Kimley»Horn

March 12, 2021

Sara Born, P.E.
Torch Clean Energy
939 Pearl Street, Suite 210
Boulder, CO 80302

RE: Phase I Environmental Site Assessment for a 154-Acre Subject Property
Chirreon Energy Project
Pinal and Pima Counties, Arizona

Dear Ms. Born:

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained to conduct a Phase I Environmental Site Assessment (ESA) of a 154-acre subject property located on State Trust land, Pima County right-of-way (ROW) on Edwin Road, and Arizona Department of Transportation (ADOT) ROW on State Route (SR) 77 in Pinal and Pima Counties, Arizona. This Phase I ESA was conducted in accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries {(AAI), 40 CFR Part 312} and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process / Designation E 1527-13* (ASTM Standard Practice E 1527-13).

The Phase I ESA for the subject property represents the product of Kimley-Horn's professional expertise and judgment in the environmental consulting industry. This report is certified to, can be relied upon by, and has been prepared for the exclusive use of the following entities: Kimley-Horn, Torch Clean Energy, Chirreon Energy, LLC, and their respective lenders, equity investors, successors, assigns, affiliates, and subsidiaries.

Reasonably ascertainable records reviewed as part of this Phase I ESA documented the use of the property back to 1935. Standard and other historical sources were able to document that the subject property and adjacent properties have primarily been native desert since before 1935 (earliest aerial photograph). The subject property has remained native desert since that time except for stock tanks for cattle, dirt roads (Edwin Road and internal dirt roads/off-road trails), an overhead powerline, and an associated maintenance road along the southern site boundary. Adjacent lands are similar in land use except for SR 77 to the east of the site and a commercial property at the southwest corner of Edwin Road and SR 77. SR 77 was visible as a dirt road in 1935 and transitioned into a paved highway between 1935 and 1956. Various improvements (widening, reconstructing, etc.) have been completed on SR 77 since that time. The commercial property at the southwest corner of Edwin Road and SR 77 was native desert until it was graded in 1996 and was developed into what appeared to be a plant nursery in 2003.

Current Recognized Environmental Conditions

The term Recognized Environmental Condition (REC) as defined in the ASTM Standard is the presence or likely presence of any hazardous substances, or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3)

under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not RECs. We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 of the 154-acre subject property located on State Trust land, Pima County ROW on Edwin Road, and ADOT ROW on SR 77 in Pinal and Pima Counties, Arizona. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of RECs connected with the property.

Historical Recognized Environmental Conditions

A historical REC (HREC), as defined in the ASTM Standard, a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meets unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). This assessment has revealed no evidence of HRECs connected with the subject property.

Controlled Recognized Environmental Conditions

A controlled REC (CREC), as defined in the ASTM Standard, is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). This assessment has revealed no evidence of CRECs connected with the subject property.

Sincerely,

Jennifer Simpkins
Senior Environmental Scientist

REPORT ISSUANCE DATE: 03/12/2021

REPORT VIABILITY DATE: 06/08/2021

CHIRREON ENERGY PROJECT

154-ACRE SUBJECT PROPERTY
PINAL AND PIMA COUNTIES, ARIZONA

Phase I Environmental Site Assessment

Prepared for:

Torch Clean Energy

939 Pearl Street, Suite 210

Boulder, CO 80302

Prepared by:

Kimley»Horn

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Kimley-Horn Project No. 094741038

EXECUTIVE SUMMARY

Table 1: Table of Critical Dates

Milestone	Date
Report Issuance Date	03/12/2021
Date of Interview of Past and Present Owners and Occupants Identified in Section 10 of ASTM 1527-13	12/18/2020
Date of Recorded Environmental Cleanup Lien Search	N/A
Date of Government Record Review	12/10/2020
Date of Visual Inspection of Subject and Adjoining Properties	12/14/2020
Earliest Date of Interviews, Lien Search, Record Reviews, and Inspections	12/10/2020
Report Viability Date	06/08/2021

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1.0 INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained to conduct a Phase I Environmental Site Assessment (ESA) of a 154-acre subject property located on State Trust land, Pima County right-of-way (ROW) on Edwin Road, and Arizona Department of Transportation (ADOT) ROW on State Route (SR) 77 in Pinal and Pima Counties, Arizona. This Phase I ESA was conducted in accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries {(AAI), 40 CFR Part 312} and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process / Designation E 1527-13* (ASTM Standard Practice E 1527-13).

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Kimley-Horn acknowledges that these parties may rely on the contents and conclusions presented in this report. Unless stated otherwise in writing, Kimley-Horn makes no other warranty, representation, or extension of reliance upon the findings of this report to any other entity or third party.

1.1: PROPERTY OVERVIEW

Table 2: Property Summary

Item	Comments
Subject Property Location/Address	The subject property is located on State Trust land, Pima County ROW on Edwin Road, and ADOT ROW on SR 77 in Pinal and Pima Counties, Arizona.
Number of Parcels and Acreage	Three, portions of parcel nos. 304097030 and 305317050 in Pinal County and a portion of parcel no. 222200010 in Pima County, 154 acres
Number of Building(s) and Square Footage	N/A
Current Property Use	Primarily native desert and cattle grazing except for Edwin Road (dirt road), overhead transmission lines, associated dirt maintenance road, and recently graded dirt roads that appear to be associated with geotechnical investigations. The subject property is also used for recreational off-roading.

The subject property location is depicted on **Figure 1. Vicinity Map.** United States Geological Survey (USGS) *Oracle Junction, AZ* 7.5-Minute Quadrangle Map is included as **Figure 2.** Photographs taken during the site reconnaissance are included in **Appendix A**. **Figure 3. Photo Locations Map** depicts the subject property and adjoining properties.

1.2: PURPOSE AND SCOPE OF SERVICES

The purpose of this Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify recognized environmental conditions (RECs) and historical recognized environmental conditions (HRECs) in connection with the subject property. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with the subject property.

1.3: SIGNIFICANT ASSUMPTIONS

Pursuant to ASTM Standard Practice E 1527-13, Kimley-Horn assumes that the information provided by all sources and parties, including the User, is accurate and complete, except where obvious inconsistencies or inaccuracies were identified.

1.4: LIMITATIONS, DEVIATIONS, AND SPECIAL TERMS AND CONDITIONS

There are no deviations from the ASTM Standard. Any physical limitations identified during the completion of this report are referenced in Section 7.0.

Due to changing environmental regulatory conditions and potential onsite or adjacent activities occurring after this assessment, the client may not presume the continuing applicability to the subject property of the conclusions in this assessment for more than 180 days after the earliest date of 1) interviews, 2) lien search (N/A in this case), 3) record reviews, or 4) inspections, per ASTM Standard Practice E 1527-13.

2.0 USER PROVIDED INFORMATION

The ASTM Standard defines a User as "the party seeking to use Practice E 1527 to complete an environmental site assessment. A User may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager." The User has specific obligations for completing a successful application of this practice as outlined in Section 6 of the ASTM Standard Practice E 1527-13.

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfield's Revitalization Act of 2001 (the "Brownfield's Amendments") (if desired), the User must provide certain information (if available) identified in the User Questionnaire to the environmental professional (EP). Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

The following responses were provided by the User. A copy of the completed User Questionnaire is included in **Appendix B**.

Table 3: User Questionnaire Summary

Question	Response
Name of Preparer and User Entity	Sara Born, P.E. Torch Clean Energy
Are you aware of any environmental liens filed or recorded against the property under federal, tribal, state or local law?	No
Are you aware of any Activity and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?	No

Question	Response
Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	No
Does the purchase price being paid for this property reasonably reflect the fair market value of the property?	Yes
If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?	N/A
Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:	
Do you know the past uses of the property?	The property has never been used and is in its native state.
Do you know of specific chemicals that are present or once were present at the property?	There are no chemicals that we are aware of
Do you know of spills or other chemical releases that have taken place at the property?	No
Do you know of any environmental cleanups that have taken place at the property?	No
Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property	No

2.1: RECORDED LAND TITLE RECORDS

A chain of title review was not conducted by Kimley-Horn as the User did not provide Kimley-Horn with chain of title documents for the subject property. A current lien review was not conducted by Kimley-Horn as the User did not provide Kimley-Horn with current title documents for the subject property. This constitutes a data failure, which is a type of data gap; however, the data gap is not considered significant because other information and/or personal experience did not raise reasonable concerns involving the data gap. The title review was completed from a historical records review perspective.

The User provided a Title Commitment dated February 12, 2020 prepared by Stewart Title & Trust for State Trust land managed by the Arizona State Land Department (ASLD) land in Section 36 (Parcel 2A proposed battery and switch yard, Parcel 1B proposed access road west, Parcel 2B proposed solar boundary, and Parcel 1C proposed solar to battery connector), Township 10 South, Range 13 East. The Title Commitment noted easements for electric transmission lines, ROW and easement for overhead electric transmission distribution lines, ROW for Rail X Ranch Road, a grazing lease, an application for a solar photovoltaic generation facility (Chirreon Energy, LLC), oil and gas leases, water rights, and franchising for natural gas facilities. No historic environmental liens were revealed by review of the title report.

The User provided a Title Commitment dated March 05, 2019 for ASLD land in Section 36, Township 10 South, Range 13 East. The Title Commitment noted easements for overhead transmission lines, ROW for transmission lines, ROW for Rail X Ranch Road, grazing leases, an application for archaeological research rights of entry, an application for a solar photovoltaic generation facility, oil and gas leases, water rights, and licensing for electric transmission facilities. No historic environmental liens were revealed by review of the title report.

The User provided a Title Commitment dated March 28, 2019 for ASLD land in Section 31, Township 10 South, Range 14 East. The Title Commitment noted water rights, ROW for overhead electric transmission and distribution lines, an application to purchase state land, ROW for Rail X Ranch Road, grazing leases, application for a solar photovoltaic generation facility, oil and gas leases, water rights, and license agreements for cable services, franchising for distribution and transmission for electricity, and franchising for the Southwest Gas Corporation. No historic environmental liens were revealed by review of the title report.

The User provided a Title Commitment dated May 06, 2019 for parcel no. 222200010 located on ASLD land in Section 5, Township 11 South, Range 14 East. The Title Commitment noted water rights, a grazing lease, a resolution for SR 77, and ROW for Rail X Ranch Road. No historic environmental liens were revealed by review of the title report.

2.2: REASON FOR PERFORMING THIS PHASE I ESA

According to the User, this Phase I ESA was conducted as part of environmental due diligence related to leasing the subject property. The User is proposing a solar photovoltaic generation facility and associated infrastructure on the subject property.

3.0 PHYSICAL SETTING

The following is a summary of the physical and environmental setting of the subject property.

Table 4: Physical Setting Summary

Physical Setting Information for the Subject Property and Surrounding Area		Source
Topography: Refer to Figure 2 for an excerpt of the Topographic Maps		
Site Elevation	Approximately 3,150-3,320 feet above mean sea level	*USGS 7.5-Minute Quadrangle Map, Oracle Junction, AZ*
Topographic Gradient	The property slopes to the southeast.	

Closest Surface Water	The Santa Cruz River lies approximately 12.8 miles southwest of the project limits within the Santa Cruz River Watershed.

General Soil Characteristics: Refer to Appendix C for a copy of the soil survey map and soil type descriptions

Soil Types	Elevation Range (feet)	Depth to restrictive feature	Natural drainage class	Typical Profile	Corrosivity for Concrete/ Steel	Source
Bodecker-Riverwash complex, 0 to 50 percent slopes	3,000 to 5,200	80”+	Excessively drained	0-4”: gravelly coarse sand; 4-60”: very gravelly coarse sand	Low/ Moderate	*Custom Soil Report for Eastern Pinal and Southern Gila Counties, Arizona; and Pima County, Arizona, Eastern Part 2019*
Sasabe-Stronghold complex, 1 to 15 percent slopes	3,290 to 3,890	80”+	Well drained	0-2”: sandy loam; 2-15”: clay loam; 15-44”: clay; 44-60”: clay loam	Low/ High	
Selevin-Tombstone-Saddlebrook complex, 3 to 45 percent slopes	3,200 to 3,900	80”+	Well drained	0-4”: gravelly sandy clay loam; 4-15”: very gravelly clay; 15-25”: extremely gravelly clay; 25-60”: extremely gravelly sandy clay loam	Low/High	
Diaspar sandy loam, 1 to 5 percent slopes	3,250 to 3,600	80”+	Well drained	0-2”: sandy loam; 2-28”: gravelly sandy loam; 28-41”: sandy clay loam; 41-60”: very gravelly loam	Low/ Moderate	

Soil Types	Elevation Range (feet)	Depth to restrictive feature	Natural drainage class	Typical Profile	Corrosivity for Concrete/ Steel	Source
Keysto extremely gravelly fine sandy loam, 2 to 8 percent slopes	3,000 to 4,500	80”+	Well drained	0-1”: extremely gravelly fine sandy loam; 1-17”: extremely gravelly loam; 17-23”: very gravelly loam; 23-41”: extremely gravelly loam; 41-60”: extremely gravelly sandy clay loam	Low/ Low	
Sasabe-Caralampi complex, 1 to 15 percent slopes	3,100 to 3,700	80”+	Well drained	0-5”: sandy loam; 5-22”: clay; 22-31”: gravelly clay loam; 31-41”: gravelly sandy clay loam; 41-60”: very gravelly sandy clay loam	Moderate/ Moderate	

Area Specific Geology/Hydrogeology Characteristics:		
Geology	Early Pleistocene to latest Pliocene surficial deposits Coarse relict alluvial fan deposits that form rounded ridges or flat, isolated surfaces that are moderately to deeply incised by streams. These deposits are generally topographically high and have undergone substantial erosion. Deposits are moderately to strongly consolidated, and commonly contain coarser grained sediment than younger deposits in the same area. (0.75-3 Ma)	USGS, https://mrdata.usgs.gov/geology/state/
Hydrogeology	The Tucson Active Management Area (AMA) contains two parallel sub-basins: the Upper Santa Cruz Valley Sub-basin in the east half and the Avra Valley Sub-basin in the west half. The sub-basins consist of relatively deep alluvial basins filled with layers of sediments and bordered by mountains. The sediments contain substantial volumes of groundwater, but the composition and productivity of the sediment layers differ between the two sub-basins. Groundwater enters the Tucson AMA from north from the Santa Cruz AMA and from bordering mountains and then flows to the north-northwest. Natural recharge also occurs along stream channels (primarily the Santa Cruz River). About 84% of the total net natural recharge in the basin is estimated to occur within the Upper Santa Cruz Valley Sub-basin. Groundwater storage in the AMA during predevelopment times is estimated to have ranged from 68 million acre-feet (maf) to 76 maf to a depth of 1,000 feet. Upper Santa Cruz Sub-basin The depth to bedrock in the center of the Upper Santa Cruz Sub-basin exceeds 11,000 feet. Sediments in this sub-basin have been divided into four hydrogeologic units that form the main regional aquifer and are hydrologically connected to varying degrees. In descending order these units are the recent alluvial deposits, Fort Lowell Formation, Tinaja Beds and Pantano Formation. A basement unit underlies the sediments and forms a relatively impermeable bedrock floor that extends to the surrounding mountains. Information from the Arizona Department of Water Resources (ADWR) website was reviewed for water wells located within the vicinity of the site. According to well registration records, groundwater exists at approximately 380 feet below ground surface. However, groundwater levels can fluctuate due to seasonal variations, groundwater withdrawal or injection and other factors.	ADWR, http://www.azwater.gov/AzDWR/StatewidePlanning/WaterAtlas/ https://gisweb2.azwater.gov/gwsi

Oil and Gas Wells:		
Current Oil and Gas Wells on Subject Property	None	Arizona Oil and Gas Conservation Commission, http://welldata.azogcc.az.gov/
Historical Oil and Gas Wells on Subject property	None	

4.0 RECORDS REVIEW

Kimley-Horn reviewed reasonably ascertainable records to identify obvious uses of the subject property from the present, back to the properties obvious first developed use, or back to 1940, whichever is earlier. Reasonably ascertainable records reviewed as part of this Phase I ESA documented the use of the property back to 1935. Standard and other historical sources were able to document that the subject property and adjacent properties have primarily been native desert since before 1935 (earliest aerial photograph). The subject property has remained native desert since that time except for stock tanks for cattle, dirt roads (Edwin Road and internal dirt roads/off-road trails), an overhead powerline and an associated maintenance road along the southern site boundary. Adjacent lands are similar in land use except for SR 77 to the east of the site and a commercial property at the southwest corner of Edwin Road and SR 77. SR 77 was visible as a dirt road in 1935 and transitioned into a paved highway between 1935 and 1956. Various improvements (widening, reconstructing, etc.) have been completed on SR 77 since that time. The commercial property at the southwest corner of Edwin Road and SR 77 was native desert until it was graded in 1996 and was developed into what appeared to be a plant nursery in 2003.

