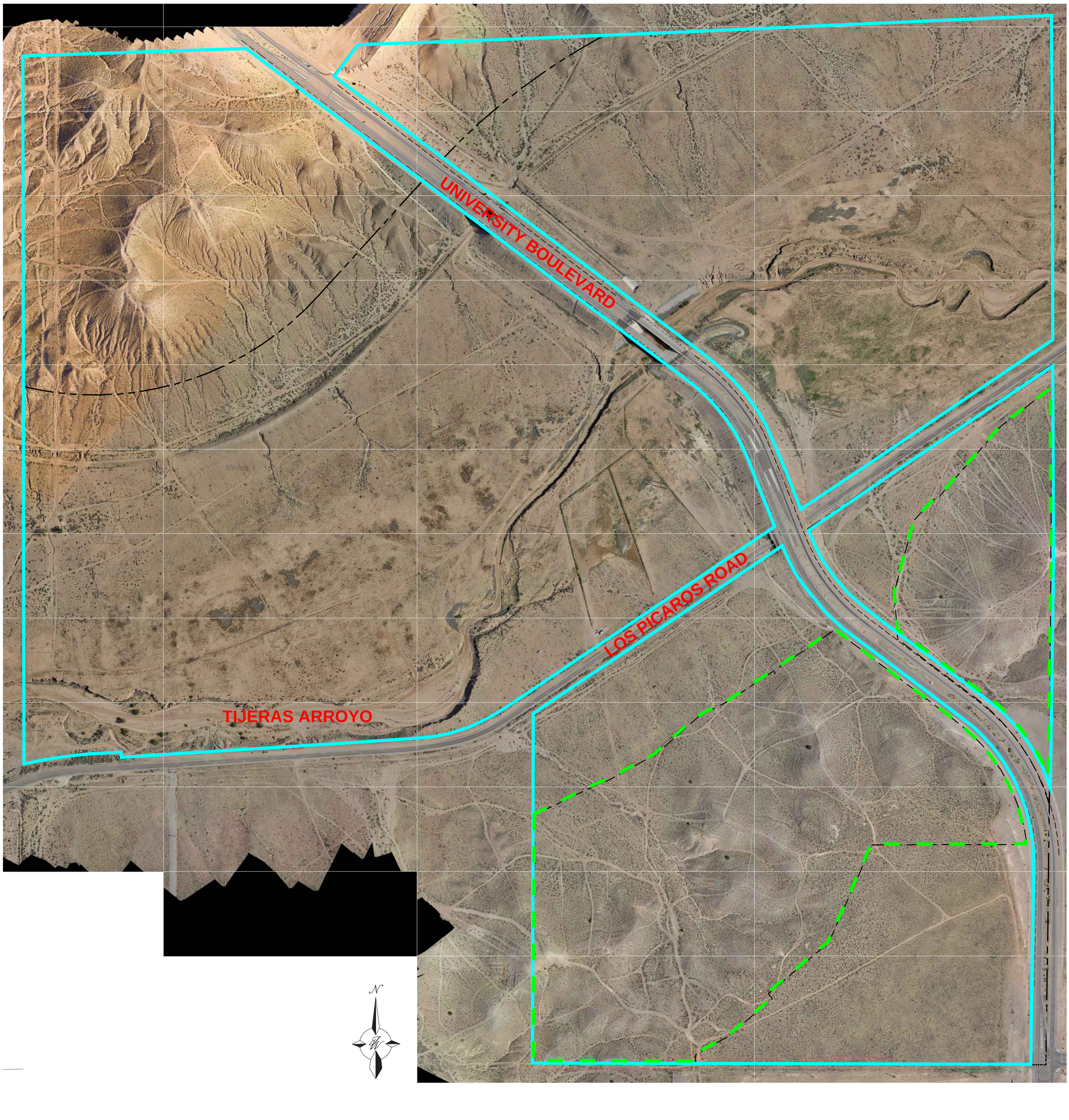
The soils in the review area are described as excessively drained with a depth to water greater than 80 inches. It is also characterized as having a low available water capacity and does not flood or pond. Based on the geomorphology, climate and the ecological site description of the review area, the watershed feeding the Tijeras Arroyo as well as, the 5 unnamed arroyos do not receive enough or consistent snowpack to contribute flow. Furthermore, there are no connecting springs that contribute flow to the waterways. Additionally, the stream channels lack a riparian corridor, and the general area is characterized by a mix of bare ground and upland vegetation. The dominate upland species consist of big sagebrush (Artemisia tridentate), Broom Snakeweed (Gutierrezia sarothrae), and Red Threeawn grass (Aristida longespica Poir).

Given the data provided herein, the only flows that the Tijeras Arroyo and its feeder drainages within the review area experiences are from precipitation events. As such, the waterways evaluated as part of this review are determined to be ephemeral stream channels.

