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): 10/15/2020
ORM Number: SPA2020-204
Associated JDs: N/A
Review Area Location[1]: State/Territory: New Mexico City: Rio Rancho County/Parish/Borough: Sandoval
Center Coordinates of Review Area: Latitude 35.315193 Longitude -106.574444

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
Venada Arroyo Location 1	7000	linear feet	(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: 2020-204 Gauge Data Flow_summary.pdf submitted 7/14/2020

This information is sufficient for purposes of this AJD.

Rationale: This information directly shows the amount of flow in the watershed and how flow is only for a few days total each year in response to precipitation events.

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).

☒ Photographs: Aerial and Other:

☒ Corps site visit(s) conducted on: 7/24/2020, 8/21/2020

☐ 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: Bernilillo, NM 2020

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
Other USDA data (specify)	NRCS Ecological site R042XA054NM – Deep Sand description and NRCS Ecological site R042XA057NM – Bottomland 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 Wmerging 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

[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.

area; and the monsoon season occurs between mid-June and the end of September. However, regarding the date of the site visit on July 24, 2020, the APT results noted that it was conducted during the dry season, and the Drought Index (PDSI) is listed as "Incipient Drought" (2020-06). For the 30 days Antecedent Condition Calculation for the 30-Day rolling total ending on July 24, 2020 the 30th percentile representing the lower limit of the 30-year normal range of precipitation is 0.569291 inches and the observed measurement for July 24th was 0.366142 inches. This information indicates that the field assessment was not conducted during a typical year, additional data has been obtained and reviewed to support our jurisdictional determination. This information is provided below under Section III.C.

It is also worth noting that a recent study by Columbia University notes that the American Southwest is experiencing a historic "megadrought" not seen in centuries. In fact, for several western states, including New Mexico, the last twenty years ranks as the second-driest period in the past 1,200 years (A. Park. Williams, 2018). Based on this data, it seems reasonable that in New Mexico a typical year within the 30 year rolling period is characterized by drought conditions—even severe drought conditions.

C. **Additional comments to support AJD:** The review area for this AJD includes the location of two planned project by the Southern Sandoval County Arroyo and Flood Control Authority.

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% 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.

There are four soil types present in the review area, the predominate soil in the review area is Sheppard loamy fine sand (approximately 50%). The soil is described as somewhat excessively drained with a depth to restrictive feature of more than 80 inches and a depth to water table greater than 80 inches. The soil is also characterized as having a low available water capacity and does not flood or pond. A typical profile for this soil consists of 0 to 3 inches of loamy fine sand in the A Horizon, 3 to 27 inches of loamy fine sand in the C1 Horizon and 27 to 60 inches of loamy fine sand in the C2 Horizon. The other 3 soils identified in the NRCS soils report are Trail loamy sand (approximately 35%) Gilco loam (approximately 10%) and Trail fine sandy loam (approximately 5%). Each of these three soils is described as moderately well drained, with a depth to restrictive feature of more than 80 inches and a depth to water table of 48 to 72 inches. The soil is also characterized as having a low available water capacity and does not flood or pond.

A field assessment of the review area was conducted on July 24, 2020, which was the day after a 0.25" rainfall in the area. However, no surface water was observed in the stream channel during the assessment less than 24 hours after this precipitation event (see attached photos). Additionally, the banks and beds of these stream channels are mostly devoid of any vegetation, nor is there a riparian corridor present. The vegetation that is present typical high desert plant community.