4.1: AERIAL PHOTOGRAPHS AND SANBORN MAPS

Kimley-Horn reviewed reasonably ascertainable aerial photographs for the subject property. The sources and years reviewed are identified in **Table 5** and the aerial photographs obtained from GeoSearch are included in **Appendix D**.

Kimley-Horn did not review Sanborn Fire Insurance Maps for the subject property. It is our experience that the review of Sanborn Fire Insurance Maps in undeveloped areas is not sufficiently useful and does not produce relevant information for the property or adjacent properties. It is Kimley-Horn's opinion that this does not preclude our ability to reach conclusions regarding the subject property and adjacent properties.

The following table summarizes the sources reviewed and the information obtained about the subject property from these sources. Information obtained about the adjoining properties from these sources is summarized in **Section 8.0**.

Table 5: Aerial Summary for the Subject Property

Year and Source	Summary of Information
1935, ASCS	*Subject Property:* The subject property consists of native desert. *Adjacent Property:* The adjacent property consists of native desert with the exception of the SR 77 alignment adjacent to the eastern boundary of the project limits.
1956, AMS	*Subject Property:* An off-road trail is visible in an east/west direction through the subject property. What appears to be a stock tank has been excavated along the off-road trail within the central portion of the site. No additional notable changes from the 1935 aerial photograph. *Adjacent Property:* SR 77 has been improved and is visible as a paved highway. No additional notable changes from the 1935 aerial photograph.

Year and Source	Summary of Information
1958, USGS	No notable changes from the 1956 aerial photograph.
1971, USAF	*Subject Property:* No notable changes from the 1958 aerial photograph. *Adjacent Property:* No notable changes from the 1958 aerial photograph. Although not adjacent, commercial structures are visible in the project area east of SR 77.
1982, USGS	*Subject Property:* Edwin Road (dirt road) has been graded along the current alignment and extends from the eastern site boundary at SR 77 through the central portion of the site in an east/west direction. No additional notable changes from the 1971 aerial photograph. *Adjacent Property:* An additional dirt road has been graded from Edwin Road to what appears to be a landing strip (dirt) approximately 1,200 feet north of the project limits. This correlates with the landing strip depicted on the *Oracle Junction, AZ* (*1988*) USGS Quadrangle Map. No structures are visible in the landing strip area. No additional notable changes from the 1971 aerial photograph.
1983, USGS	*Subject Property:* An additional dirt road has been graded originating at the stock tank in the central portion of the site and to the north. No additional notable changes from the 1982 aerial photograph. *Adjacent Property:* No notable changes from the 1982 aerial photograph.
1992, USGS	*Subject Property:* What appears to be an overhead powerline and an associated dirt maintenance road have been constructed along the southern project limits. An additional dirt road has been graded at the southwestern corner of the project limits. No additional notable changes from the 1983 aerial photograph. *Adjacent Property:* SR 77 has been widened into a four-lane highway. No additional notable changes from the 1983 aerial photograph.
1996, USGS	*Subject Property:* No notable changes from the 1992 aerial photograph. *Adjacent Property:* The southwest corner of the intersection of SR 77 and Edwin Road has been cleared of vegetation and graded. Additionally, SR 77 has been reconstructed and a landscape median has been added.
2003, USGS	*Subject Property:* Additional ground disturbance is visible in the southwest portion of the project limits (associated with off-roading and cattle grazing). No additional notable changes from the 1996 aerial photograph. *Adjacent Property:* What appears to be a plant nursery is visible at the southwest corner of Edwin Road and SR 77. Eagle Crest Ranch Boulevard is visible east of SR 77. The project area east of SR 77 is transitioning from native desert to residential development and commercial development along SR 77. No additional notable changes from the 1996 aerial photograph.
2007, USDA	No notable changes from the 2003 aerial photograph.
2010, USDA	No notable changes from the 2007 aerial photograph.
2013, USDA	No notable changes from the 2010 aerial photograph.
2015, USDA	No notable changes from the 2013 aerial photograph.
2019, Nearmap	No notable changes from the 2015 aerial photograph.

4.2: HISTORICAL TOPOGRAPHIC MAPS

Kimley-Horn obtained historical topographic maps through GeoSearch that included excerpts from the *Tucson, AZ* (*1905*), *Winkelman, AZ* (*1911 and 1913*), *Mount Lemmon, AZ* (*1957*), *Oracle, AZ* (*1959*), *Oro Valley, AZ* (*1981, 1996, and 2011*), and *Oracle Junction, AZ* (*1988, 1996, and 2011*) Quadrangles. The

Tucson (*1905*) and *Winkelman* (*1911 and 1913*) Quadrangles were not reviewed in detail due to their scale and lack of detail regarding the subject property and adjoining lands. Ephemeral washes are first depicted onsite in the *Oracle, AZ* (*1959*) topographic map and are visible on the *Oracle Junction, AZ* (*1988, 1996, and 2011*) Quadrangle Maps. Within the project limits, Edwin Road and a stock tank are first depicted on the *Oracle Junction, AZ* (*1988*) topographic map. Additionally, SR 77 is depicted adjacent to the eastern project limits and a landing strip is depicted approximately 1,200 feet north of the project limits which correlates with the observation in the 1982 aerial photograph. No structures are depicted within or adjacent to the project limits. No RECs were revealed by the review of historical topographic maps. The historical topographical maps are included in **Appendix E**.

4.3: LOCAL STREET DIRECTORIES

Kimley-Horn did not review local city directories for the property because other historical records indicated the property and adjacent properties have been native desert since before 1935 (earliest aerial photograph). It is our experience that the review of local city directories in undeveloped areas is not sufficiently useful and does not produce relevant information for the property or adjacent properties. It is Kimley-Horn's opinion that this does not preclude our ability to reach conclusions regarding the subject property and adjacent properties.

4.4: ASSESSING DEPARTMENT

Kimley-Horn obtained parcel data for the property and adjacent properties from the Pinal County and Pima County Assessor's Offices. No other reasonably ascertainable assessment information provided by the Pinal County and Pima Counties Assessor's Offices was obtained and reviewed.

4.5: BUILDING DEPARTMENT

Kimley-Horn searched the Pima County Permits records search website (https://permits.pima.gov/acaprod/) and found no records for the subject property within Pima County. Additionally, Kimley-Horn contacted the Pima County Development Services Department. As of the date of this Phase I ESA, Kimley-Horn has not received a response. If a response is received that changed the result of this report, an addendum will be issued. Kimley-Horn also submitted a public records request form to the Pinal County Building Safety Department on December 10, 2020. Pinal County responded via e-mail on December 10, 2020 stating that no records were found for the parcels listed.

4.6: FIRE DEPARTMENT

Kimley-Horn submitted a records request to the Golder Ranch Fire District. The Fire District responded with a letter via email on December 9, 2020 (**Appendix F**) stating that there are no aboveground or underground storage tanks listed or on record for Pinal County parcels nos. 304097030 and 305317050 or Pima County parcel no. 222200010. Additionally, there is no documentation on file for any environmental issues, hazardous materials incidents, or spills for the mentioned parcels.

4.7: HEALTH DEPARTMENT

Kimley-Horn contacted the Pinal County Environmental Health Department regarding environmental records for the subject property. Kimley-Horn was directed to submit a public records request to the Pinal County Public Records Division. A public records request was then submitted to Pinal County requesting data for environmental reports, hazardous materials incidents, spills, underground or aboveground storage tanks for parcel nos. 304097030 and 305317050. Kimley-Horn received a response via email on December 15, 2020 stating that no records exist for the subject property.

Kimley-Horn contacted the Pima County Health Department regarding environmental records for the subject property and was re-directed to the Pima County Department of Environmental Quality (DEQ). Pima County DEQ responded stating that for environmental records, the ADEQ eMaps website should be used.

The ADEQ eMaps website (http://gisweb.azdeq.gov/arcgis/emaps/) was reviewed for hazardous waste, landfills, superfund sites, and USTs. No RECs or environmental concerns for the subject property were revealed during the search. Pima County DEQ also completed an Owner Questionnaire for Edwin Road ROW (see **Appendix G** for details).

4.8: UTILITIES

4.8.1: MUNICIPAL WATER/WATER WELLS

Kimley-Horn reviewed the ADWR Well Registry website (ADWR 2019). No water wells are located on the subject property according to ADWR. Kimley-Horn obtained site survey data from Cooper Aerial Surveys Co. The survey data revealed that the site is not served by municipal water and the nearest connection is along SR 77.

4.8.2: SANITARY SEWER/SEPTIC SYSTEM

Kimley-Horn obtained site survey data from Cooper Aerial Surveys Co. The survey data revealed that the site is not served by municipal sewer and the nearest connection is along SR 77. If septic systems are encountered, they should be removed and disposed of in accordance with all applicable rules and regulations.

4.8.3: HEAT SOURCE

The subject property is undeveloped native desert with no buildings. No documentation of fuel oil use was identified during review of reasonably ascertainable records, and no visual evidence of fuel oil use was identified during the site reconnaissance. It is Kimley-Horn's opinion that this does not preclude our ability to reach conclusions regarding the subject property and adjacent properties. If a fuel oil underground storage tank (UST) is discovered in the future and/or evidence of a release of historical fuel oil is identified, further evaluation may be necessary.

4.9: UNDERGROUND STORAGE TANK SYSTEMS

Review of reasonably ascertainable standard and other historical sources and site observations have not identified the current presence of USTs on the subject property. Specifically, no records of USTs were identified through review of reasonably ascertainable records and Kimley-Horn did not observe any evidence of USTs (i.e. fill ports, vent pipes, etc.) during the site reconnaissance. Additionally, the owner indicated no knowledge of USTs associated with the subject property.

4.10: PREVIOUS ENVIRONMENTAL REPORTS

The following previous environmental report was reviewed during the preparation of this Phase I ESA.

- *Asbestos and Lead-Based Paint Sampling and Analysis Report SR 77 Pima/Pinal County Line – Oracle Junction (NB & SB). December 30, 2009.*
- *Preliminary Initial Site Assessment SR 77, MP 87.92-91.70. January 05, 2010.*
- *Chirreon Energy Project 151-Acre Subject Property, Pinal and Pima Counties Arizona Phase I Environmental Site Assessment. July 25, 2019.*

No RECs or potential environmental concerns were revealed by the review of this documentation.

4.11: GOVERNMENT INSTITUTIONAL AND ENGINEERING CONTROLS

Kimley-Horn has not identified any record of environmental liens, activity and use limitations, or institutional controls or engineering controls associated with the subject property through review of reasonably ascertainable records.

Kimley-Horn searched the ADEQ's eMaps website (http://gisweb.azdeq.gov/arcgis/emaps/?topic=deurs) for Remediation and Declaration of Environmental Use Restriction (DEUR) and Voluntary Environmental Mitigation Use Restriction (VEMURs). DEURs, VEMURs or other use limitations were not identified.

5.0 INTERVIEWS

The objective of completing interviews with knowledgeable site contacts is to obtain information about the uses and physical characteristics of the property. In general, the interviewee supported the information reviewed from other historical sources (i.e. aerial photographs, city records, etc.). The current property owners were interviewed by Kimley-Horn by owner questionnaires. The owner questionnaires were returned and are included in **Appendix G**. Former owners or occupants were not interviewed. Based on Kimley-Horn's research of historical records for the site, it was concluded that interviews with former property owners or former occupants would unlikely provide information material to identifying RECs for the subject property. Therefore, this is not considered a significant data gap. It is Kimley-Horn's opinion that this does not preclude our ability to reach conclusions regarding the subject property and adjacent properties.

The current and historic use of the property in the questionnaire was described as paved and dirt roadway, native desert, and cattle grazing, which is consistent with field observations and the review of historical data. The review of the owner questionnaires did not reveal any RECs or other environmental concerns for the subject property.

6.0 SUMMARY OF HISTORICAL USE

Standard and other historical sources were able to document that the subject property and adjacent properties have primarily been native desert since before 1935 (earliest aerial photograph). The subject property has remained native desert since that time except for stock tanks for cattle, dirt roads (Edwin Road and internal dirt roads/off-road trails), an overhead powerline and an associated maintenance road along the southern site boundary. Adjacent lands are similar in land use except for SR 77 to the east of the site and a commercial property at the southwest corner of Edwin Road and SR 77. SR 77 was visible as a dirt road in 1935 and transitioned into a paved highway between 1935 and 1956. Various improvements (widening, reconstructing, etc.) have been completed on SR 77 since that time. The commercial property at the southwest corner of Edwin Road and SR 77 was native desert until it was graded in 1996 and was developed into what appeared to be a plant nursery in 2003.

7.0 SUBJECT PROPERTY RECONNAISSANCE

Table 6: Site Reconnaissance Summary

Reconnaissance Information	
Kimley-Horn Field Personnel:	Jennifer Simpkins, REP, EP and Cheyenne Herzog, EP in Training
Site Reconnaissance Date:	December 14, 2020
Weather Conditions:	Cloudy, ~61-67 degrees
Escort:	Kimley-Horn was not escorted during the site reconnaissance.

Limitations:	The property was accessed by existing dirt roads accessible by four-wheel drive. Therefore, areas of dense vegetation may have precluded observation.

7.1: SUBJECT PROPERTY OBSERVATIONS

The subject property consists primarily of native desert except for stock tanks for cattle, dirt roads (Edwin Road and internal dirt roads/off-road trails), an overhead transmission line and an associated maintenance road along the southern site boundary. Subsequent to the Phase I ESA in 2019, the transmission line along the southern boundary has been extended northeast and crosses Edwin Road. Also subsequent to the 2019 Phase I ESA, there are multiple recently graded dirt roads that appear to be associated with onsite geotechnical investigations. No additional structures or other improvements were observed onsite. Photographs taken during the site reconnaissance are included in **Appendix A**. No RECs were observed during the site reconnaissance.

Table 7: Site Reconnaissance Observation Summary

Category	Feature	Observed
Interior Equipment	Elevators	N/A
	Air Compressors	N/A
	Incinerators	N/A
	Waste Treatment Systems	N/A
	Presses/Stamping Equipment	N/A
	Press Pits	N/A
	Hydraulic Lifts or In-ground hoists	N/A
	Paint Booth	N/A
	Plating Tanks	N/A
	Lathes, Screw Machines, etc.	N/A
Aboveground Chemical or Other Waste Storage or Waste Streams	Aboveground Storage Tanks (ASTs)	No
	Drums, Barrels and/or Containers > 5 gallons	No
	Chip Hoppers	No
	Hazardous or Petroleum Waste Streams	No
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground Storage Tanks	No
	Fuel Dispensers	No
	Sumps or Cisterns	No
	Dry Wells	No
	Oil/Water Separators	No
	Floor Drains, Trench Drains, etc.	No
	Pipeline Markers	No
Exterior Observations	Stressed Vegetation	No
	Stained Soil or Pavement	No
	Pad or Pole Mounted Transformers and/or Capacitors	No
	Soil Piles of Unknown Origin	Yes, fill pile located within disturbed off-roading area. Although the source of the fill pile was unknown, no stressed or stained vegetation was observed, and no odors were noted. *De minimus* condition.
	Exterior Dumpsters with Staining	No
	Leachate or Other Waste Seeps	No

Category	Feature	Observed
	Trash, Debris, and/or Other Waste Materials	No
	Uncontrolled Dumping or Disposal Areas	No
	Surface Water Discoloration, Sheen or Free Product	No
	Strong, Pungent or Noxious Odors	No
	Storm water retention or detention ponds	No
	Pits, Ponds, Lagoons	Yes, stock tanks typical for cattle grazing.

7.1.1: CURRENT OPERATIONS

The subject property consists primarily of native desert except for stock tanks for cattle, dirt roads (Edwin Road and internal dirt roads/off-road trails), an overhead transmission line and an associated maintenance road along the southern site boundary. Subsequent to the Phase I ESA in 2019, the transmission line along the southern boundary has been extended northeast and crosses Edwin Road. Also subsequent to the 2019 Phase I ESA, there are multiple recently graded dirt roads that appear to be associated with onsite geotechnical investigations.

8.0 ADJOINING PROPERTIES

The following paragraphs provide information about the adjoining properties obtained during the site reconnaissance and through review of reasonably ascertainable information.

North Adjoining Properties

Land north of the subject property is native desert except for dirt roads. An Airstream was observed north of Edwin Road (temporary camping).

East Adjoining Properties

Land east of the subject property consists of SR 77 (paved four-lane highway) and a plant nursery located at the southwest corner of Edwin Road and SR 77.

South Adjoining Properties

Land south of the subject property is native desert. An RV was observed south of Edwin Road (temporary camping).

West Adjoining Properties

Land west of the subject property is native desert except for Edwin Road (dirt road).