Waters Name	Latitude	Longitude	Waters Size	Type Of Aquatic Resource	Geographic Authority
SPA-2017-00142-1	35.00763	-106.63116	5600 FEET	B3EPHEMERAL	None
SPA-2017-00142-2	35.01213	-106.63003	1166 FEET	B3EPHEMERAL	None
SPA-2017-00142-3	35.01439	-106.63089	694 FEET	B3EPHEMERAL	None
SPA-2017-00142-4	35.0139	-106.63207	878 FEET	B3EPHEMERAL	None
SPA-2017-00142-5	35.01408	-106.63181	178 FEET	B3EPHEMERAL	None
SPA-2017-00142-6	35.01189	-106.62659	302 FEET	B3EPHEMERAL	None

Table 1: Jurisdictional Determination Crossing Table

AERIAL ORTHOPHOTO



LEGEND

= PROPERTY BOUNDARY

= OPEN SPACE (NOT A PART)

Photo 1: Stream Path Becomes Sheet Flow

Photo 2: Stream Path Becomes Sheet Flow

Photo 3: Delineated Stream Path Entering Tijeras Arroyo

Photo 4: Stream Paths Become Sheet Flow

Photo 5: Culvert Invert for Delineated Water Way Prior to Entering Arroyo

Photo 6: Delineated Water Way Crossing Beneath Rail Spur

Photo 7: View of Delineated Stream Paths and Dirt Roads from Earthen Spoil Pile

Photo 8: Looking Upstream of Concrete Swale Along University Blvd Slope

Photo 9: Rail Spur Crossing Beneath University Blvd

Photo 10: Arroyo Crossing University Blvd, Delineated Water Way Outfall, Swallow Nests

Photo 11: Stream Path Becomes Sheet Flow

Photo 12: Stream Path Becomes Sheet Flow

Photo 13: Stream Path Becomes Sheet Flow

Photo 14: View Looking Uphill with Dirt Roads and Off-Road Trails

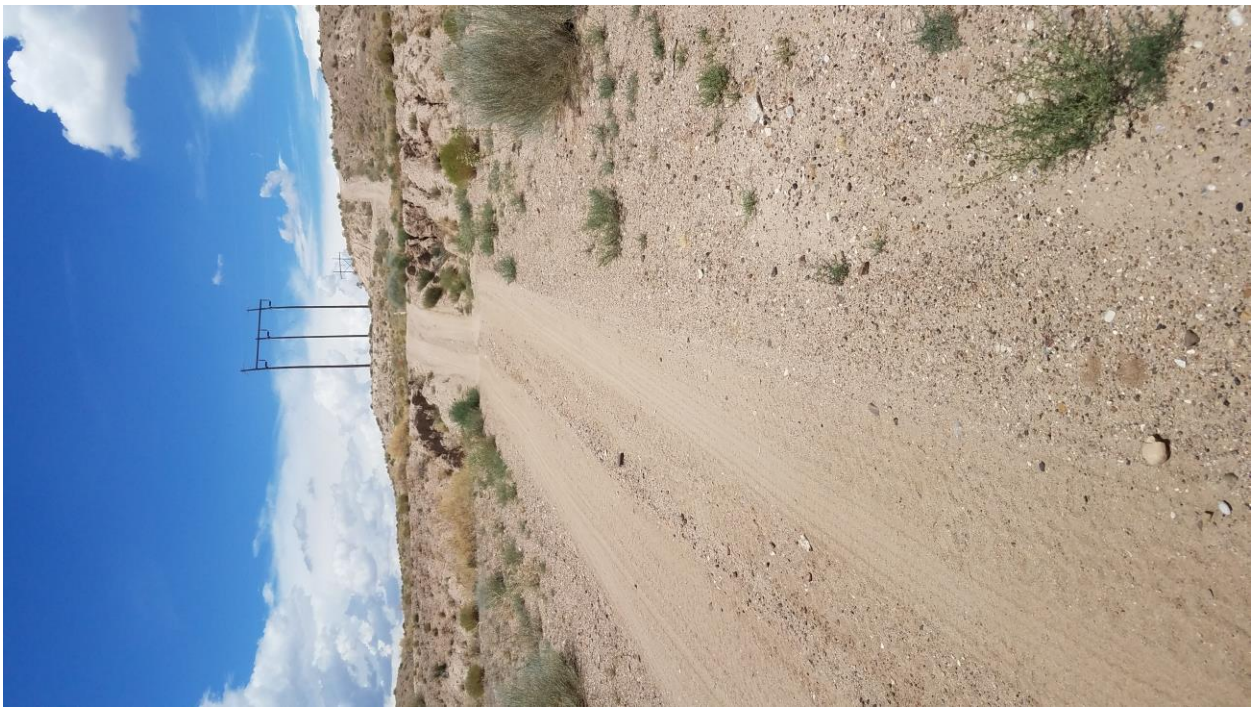


Photo 15: Fuel Line Maintenance Road

Photo 16: Bar Ditch Along South Side of Los Picaros Rd

Photo 17: Silted Up Culverts Crossing Los Picaros Rd

Photo 18: Concrete Swale Along University Blvd

Photo 19: Looking Uphill at Off-Road Trails

Photo 20: Looking Downslope at Dirt Roadway

Photo 21: Looking Upslope at Dirt Roadway

Photo 22: Looking West on Dirt Roadway Directly North of Rail Spur