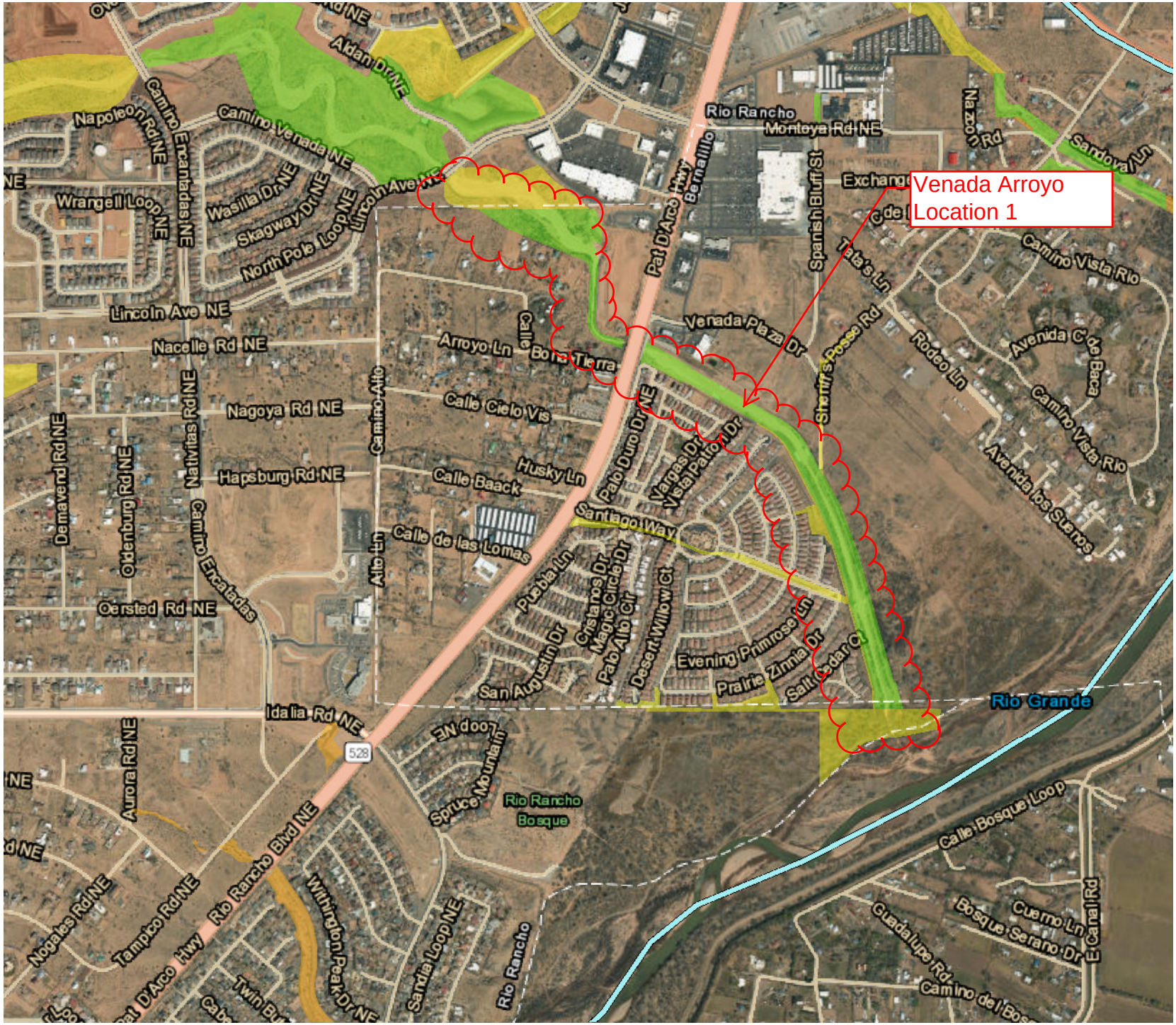
Regulator Forrest Luna conducted a second site visit on 8/21/2020 to take additional photos (see attached) there was no water present in the arroyo.

The applicant also provided gauge data from several points within the same 8-digit Hydrologic Unit Code (HUC 13020203) where the Coronado Arroyo is located. Other similar aquatic features in the area only recorded flow from 0 to 9 days total per year over the 11 years of data provided.

The Venada arroyo had data for 9 years and flowed for a maximum of 104.4 hours per year during the time that data is been provided. The year with the second highest amout of flow was for only 53.6 hours of flow during the year, and in 6 of the years the arroyo had less than 10 hours of flow per year.

In addition to the field assessment, the APT was run for the following additional dates in conjunction with reviewing satellite imagery of the review area: November 1, 2015, January 17, 2013, and February 19, 2014 (see document 2020-204 APT 2015-11-01.pdf, 2020-204 ATP 2013-01-17.pdf, 2020-204 ATP 2014-02-19.pdf, 2020-204 Satellite Imagery 2015-11-01.PNG, 2020-204 Satellite image 2014-02-19.PNG, and 2020-204 Satellite image 2013-01-17.pdf). The date 2015-11-01 was chosen as is the closest date to the wet season with satellite imagery available and the Drought Index was listed as “Normal” this also the year with the second most days of flow from the gauge data provided. Furthermore, this date fell between precipitation events in the area that resulted in over 0.5 inches of rainfall. The date of January 17, 2013 was chosen as it fell within the wet season during the wettest year as determined by the gauge data provided. The date of February 19, 2014 was chosen as the date with available satellite imagery in the wet season following the wettest year as determined by the gauge data provided. Upon review of satellite imagery for these dates, no surface water or indication of recent flows was observed in the stream channel for any of these dates. As such, and in consideration of the other information provided above, it has been determined that the stream channel comprising the review area only experiences flows in response to rain events and, therefore, is ephemeral.

Venada Arroyo Location 1



Southern Sandoval County Arroyo Flood Control Authority

- Acquired, Fee Simple
- Acquired, Easement
- Other, <Null>
- Planned Acquisition, <Null>
- SSCAFCA boundary

1 inch = 1500 feet

0 875 1,750 ft

Date: 8/6/2020

Site Visit 08-21-2020 Venada Location 1

Middle of project location looking east.

Site Visit 08-21-2020 Venada Location 1

Middle of project location looking east.

Site Visit 08-21-2020 Venada Location 1

West end of project location looking East.

Site Visit 08-21-2020 Venada Location 1

West end of project location looking West