9.0 REGULATORY RECORDS REVIEW

Kimley-Horn retained GeoSearch to provide current regulatory database information compiled by a variety of federal and state regulatory agencies. A copy of the GeoSearch database report is included in **Appendix H.** The databases returned no results within the search radius.

Table 8: Environmental Database Summary

Type	Regulatory Agency Database	Approximate Minimum Search Distance (AMSD)	Number of Sites within AMSD
Federal	AIRSAFS	0.02 mile	0
Federal	BRS	0.02 mile	0
Federal	CDL	0.02 mile	0
Federal	DOCKETS	0.02 mile	0
Federal	EC	0.02 mile	0
Federal	ECHOR09	0.02 mile	0
Federal	ERNSAZ	0.02 mile	0
Federal	FRSAZ	0.02 mile	0
Federal	HMIRSR09	0.02 mile	0
Federal	ICIS	0.02 mile	0
Federal	ICISNPDES	0.02 mile	0
Federal	LUCIS	0.02 mile	0
Federal	MLTS	0.02 mile	0
Federal	NPDESR09	0.02 mile	0
Federal	PADS	0.02 mile	0
Federal	PCSR09	0.02 mile	0
Federal	RCRASC	0.02 mile	0
Federal	SEMSLIENS	0.02 mile	0
Federal	SFLIENS	0.02 mile	0
Federal	SSTS	0.02 mile	0
Federal	TRI	0.02 mile	0
Federal	TSCA	0.02 mile	0
Federal	RCRAGR09	⅛ mile	0
Federal	RCRANGR09	⅛ mile	0
Federal	ALTFUELS	¼ mile	0
Federal	FEMAUST	¼ mile	0
Federal	HISTPST	¼ mile	0
Federal	ICISCLEANERS	¼ mile	0
Federal	MRDS	¼ mile	0
Federal	MSHA	¼ mile	0
Federal	BF	½ mile	0
Federal	DNPL	½ mile	0
Federal	NLRRCRAT	½ mile	0
Federal	ODI	½ mile	0
Federal	RCRAT	½ mile	0
Federal	SEMS	½ mile	0
Federal	SEMSARCH	½ mile	0
Federal	SMCRA	½ mile	0
Federal	USUMTRCA	½ mile	0
Federal	DOD	1 mile	0
Federal	FUDS	1 mile	0
Federal	FUSRAP	1 mile	0
Federal	NLRRCRAC	1 mile	0
Federal	NMS	1 mile	0
Federal	NPL	1 mile	0

Type	Regulatory Agency Database	Approximate Minimum Search Distance (AMSD)	Number of Sites within AMSD
Federal	PNPL	1 mile	0
Federal	RCRAC	1 mile	0
Federal	RCRASUBC	1 mile	0
Federal	RODS	1 mile	0
State	AIRS	0.02 mile	0
State	CDL	0.02 mile	0
State	DRYWELLS	0.02 mile	0
State	EUR	0.02 mile	0
State	SPILLS	0.02 mile	0
State	WWFAC	0.02 mile	0
State	AST	¼ mile	0
State	AST2	¼ mile	0
State	BIOMW	¼ mile	0
State	UST	¼ mile	0
State	CLEANERS	½ mile	0
State	CLOSEDSWF	½ mile	0
State	LUST	½ mile	0
State	OPENLF	½ mile	0
State	VRPBF	½ mile	0
State	ASPL	1 mile	0
State	SHWS	1 mile	0
State	WQARF	1 mile	0
Local	COTLF	½ mile	0
Tribal	USTR09	¼ mile	0
Tribal	LUSTR09	½ mile	0
Tribal	ODINDIAN	½ mile	0
Tribal	INDIANRES	1 mile	0
Total			**0**

9.1 SUBJECT PROPERTY AND OCCUPANT LISTINGS

No facilities were documented on the subject property in the RecSearch report provided by GeoSearch.

9.2: ADJOINING AND NEARBY SITES

No facilities were documented adjacent or nearby the subject property in the RecSearch report provided by GeoSearch.

10.0 FINDINGS, OPINIONS AND CONCLUSIONS

10.1: SIGNIFICANT DATA GAPS

Data gaps were encountered during the preparation of this Phase I ESA are listed below. However, no significant data gaps which impacted Kimley-Horn's ability to identify environmental concerns for the subject property were identified:

- Historical aerial photographs and topographic maps were not readily available for review in five-year intervals.
- Former owners or occupants were not interviewed.
- A chain of title review was not conducted by Kimley-Horn as the User did not provide Kimley-Horn with chain of title documents for the subject property.
- A current title report or lien search was not conducted by Kimley-Horn as the User did not provide Kimley-Horn current title documents.
- The property was accessed by existing dirt roads accessible by four-wheel drive. Therefore, areas of dense vegetation may have precluded observation

It is Kimley-Horn's opinion that these gaps do not preclude our ability to reach conclusions regarding the subject property and adjacent properties. Kimley-Horn did not identify or encounter any instances of significant data gaps during the course of this Phase I ESA.

10.2: RECOGNIZED ENVIRONMENTAL CONDITIONS

The term REC as defined in the ASTM Standard is the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions. We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 of the 154-acre subject property located on State Trust land, Pima County ROW on Edwin Road, and ADOT ROW on SR 77 in Pinal and Pima Counties, Arizona. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of RECs connected with the property.

10.3: HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

A HREC, as defined in the ASTM Standard, a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meets unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). This assessment has revealed no evidence of HRECs connected with the subject property.

10.4: CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS

A CREC, as defined in the ASTM Standard, is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). This assessment has revealed no evidence of CRECs connected with the subject property.

11.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* (EP) as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

Jennifer Simpkins, REP, EP

Cheyenne Herzog, EP in Training

12.0 REFERENCES

The following published sources were utilized during completion of this Phase I ESA:

Arizona Department of Environmental Quality (ADEQ). 2020. eMaps database, https://gisweb.azdeq.gov/arcgis/emaps/

Arizona Department of Water Resources (ADWR), https://gisweb3.azwater.gov/WellReg

Arizona Geological Survey, Geologic Map of Arizona, http://data.azgs.az.gov/geologic-map-of-arizona/#

Arizona Oil and Gas Conservation Commission, http://welldata.azogcc.az.gov/

ASTM Standard E 1527-13, 2013, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM International, West Conshohocken, PA, 2013, www.astm.org.

GeoSearch. 2020. E RecSearch Report. Chirreon Solar Project Tucson, Pinal County, Arizona 85232. Received 12/10/2020.

Pima County PimaMaps Parcel database. 2020.
https://webcms.pima.gov/government/geographic_information_systems/gis_maps/pimamaps

Pinal County Assessor Parcel Viewer. 2020.
https://pinal.maps.arcgis.com/apps/webappviewer/index.html?id=d92bad11160e425ca191f048ef6ca556

United States Department of Agriculture, *Custom Soil Resource Report for Eastern Pinal and Southern Gila Counties, Arizona; and Pima County, Arizona, Eastern Part 2020.*

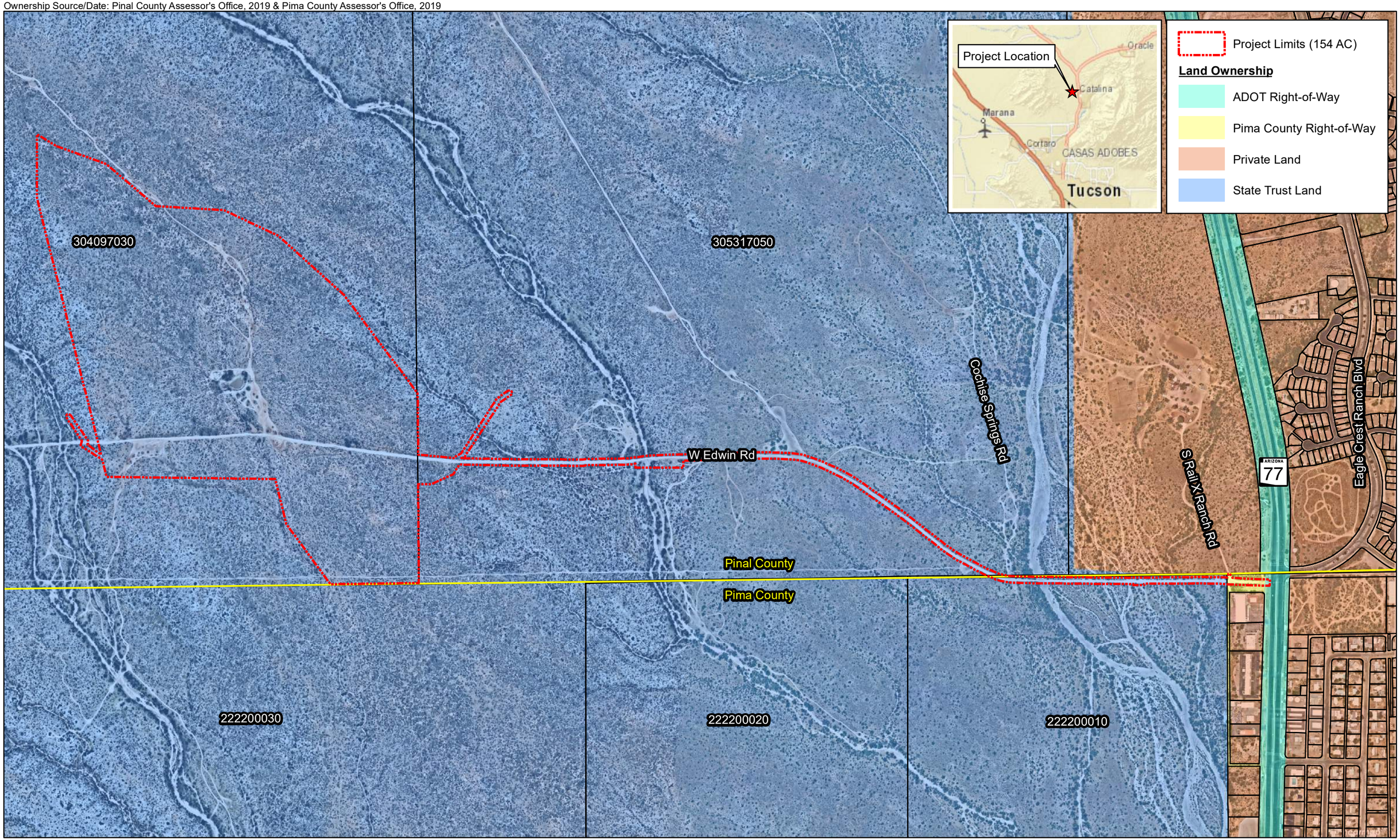
United States Geological Survey Division (USGS) 7.5-Minute Quadrangle Maps (*Oracle Junction, AZ*)

USGS, https://mrdata.usgs.gov/geology/state/

FIGURE 1

Vicinity Map

Aerial Source/Date: Nearmap 2020
Ownership Source/Date: Pinal County Assessor's Office, 2019 & Pima County Assessor's Office, 2019



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Chirreon Energy Project

Pinal and Pima Counties, Arizona

Figure 1. Vicinity Map

0 700 1,400 2,800 Feet

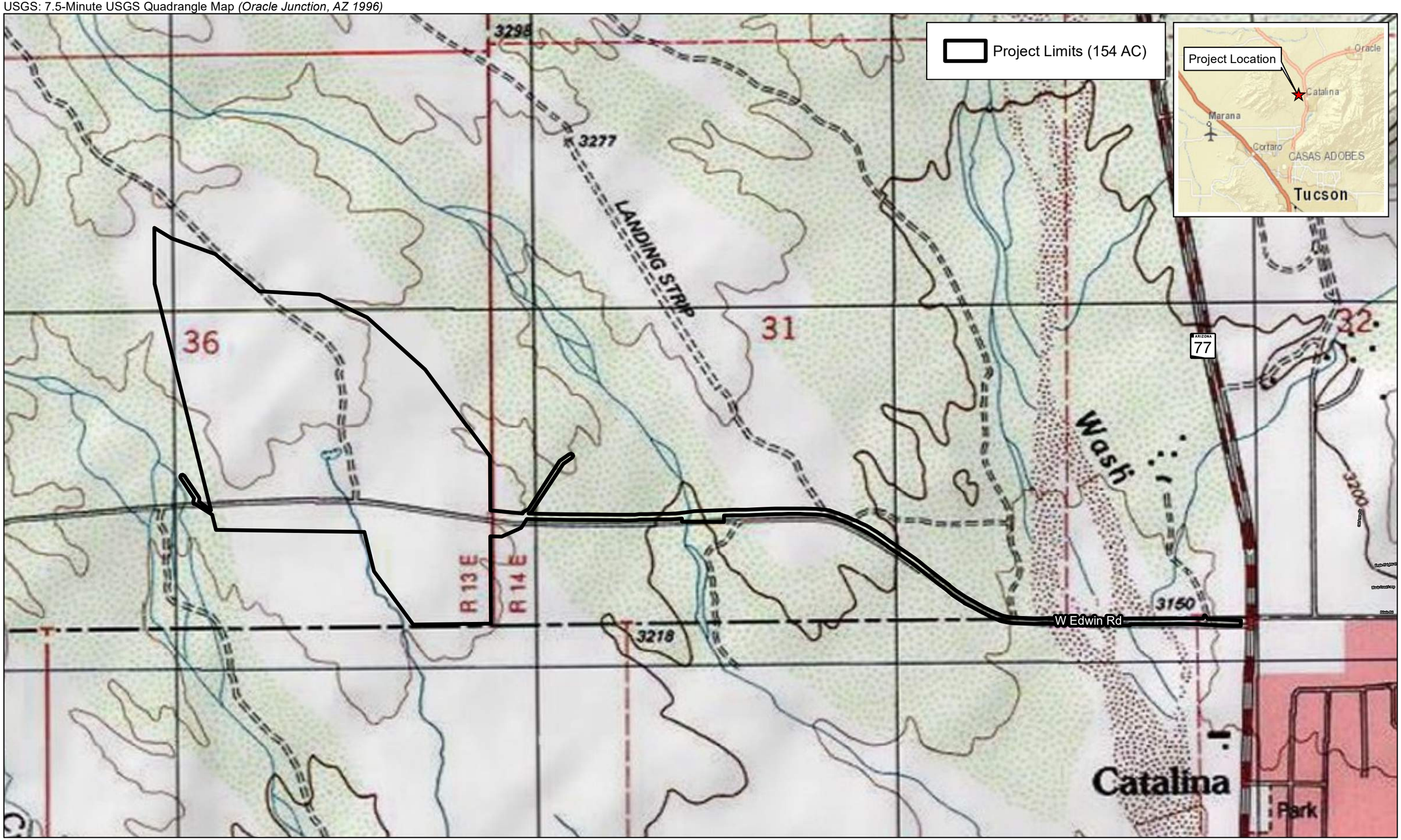
Scale: 1"=700'

N W E S

FIGURE 2

USGS 7.5-Minute Quadrangle Map
Oracle Junction, Arizona

USGS: 7.5-Minute USGS Quadrangle Map *(Oracle Junction, AZ 1996)*



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Pinal and Pima Counties, Arizona

Figure 2. USGS 7.5-Minute Quadrangle Map
(Oracle Junction, AZ, 1996)

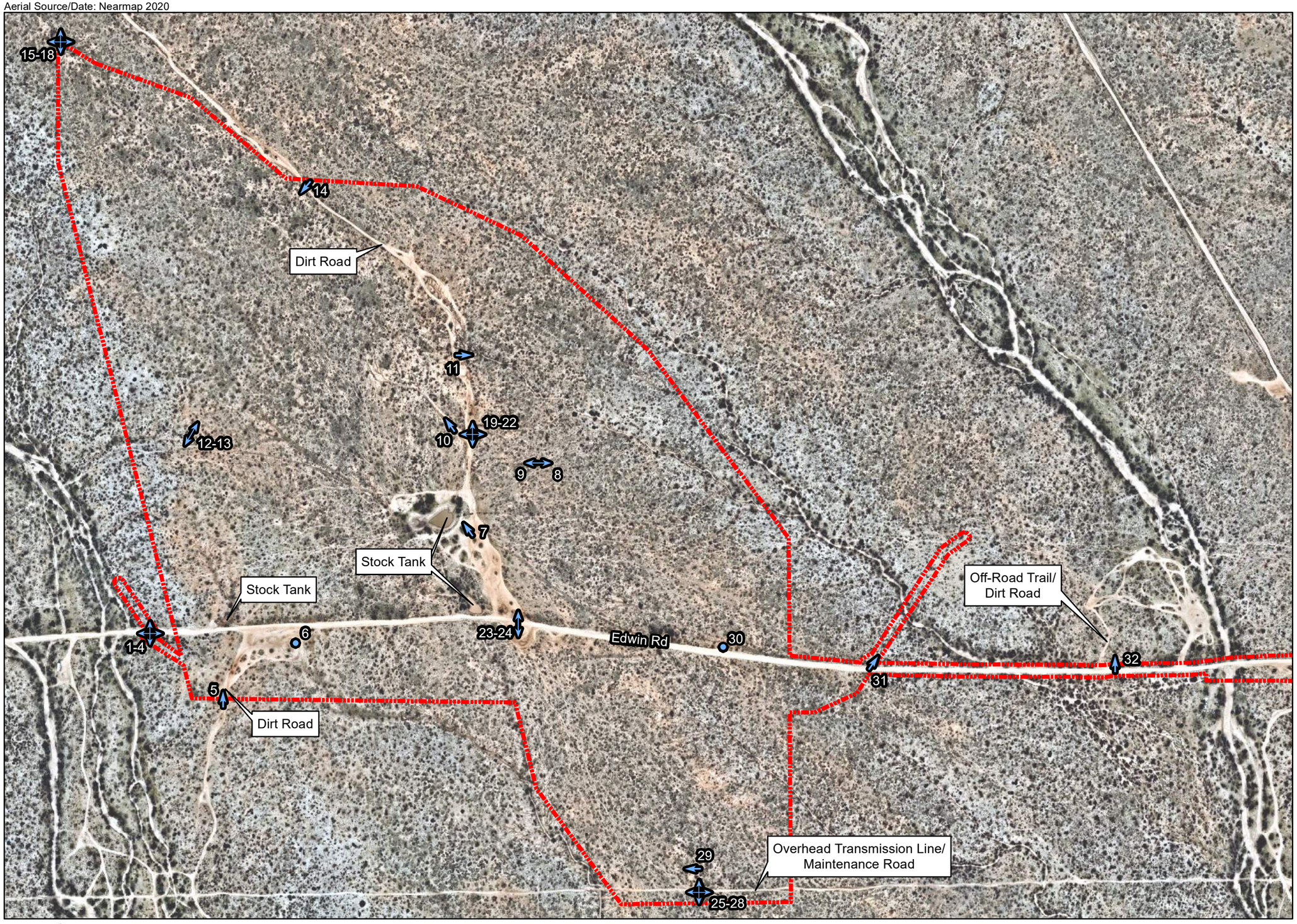
0 400 800 1,600 Feet
Scale: 1"=800'

N W E S

FIGURE 3

Photo Locations Map

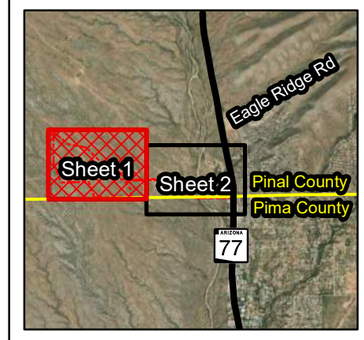
Aerial Source/Date: Nearmap 2020



Legend

Project Limits (154 AC)

Photo Location/Direction



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Pinal and Pima Counties, Arizona

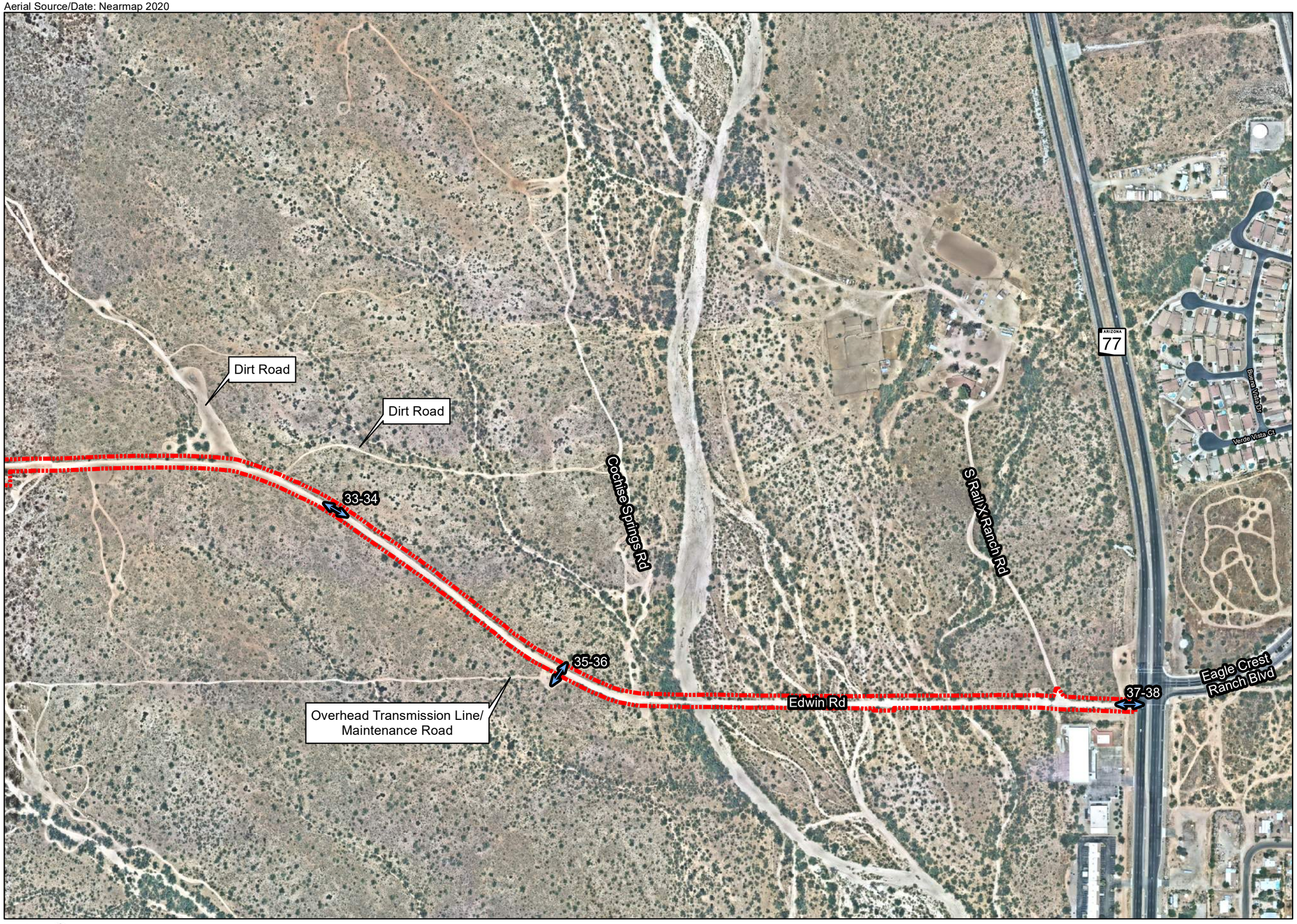
Figure 3. Photo Locations Map

0 200 400 800 Feet

Scale: 1"=400'

N W E S

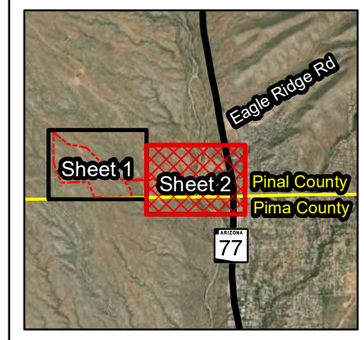
Aerial Source/Date: Nearmap 2020



Legend

Project Limits (154 AC)

Photo Location/Direction



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Pinal and Pima Counties, Arizona

Figure 3. Photo Locations Map

0 200 400 800 Feet

Scale: 1"=400'

N W E S

APPENDIX A

Site Photographs

Photo No. 1

View from Edwin Road and the western project limits looking north depicting typical native desert.

Photo No. 2

View from Edwin Road and the western project limits looking east along Edwin Road.

Photo No. 3

View from Edwin Road and the western project limits looking south depicting typical native desert.

Photo No. 4

View from Edwin Road and the western project limits looking west along Edwin Road.

Photo No. 5

View from the southern project limits looking north toward Edwin Road depicting typical disturbance area from off-roading.

Photo No. 6

View from Edwin Road looking southwest at fill pile observed onsite (no stressed vegetation or soil staining noted).

Photo No. 7

View of stock tank (typical).

Photo No. 8

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 9

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 10

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 11

View of cross ties and farm fencing dumped in onsite erosion feature. *De minimus* condition.

Photo No. 12

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 13

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 14

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 15

View from the northwest corner of the project limits looking north depicting typical native desert.

Photo No. 16

View from the northwest corner of the project limits looking east depicting typical native desert.

Photo No. 17

View from the northwest corner of the project limits looking south depicting typical native desert.

Photo No. 18

View from the northwest corner of the project limits looking west depicting typical native desert.

Photo No. 19

View from the center of the project limits looking north depicting typical dirt road/off-road disturbance areas.

Photo No. 20

View from the center of the project limits looking east at typical native desert.

Photo No. 21

View from the center of the project limits looking south depicting typical dirt road/off-road disturbance areas.

Photo No. 22

View from the center of the project limits looking west at typical native desert.

Photo No. 23

View from Edwin Road looking north depicting typical dirt road/off-road disturbance areas.

Photo No. 24

View from Edwin Road looking south depicting typical dirt road/off-road disturbance areas.

Photo No. 25

View from the transmission line maintenance road at the southern project limits looking north toward native desert.

Photo No. 26

View from the transmission line maintenance road at the southern project limits looking east.

Photo No. 27

View from the transmission line maintenance road at the southern project limits looking south toward native desert.

Photo No. 28

View from the transmission line maintenance road at the southern project limits looking west.

Photo No. 29

View of recently graded dirt roads that appear to be associated with geotechnical investigations.

Photo No. 30

View of onsite signage for Chirreon Energy Project.

Photo No. 31

View from Edwin Road looking northeast towards proposed fence location.

Photo No. 32

View from Edwin Road looking north at a typical dirt trail/fill piles. No staining or odors noted. *De minimus* condition.

Photo No. 33

View from Edwin Road looking east.

Photo No. 34

View from Edwin road looking west. Airstream adjacent to project limits (temporary camping).

Photo No. 35

View from Edwin Road looking northeast along overhead transmission line.

Photo No. 36

View from Edwin Road looking southwest along overhead transmission line. RV adjacent to project limits (temporary camping).

Photo No. 37

View from the intersection of Edwin Road and SR 77 looking east.

Photo No. 38

View from the intersection of Edwin Road and SR 77 looking west.

APPENDIX B

User Questionnaire

Kimley»Horn

ASTM E1527-13
USER QUESTIONNAIRE

Site Name:	Chirreon Solar Project (154-acre subject property) Pinal and Pima Counties, Arizona
Client Name:	Torch Clean Energy
Client Contact:	Sara R. Born, P.E. Torch Clean Energy E-mail: sborn@torchcleanenergy.com Phone: 720.699.8465 939 Pearl Street, Suite 210, Boulder, Colorado 80302
Signature of Client:	Sara Born
Date:	12/15/20

INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections (LLPs)*[187] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"),[188] the *user* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The *user* should provide the following information to the *environmental professional*. Failure to conduct these inquiries could result in a determination that *"all appropriate inquiries"* is not complete.

(1.) Environmental liens that are filed or recorded against the *property* (40 CFR 312.25).

Are you aware of any environmental liens filed or recorded against the *property* under federal, tribal, state or local law? no

(2.) Activity and use limitations that are in place on the *property* or that have been filed or recorded against the *property* (40 CFR 312.26(a)(1)(v) and vi)).

Are you aware of any Activity and Use Limitations (AULs), such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the *property* and/or have been filed or recorded against the *property* under federal, tribal, state or local law? no

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business? No

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably ref lect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*? yes

(5.) Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example,

(a.) Do you know the past uses of the *property*? The property has never been used and is in it's native state.

(b.) Do you know of specific chemicals that are present or once were present at the *property*?

none

(c.) Do you know of spills or other chemical releases that have taken place at the *property*?

none

(d.) Do you know of any environmental cleanups that have taken place at the *property*?

none

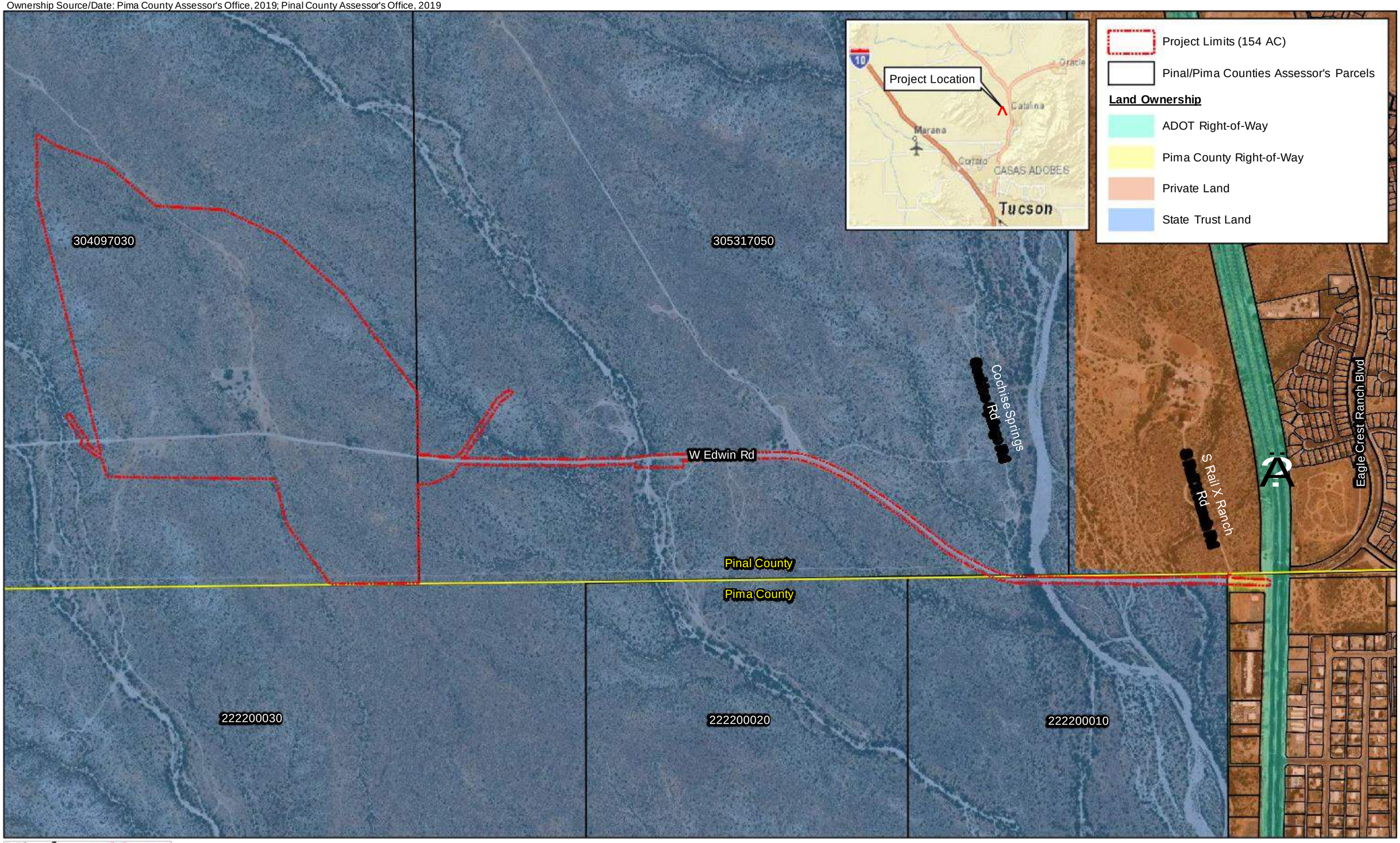
(6.) The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of releases at the *property*?
no

Attachment: Aerial Photograph

187
Landowner Liability Protections, or LLPs, is the term used to describe the three types of potential defenses to Superfund liability in EPA's Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser; Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability ("Common Elements" Guide) issued on March 6, 2003.
188
P.L 107-118.

Aerial Source/Date: ESRI 2017
Ownership Source/Date: Pima County Assessor's Office, 2019; Pinal County Assessor's Office, 2019



Kimley»Horn
Expect More. Experience Better.

Chirreon Solar Project

Pinal and Pima Counties, Arizona

Aerial Photograph

0 700 1,400 2,800 Feet

Scale: 1"=700'

APPENDIX C

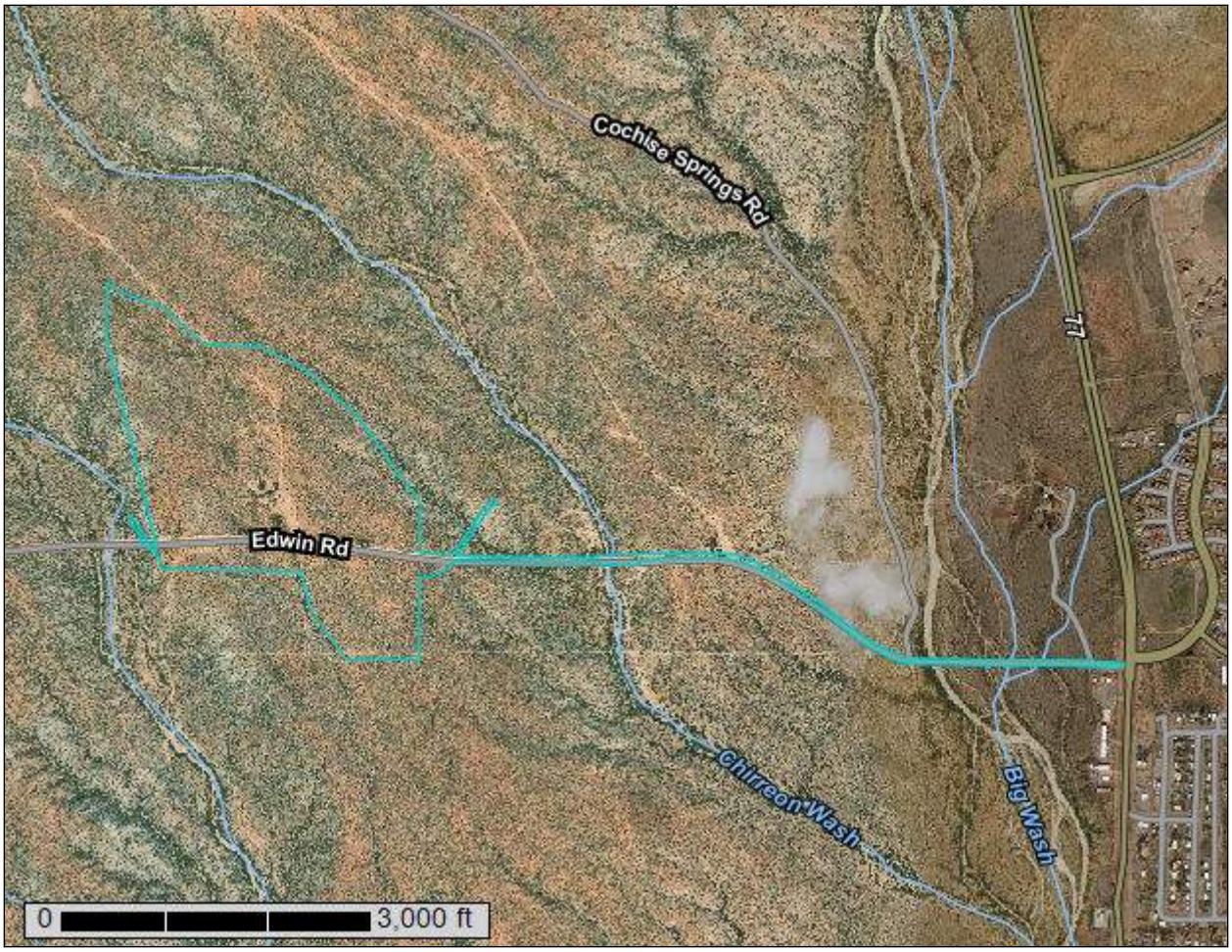
USDA-NRCS Soil Survey

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eastern Pinal and Southern Gila Counties, Arizona; and Pima County, Arizona, Eastern Part



December 9, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

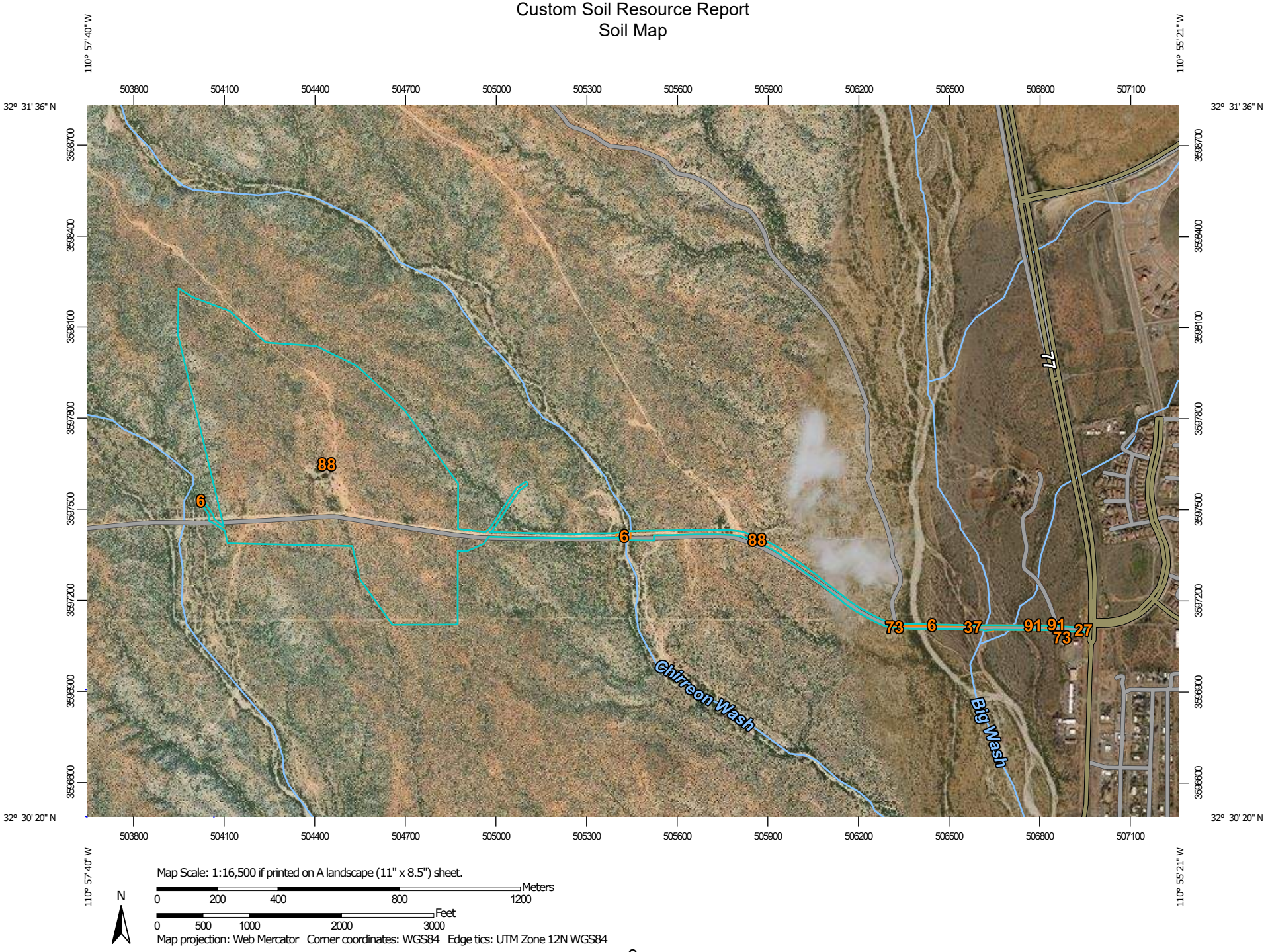
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:16,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Pinal and Southern Gila Counties, Arizona
Survey Area Data: Version 15, Jun 5, 2020

Soil Survey Area: Pima County, Arizona, Eastern Part
Survey Area Data: Version 18, Jun 5, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Bodecker-Riverwash complex, 0 to 5 percent slopes	0.6	0.4%
88	Sasabe-Stronghold complex, 1 to 15 percent slopes	151.3	98.1%
91	Selevin-Tombstone-Saddlebrook complex, 3 to 45 percent slopes	0.0	0.0%
Subtotals for Soil Survey Area		**151.9**	**98.5%**
Totals for Area of Interest		**154.1**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
27	Diaspar sandy loam, 1 to 5 percent slopes	0.1	0.0%
37	Keysto extremely gravelly fine sandy loam, 2 to 8 percent slopes	1.7	1.1%
73	Sasabe-Caralampi complex, 1 to 15 percent slopes	0.5	0.4%
Subtotals for Soil Survey Area		**2.3**	**1.5%**
Totals for Area of Interest		**154.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eastern Pinal and Southern Gila Counties, Arizona

6—Bodecker-Riverwash complex, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tdt7
Elevation: 3,000 to 5,200 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 60 to 67 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Bodecker and similar soils: 55 percent
Riverwash: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bodecker

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed stream alluvium

Typical profile

C1 - 0 to 4 inches: gravelly coarse sand
C2 - 4 to 34 inches: very gravelly coarse sand
C3 - 34 to 60 inches: very gravelly coarse sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 39.68 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: A
Ecological site: R041XC316AZ - Sandy Wash 12-16" p.z.
Hydric soil rating: No

Description of Riverwash

Setting

Parent material: Mixed stream alluvium

Properties and qualities

Frequency of flooding: FrequentNone

Minor Components

Unnamed soils

Percent of map unit: 15 percent
Hydric soil rating: No

88—Sasabe-Stronghold complex, 1 to 15 percent slopes

Map Unit Setting

National map unit symbol: 1r44l
Elevation: 3,290 to 3,890 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 60 to 67 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Sasabe and similar soils: 45 percent
Stronghold and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sasabe

Setting

Landform: Fan terraces
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed fan alluvium

Typical profile

A - 0 to 2 inches: sandy loam
Bt1 - 2 to 15 inches: clay loam
Bt2 - 15 to 44 inches: clay
Btk - 44 to 60 inches: clay loam

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: C
Ecological site: R041XC313AZ - Loamy Upland 12-16" p.z.
Hydric soil rating: No

Description of Stronghold

Setting

Landform: Fan terraces
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed fan alluvium

Typical profile

A - 0 to 2 inches: sandy loam
Bk1 - 2 to 17 inches: sandy loam
Bk2 - 17 to 41 inches: gravelly loam
Bk3 - 41 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 1 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: A
Ecological site: R041XC309AZ - Limy Upland 12-16" p.z.
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 20 percent
Hydric soil rating: No

91—Selevin-Tombstone-Saddlebrook complex, 3 to 45 percent slopes

Map Unit Setting

National map unit symbol: 1lmvm
Elevation: 3,200 to 3,900 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 60 to 67 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Selevin and similar soils: 36 percent
Tombstone and similar soils: 35 percent
Saddlebrook and similar soils: 20 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Selevin

Setting

Landform: Fan terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed fan alluvium

Typical profile

A - 0 to 4 inches: gravelly sandy clay loam
Bt - 4 to 15 inches: very gravelly clay
Btk1 - 15 to 25 inches: extremely gravelly clay
Btk2 - 25 to 60 inches: extremely gravelly sandy clay loam

Properties and qualities

Slope: 10 to 45 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: C
Ecological site: R041XC314AZ - Loamy Slopes 12-16" p.z.
Hydric soil rating: No

Description of Tombstone

Setting

Landform: Fan terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed fan alluvium

Typical profile

A - 0 to 3 inches: very gravelly sandy loam
Bk1 - 3 to 27 inches: very gravelly sandy loam
Bk2 - 27 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 10 to 45 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: A
Ecological site: R041XC308AZ - Limy Slopes 12-16" p.z.
Hydric soil rating: No

Description of Saddlebrook

Setting

Landform: Fan terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed fan alluvium

Typical profile

A - 0 to 2 inches: loam
Bt - 2 to 9 inches: clay
Btk - 9 to 16 inches: clay
Bkm - 16 to 60 inches: cemented material

Properties and qualities

Slope: 3 to 10 percent
Depth to restrictive feature: 8 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: D
Ecological site: R041XC305AZ - Clay Loam Upland 12-16" p.z.
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 9 percent
Hydric soil rating: No

Pima County, Arizona, Eastern Part

27—Diaspar sandy loam, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1sz8
Elevation: 3,250 to 3,600 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Diaspar and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Diaspar

Setting

Landform: Fan terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium derived from granite and/or alluvium derived from schist

Typical profile

A - 0 to 2 inches: sandy loam
Bt - 2 to 28 inches: gravelly sandy loam
2Bt - 28 to 41 inches: sandy clay loam
3BCt - 41 to 60 inches: very gravelly loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R041XC319AZ - Sandy Loam Upland 12-16" p.z.
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 25 percent
Hydric soil rating: No

37—Keysto extremely gravelly fine sandy loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 1t06
Elevation: 3,000 to 4,500 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Keysto and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Keysto

Setting

Landform: Stream terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed alluvium

Typical profile

A1 - 0 to 1 inches: extremely gravelly fine sandy loam
A2 - 1 to 17 inches: extremely gravelly loam
A3 - 17 to 23 inches: very gravelly loam
AC - 23 to 41 inches: extremely gravelly loam
2Btb - 41 to 60 inches: extremely gravelly sandy clay loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R041XC318AZ - Sandy Loam 12-16" p.z. Deep
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 20 percent
Hydric soil rating: No

73—Sasabe-Caralampi complex, 1 to 15 percent slopes

Map Unit Setting

National map unit symbol: 1t28
Elevation: 3,100 to 3,700 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Sasabe and similar soils: 45 percent
Caralampi and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sasabe

Setting

Landform: Fan terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed alluvium

Typical profile

A - 0 to 5 inches: sandy loam
Bt1 - 5 to 22 inches: clay
Bt2 - 22 to 31 inches: gravelly clay loam
Bt3 - 31 to 41 inches: gravelly sandy clay loam
Btk - 41 to 60 inches: very gravelly sandy clay loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: C
Ecological site: R041XC313AZ - Loamy Upland 12-16" p.z.
Hydric soil rating: No

Description of Caralampi

Setting

Landform: Fan terraces, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed alluvium

Typical profile

A - 0 to 1 inches: extremely gravelly sandy loam
Bt1 - 1 to 8 inches: very gravelly clay loam
Bt2 - 8 to 28 inches: extremely gravelly sandy clay loam
2C - 28 to 60 inches: extremely gravelly sandy loam

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: R041XC313AZ - Loamy Upland 12-16" p.z.
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 25 percent
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

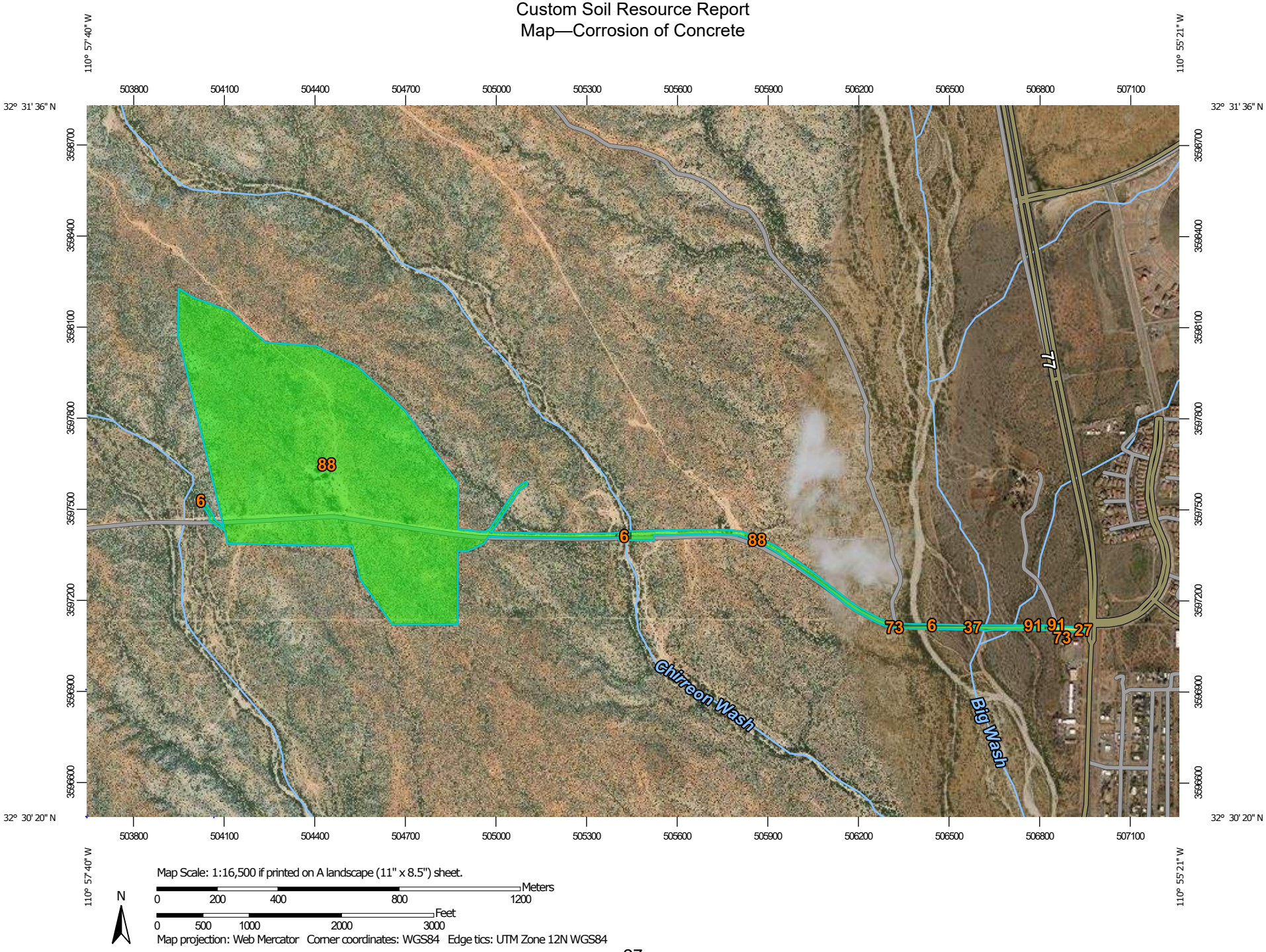
Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Corrosion of Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Map—Corrosion of Concrete



Map Scale: 1:16,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- High
- Moderate
- Low
- Not rated or not available

Soil Rating Lines

- High
- Moderate
- Low
- Not rated or not available

Soil Rating Points

- High
- Moderate
- Low
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Pinal and Southern Gila Counties, Arizona
Survey Area Data: Version 15, Jun 5, 2020

Soil Survey Area: Pima County, Arizona, Eastern Part
Survey Area Data: Version 18, Jun 5, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Corrosion of Concrete

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6	Bodecker-Riverwash complex, 0 to 5 percent slopes	Low	0.6	0.4%
88	Sasabe-Stronghold complex, 1 to 15 percent slopes	Low	151.3	98.1%
91	Selevin-Tombstone-Saddlebrook complex, 3 to 45 percent slopes	Low	0.0	0.0%
Subtotals for Soil Survey Area			**151.9**	**98.5%**
Totals for Area of Interest			**154.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
27	Diaspar sandy loam, 1 to 5 percent slopes	Low	0.1	0.0%
37	Keysto extremely gravelly fine sandy loam, 2 to 8 percent slopes	Low	1.7	1.1%
73	Sasabe-Caralampi complex, 1 to 15 percent slopes	Moderate	0.5	0.4%
Subtotals for Soil Survey Area			**2.3**	**1.5%**
Totals for Area of Interest			**154.1**	**100.0%**

Rating Options—Corrosion of Concrete

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

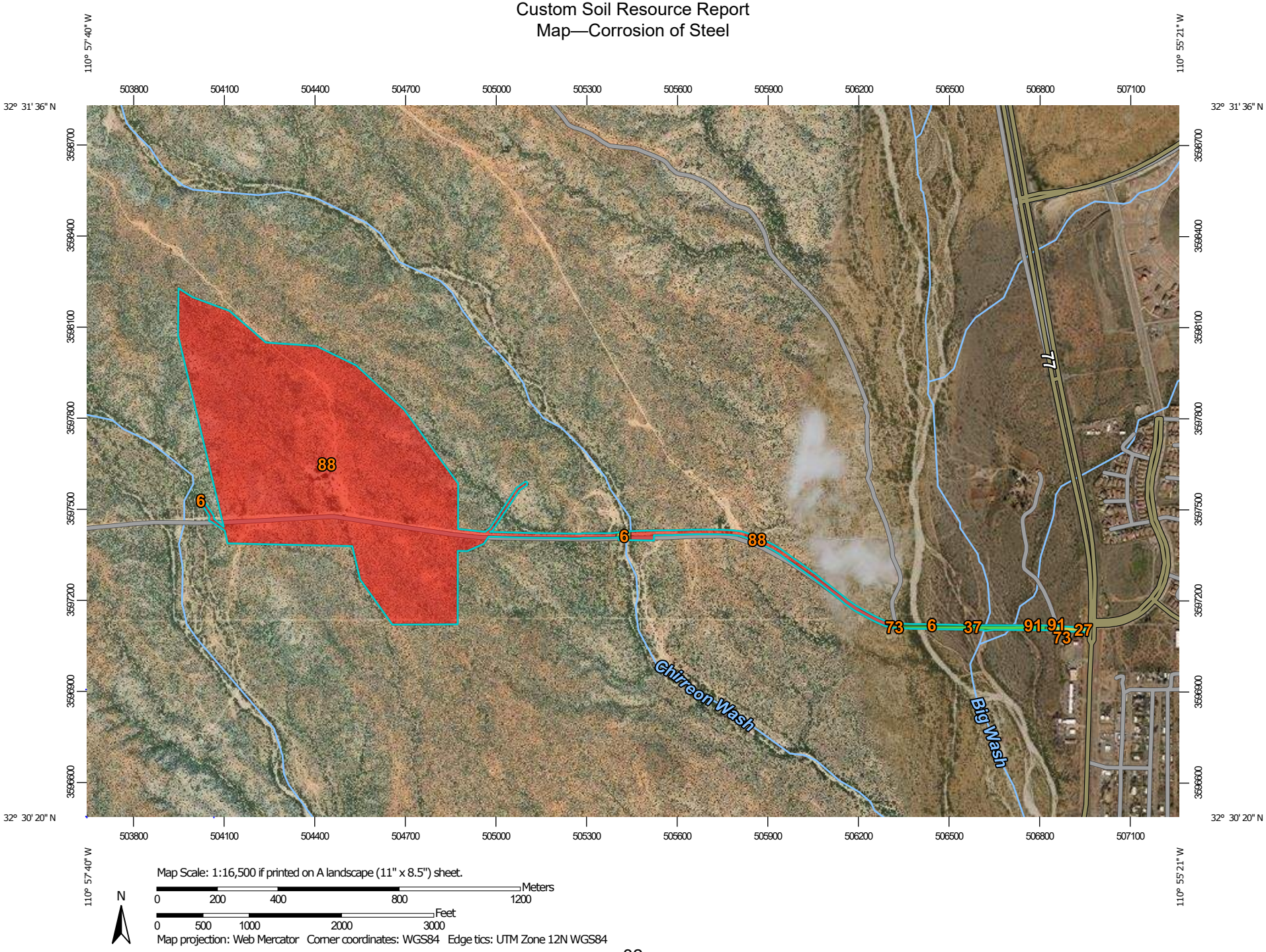
Tie-break Rule: Higher

Corrosion of Steel

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Custom Soil Resource Report
Map—Corrosion of Steel



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- High
- Moderate
- Low
- Not rated or not available

Soil Rating Lines

- High
- Moderate
- Low
- Not rated or not available

Soil Rating Points

- High
- Moderate
- Low
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Pinal and Southern Gila Counties, Arizona
Survey Area Data: Version 15, Jun 5, 2020

Soil Survey Area: Pima County, Arizona, Eastern Part
Survey Area Data: Version 18, Jun 5, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Corrosion of Steel

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6	Bodecker-Riverwash complex, 0 to 5 percent slopes	Moderate	0.6	0.4%
88	Sasabe-Stronghold complex, 1 to 15 percent slopes	High	151.3	98.1%
91	Selevin-Tombstone-Saddlebrook complex, 3 to 45 percent slopes	High	0.0	0.0%
Subtotals for Soil Survey Area			**151.9**	**98.5%**
Totals for Area of Interest			**154.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
27	Diaspar sandy loam, 1 to 5 percent slopes	Moderate	0.1	0.0%
37	Keysto extremely gravelly fine sandy loam, 2 to 8 percent slopes	Low	1.7	1.1%
73	Sasabe-Caralampi complex, 1 to 15 percent slopes	Moderate	0.5	0.4%
Subtotals for Soil Survey Area			**2.3**	**1.5%**
Totals for Area of Interest			**154.1**	**100.0%**

Rating Options—Corrosion of Steel

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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APPENDIX D

GeoSearch Historical Aerial Photographs

Historical Aerial Photographs

NEW: *GeoLens by Geosearch*

Target Property:

Saddlebrooke Solar Project

, Pinal, Arizona

Prepared For:

Kimley-Horn and Associates-Phoenix

Order #: 129052
Job #: 302421
Project #:
Date: 7/8/2019

Target Property Summary

Saddlebrooke Solar Project

, Pinal, Arizona

USGS Quadrangle: ***Oracle Junction***
Target Property Geometry: ***Area***

Target Property Longitude(s)/Latitude(s):
(-110.945144000, 32.513932000), (-110.944038000, 32.512464000), (-110.943989000, 32.511426000), (-110.950636000, 32.511502000), (-110.951615000, 32.513827000), (-110.956488000, 32.513755000), (-110.957838000, 32.516812000), (-110.957789000, 32.521420000), (-110.955237000, 32.519555000), (-110.951925000, 32.518984000), (-110.946560000, 32.514169000), (-110.945267000, 32.514092000), (-110.945255000, 32.514071000), (-110.945236000, 32.514069000), (-110.944235000, 32.514052000), (-110.944082000, 32.514044000), (-110.943814000, 32.514044000), (-110.943746000, 32.514053000), (-110.943744000, 32.514054000), (-110.943690000, 32.514059000), (-110.943450000, 32.514058000), (-110.942981000, 32.514061000), (-110.942978000, 32.514061000), (-110.942828000, 32.514060000), (-110.942627000, 32.514064000), (-110.942375000, 32.514089000), (-110.942090000, 32.514119000), (-110.942086000, 32.514120000), (-110.941849000, 32.514127000), (-110.941593000, 32.514135000), (-110.940893000, 32.514146000), (-110.940547000, 32.514145000), (-110.940143000, 32.514159000), (-110.940140000, 32.514159000), (-110.939922000, 32.514165000), (-110.939657000, 32.514170000), (-110.939471000, 32.514170000), (-110.939277000, 32.514171000), (-110.939079000, 32.514169000), (-110.938927000, 32.514168000), (-110.938772000, 32.514165000), (-110.938770000, 32.514165000), (-110.938442000, 32.514151000), (-110.938176000, 32.514129000), (-110.938069000, 32.514113000), (-110.937866000, 32.514057000), (-110.937863000, 32.514056000), (-110.937748000, 32.514020000), (-110.937747000, 32.514020000), (-110.937633000, 32.513982000), (-110.937506000, 32.513939000), (-110.937500000, 32.513937000), (-110.937127000, 32.513783000), (-110.937125000, 32.513783000), (-110.936962000, 32.513713000), (-110.936958000, 32.513711000), (-110.936838000, 32.513652000), (-110.936837000, 32.513651000), (-110.936679000, 32.513570000), (-110.936675000, 32.513567000), (-110.936478000, 32.513449000), (-110.936250000, 32.513307000), (-110.935923000, 32.513114000), (-110.935921000, 32.513113000), (-110.935487000, 32.512849000), (-110.935483000, 32.512846000), (-110.935250000, 32.512691000), (-110.934789000, 32.512381000), (-110.934523000, 32.512208000), (-110.934519000, 32.512205000), (-110.934338000, 32.512071000), (-110.934003000, 32.511875000), (-110.933776000, 32.511773000), (-110.933291000, 32.511551000), (-110.932992000, 32.511438000), (-110.932904000, 32.511417000), (-110.932781000, 32.511396000), (-110.932655000, 32.511377000), (-110.932020000, 32.511355000), (-110.931626000, 32.511354000), (-110.931623000, 32.511354000), (-110.931150000, 32.511342000), (-110.930475000, 32.511333000), (-110.929576000, 32.511320000), (-110.929397000, 32.511324000), (-110.929394000, 32.511325000), (-110.929392000, 32.511325000), (-110.928294000, 32.511318000), (-110.927766000, 32.511320000), (-110.927764000, 32.511320000), (-110.927216000, 32.511312000), (-110.926930000, 32.511303000), (-110.926927000, 32.511303000), (-110.926579000, 32.511282000), (-110.925901000, 32.511254000), (-110.925909000, 32.511116000), (-110.926588000, 32.511144000), (-110.926590000, 32.511144000), (-110.926937000, 32.511166000),

Aerial Research Summary

Date	Source	Scale	Frame
2015	USDA	1" = 700'	N/A
2013	USDA	1" = 700'	N/A
2010	USDA	1" = 700'	N/A
2007	USDA	1" = 700'	N/A
09/17/2003	USGS	1" = 700'	N/A
06/02/1996	USGS	1" = 700'	N/A
04/26/1992	USGS	1" = 700'	N/A
07/04/1983	USGS	1" = 700'	117-58
04/16/1982	USGS	1" = 700'	1-111
08/01/1972	NASA	1" = 700'	560-4039
07/17/1971	USAF	1" = 700'	27A-3928
07/20/1958	USGS	1" = 700'	13-24
02/27/1956	AMS	1" = 700'	973
1935	ASCS	1" = 700'	2928

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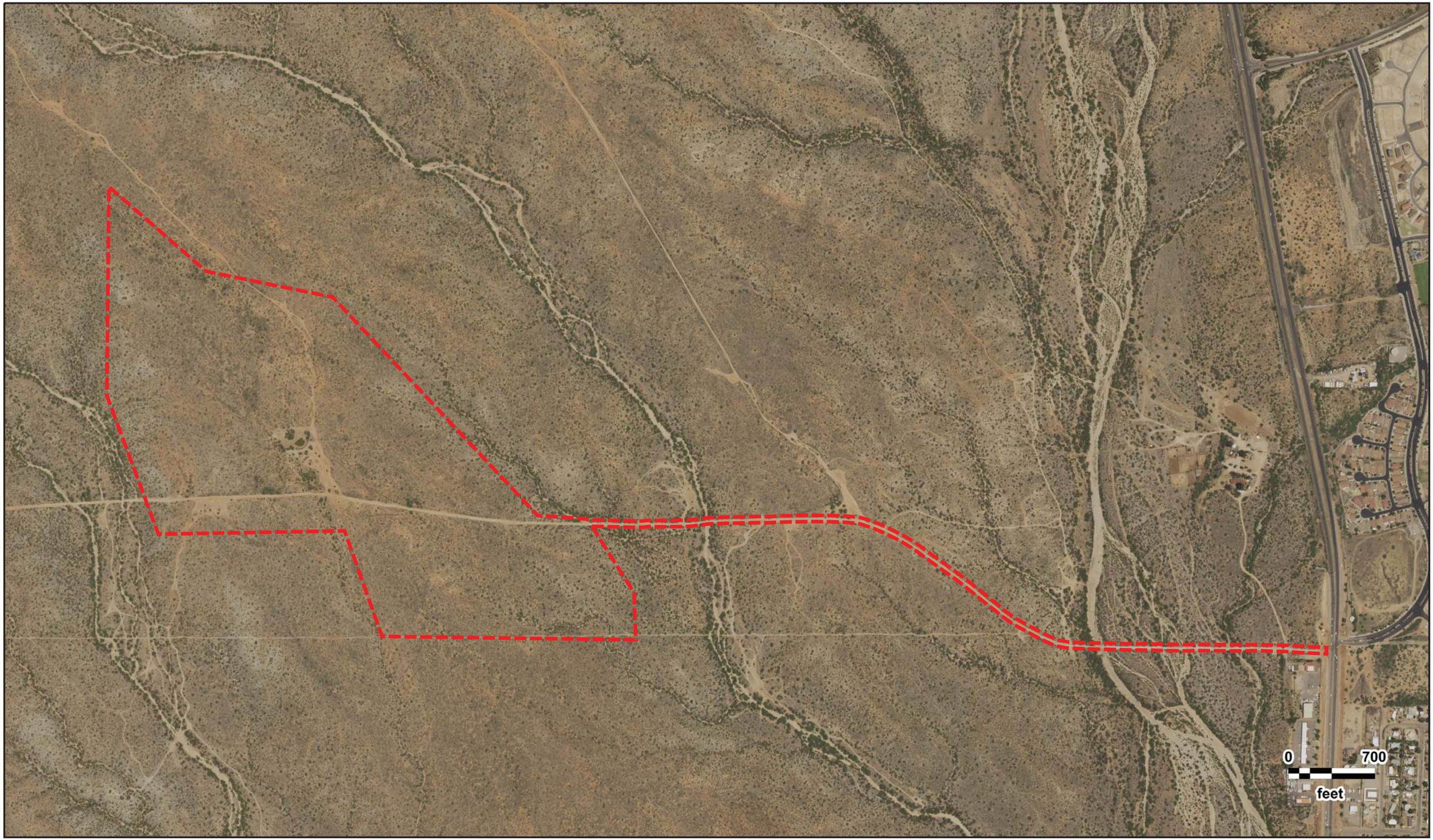

N
W E
S

Saddlebrooke Solar Project
USDA
2015

GeoSearch

JOB #: 302421 - 07/08/2019

N
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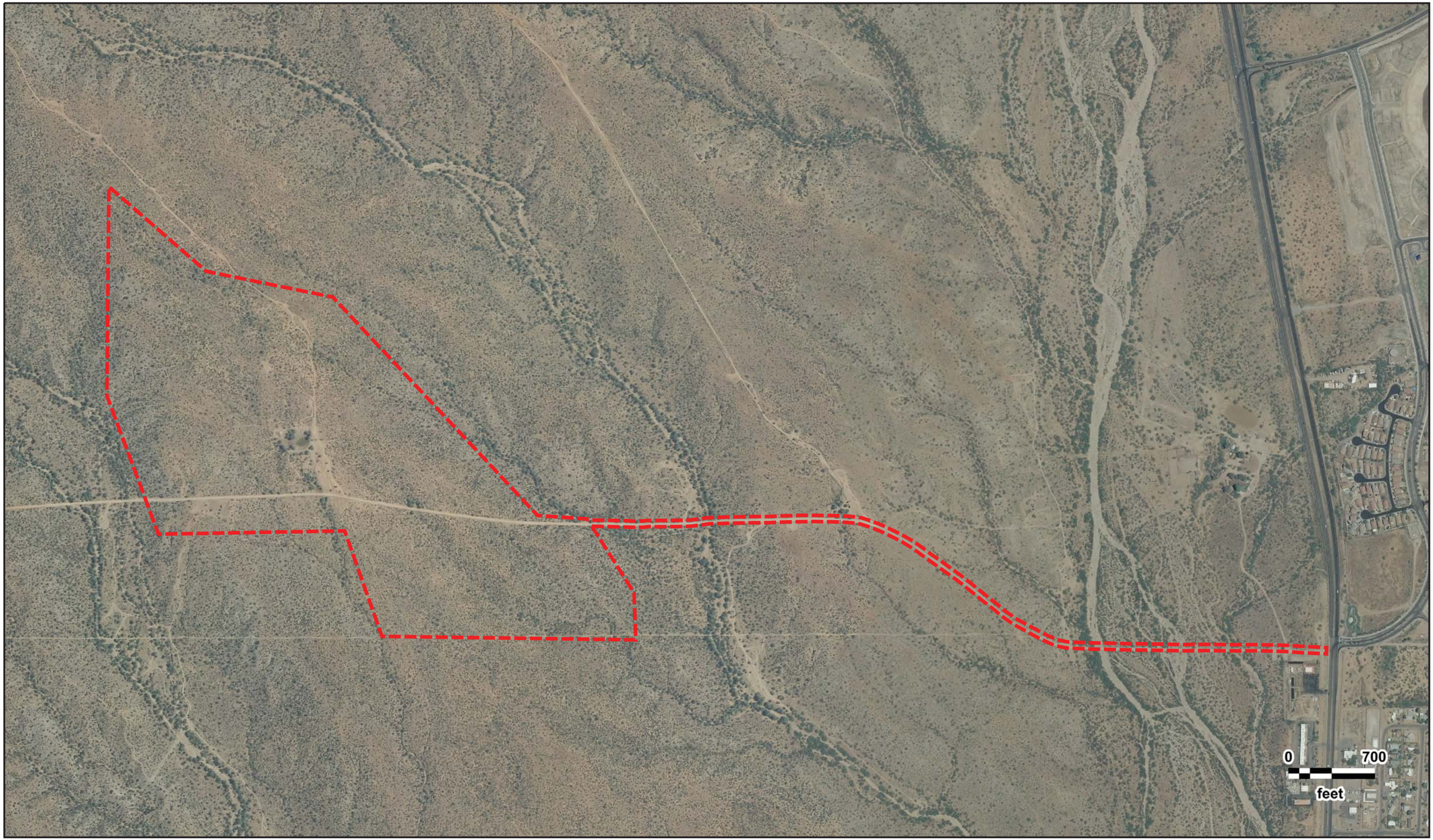
Saddlebrooke Solar Project
USDA
2013

GeoSearch

JOB #: 302421 - 07/08/2019



N
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Saddlebrooke Solar Project
USDA
2010

GeoSearch

JOB #: 302421 - 07/08/2019

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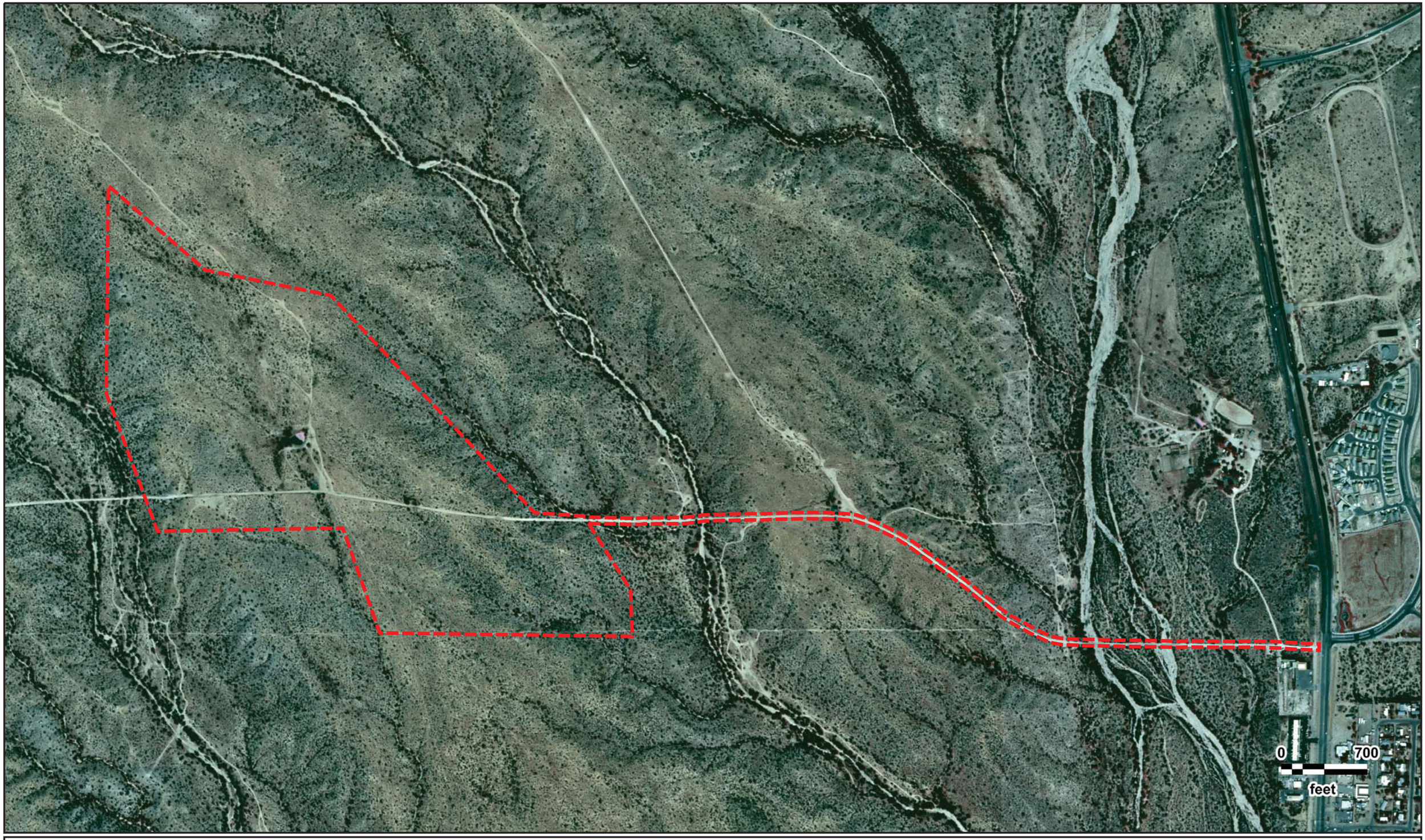
Saddlebrooke Solar Project
USDA
2007

GeoSearch

JOB #: 302421 - 07/08/2019



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Saddlebrooke Solar Project
USGS
09/17/2003

GeoSearch

JOB #: 302421 - 07/08/2019

N
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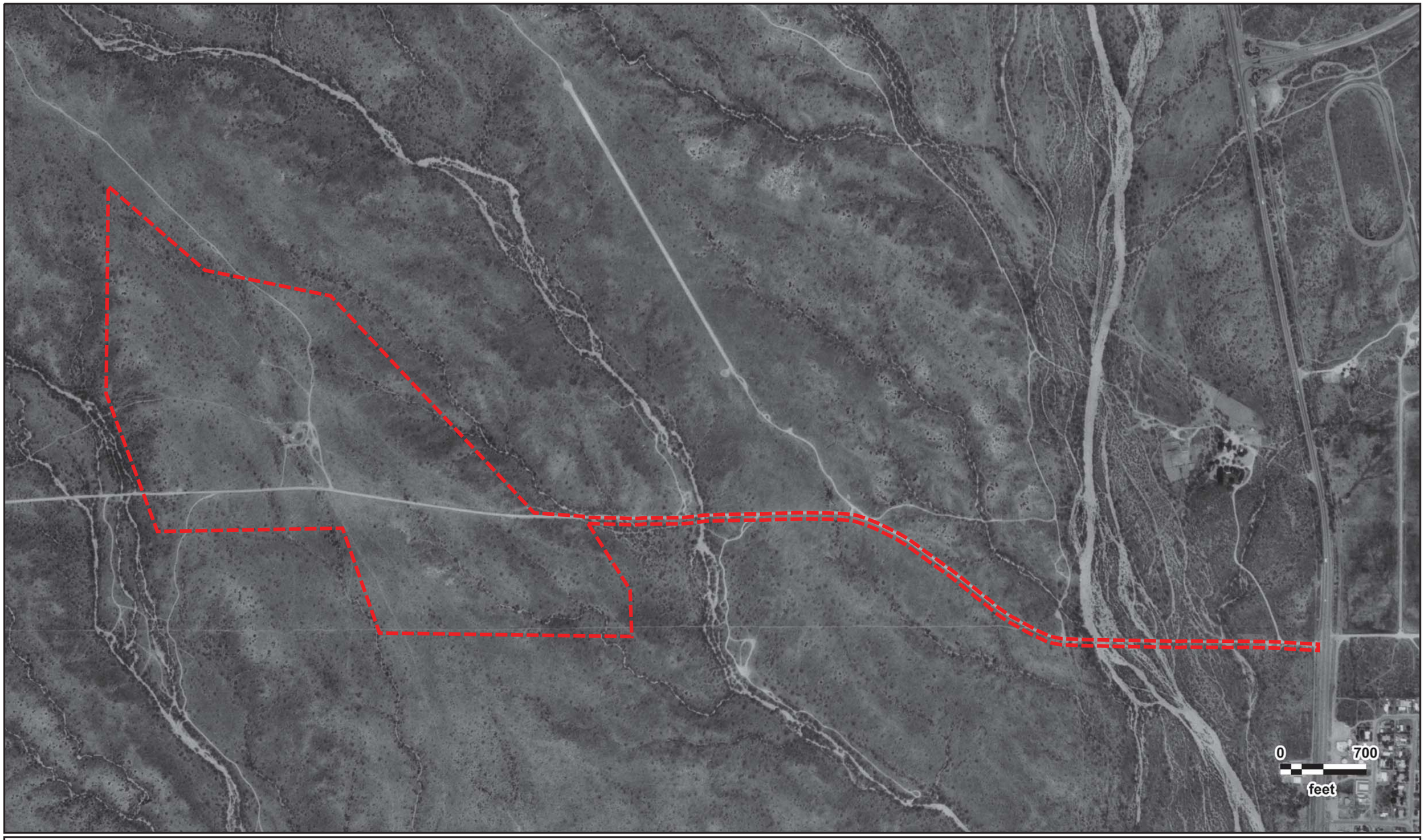
Saddlebrooke Solar Project
USGS
06/02/1996

GeoSearch

JOB #: 302421 - 07/08/2019



N
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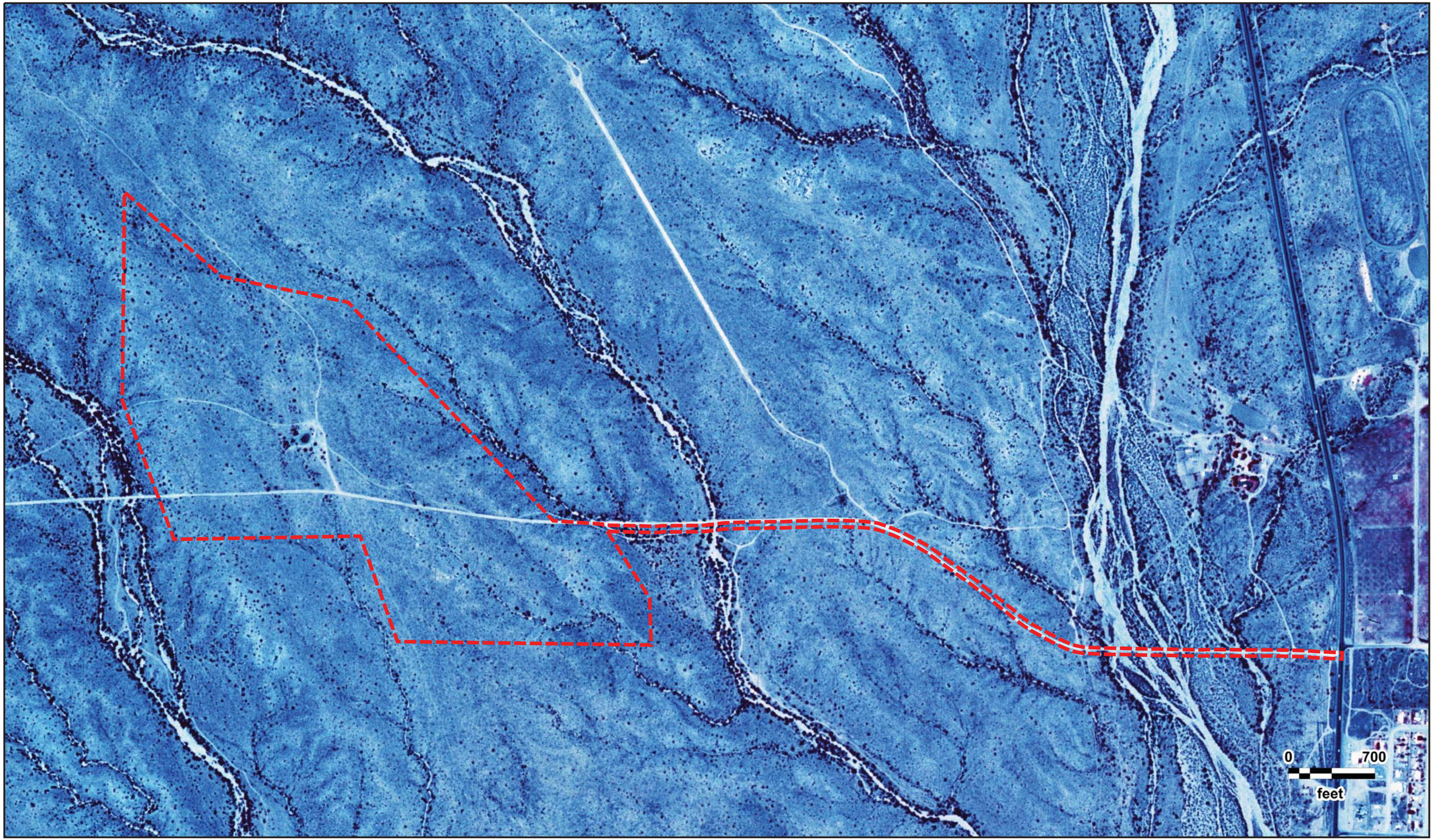
Saddlebrooke Solar Project
USGS
04/26/1992

GeoSearch

JOB #: 302421 - 07/08/2019



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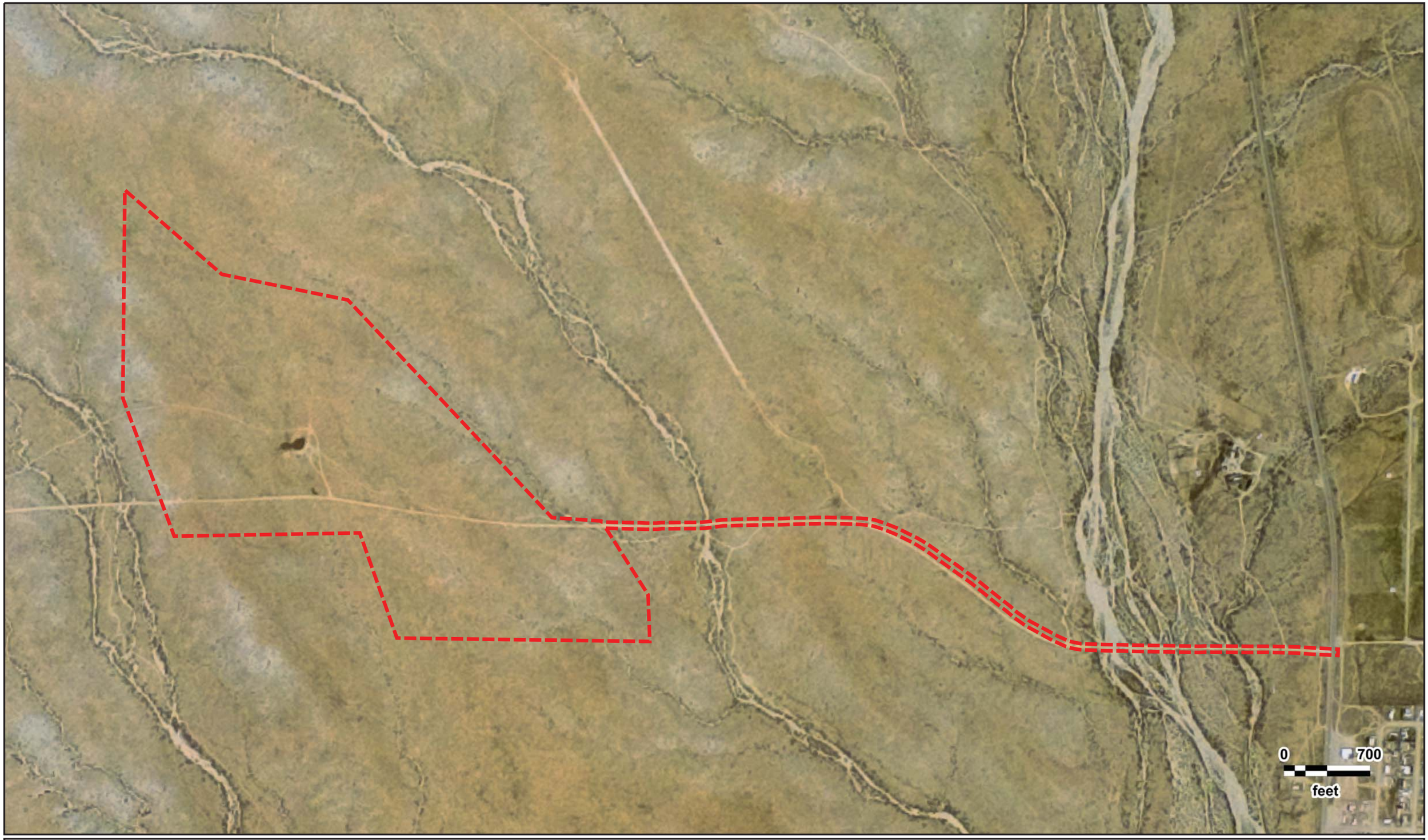
Saddlebrooke Solar Project
USGS
07/04/1983

GeoSearch

JOB #: 302421 - 07/08/2019



N
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Saddlebrooke Solar Project
USGS
04/16/1982

GeoSearch

JOB #: 302421 - 07/08/2019

N
W E
S

Saddlebrooke Solar Project
NASA
08/01/1972

GeoSearch

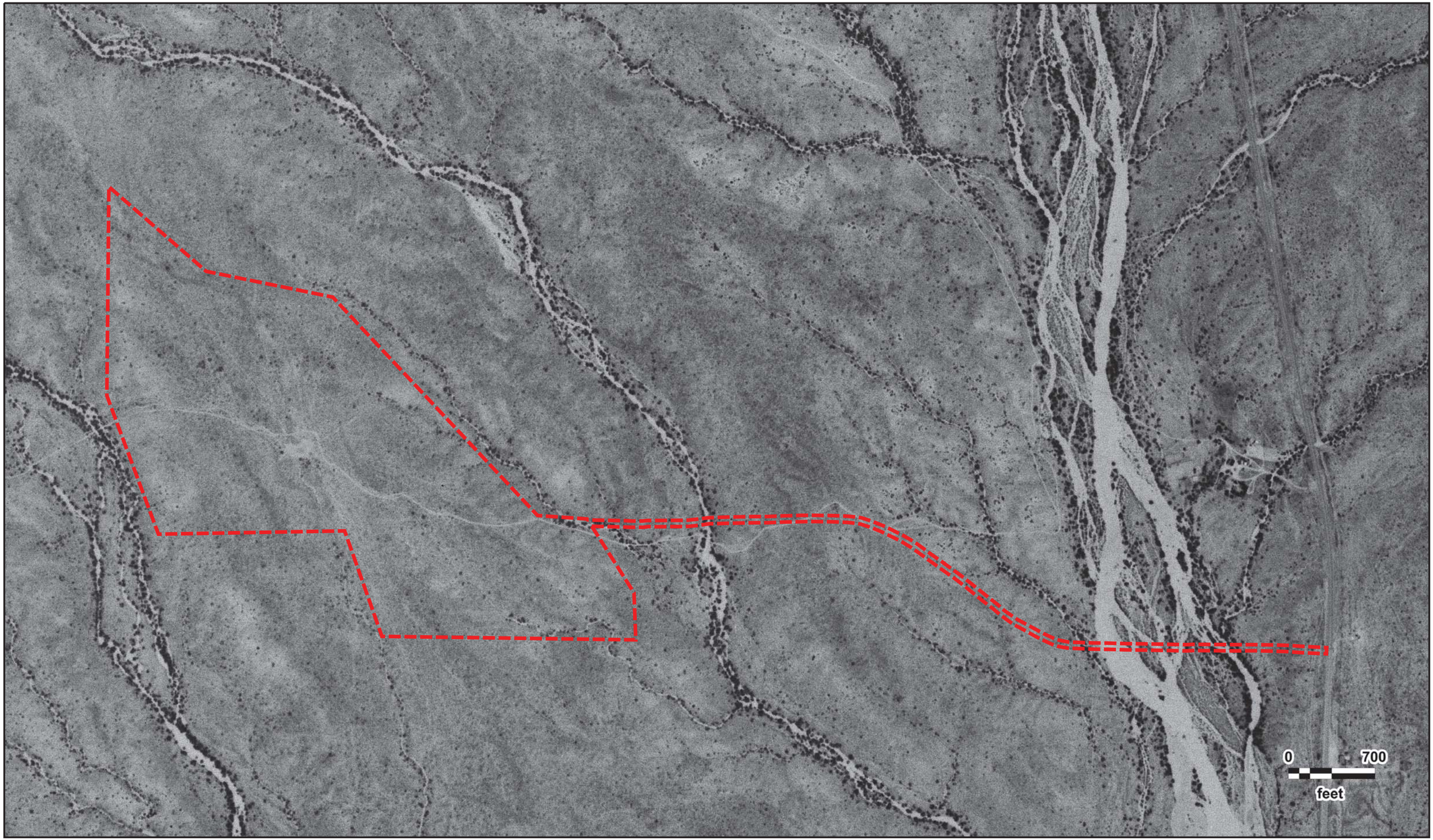
JOB #: 302421 - 07/08/2019

N
W E
S

Saddlebrooke Solar Project
USAF
07/17/1971

GeoSearch

JOB #: 302421 - 07/08/2019



N
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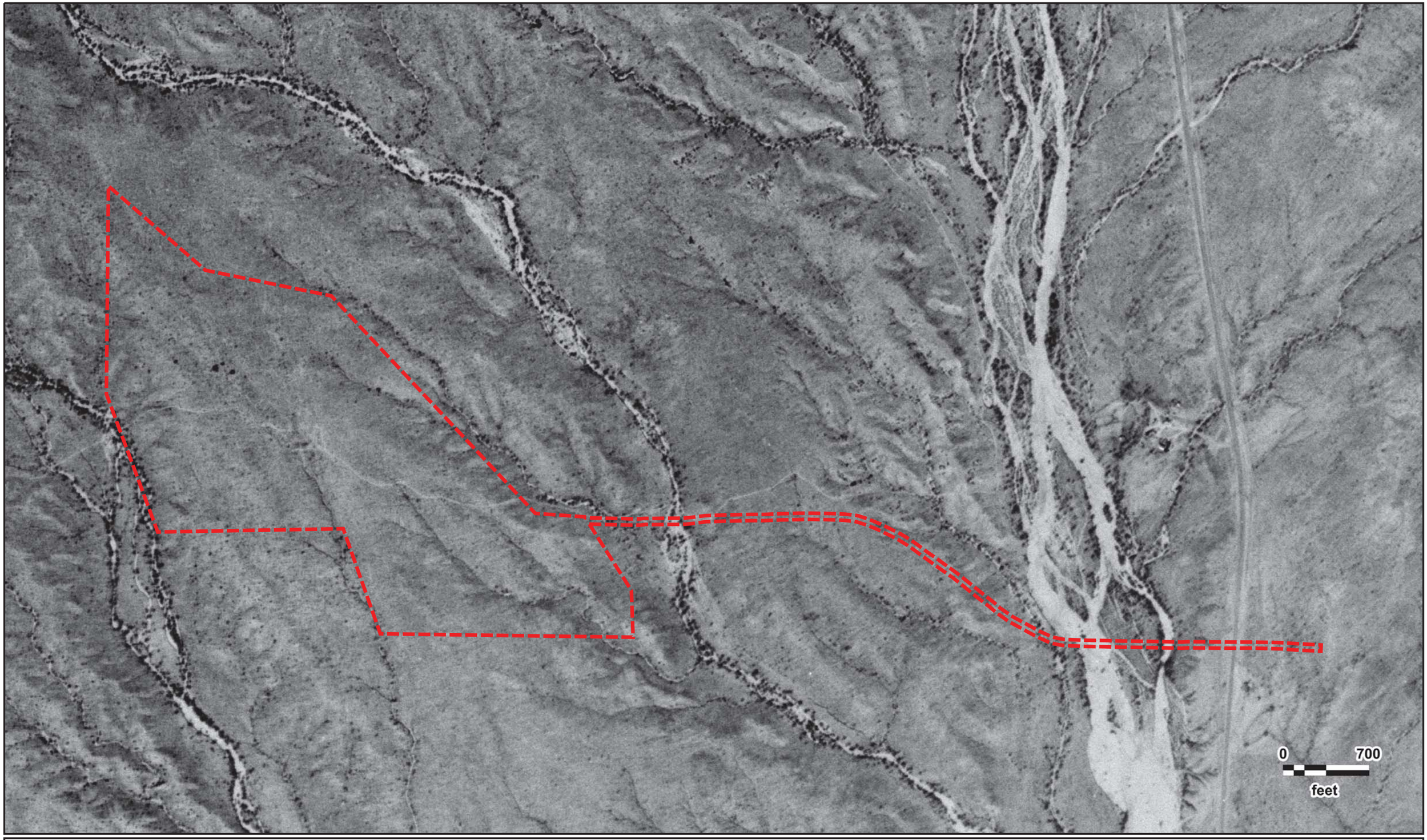
Saddlebrooke Solar Project
USGS
07/20/1958

GeoSearch

JOB #: 302421 - 07/08/2019



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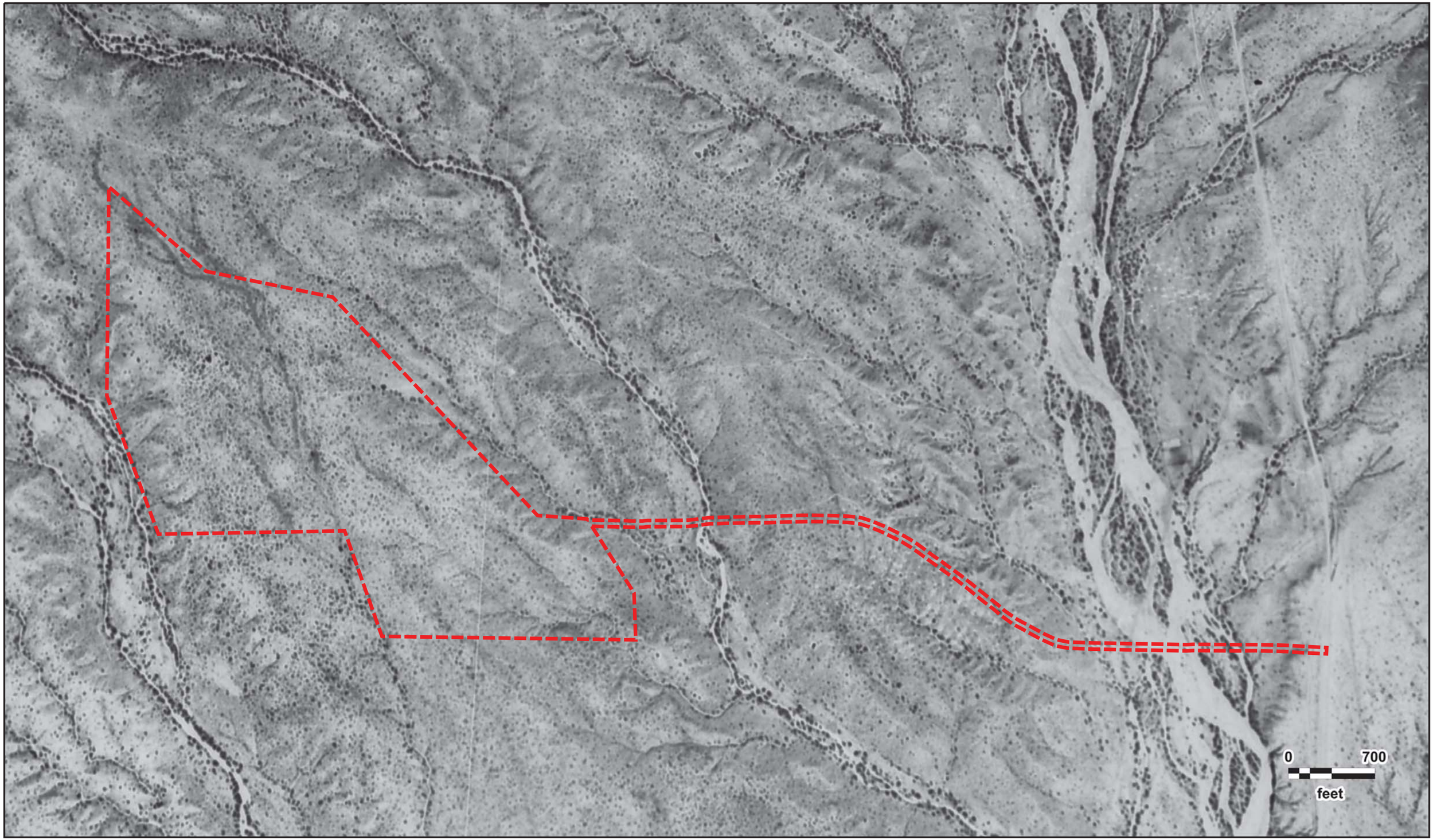
Saddlebrooke Solar Project
AMS
02/27/1956

GeoSearch

JOB #: 302421 - 07/08/2019



N
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Saddlebrooke Solar Project
ASCS
1935

GeoSearch

JOB #: 302421 - 07/08/2019

APPENDIX E

GeoSearch Historical Topographic Maps

Historical Topographic Maps

NEW: *GeoLens by Geosearch*

Target Property:

Saddlebrooke Solar Project

, Pinal, Arizona

Prepared For:

Kimley-Horn and Associates-Phoenix

Order #: 129052
Job #: 302420
Project #:
Date: 7/1/2019

Target Property Summary

Saddlebrooke Solar Project

, Pinal, Arizona

USGS Quadrangle: ***Oracle Junction***
Target Property Geometry: ***Area***

Target Property Longitude(s)/Latitude(s):
(-110.945144000, 32.513932000), (-110.944038000, 32.512464000), (-110.943989000, 32.511426000), (-110.950636000, 32.511502000), (-110.951615000, 32.513827000), (-110.956488000, 32.513755000), (-110.957838000, 32.516812000), (-110.957789000, 32.521420000), (-110.955237000, 32.519555000), (-110.951925000, 32.518984000), (-110.946560000, 32.514169000), (-110.945267000, 32.514092000), (-110.945255000, 32.514071000), (-110.945236000, 32.514069000), (-110.944235000, 32.514052000), (-110.944082000, 32.514044000), (-110.943814000, 32.514044000), (-110.943746000, 32.514053000), (-110.943744000, 32.514054000), (-110.943690000, 32.514059000), (-110.943450000, 32.514058000), (-110.942981000, 32.514061000), (-110.942978000, 32.514061000), (-110.942828000, 32.514060000), (-110.942627000, 32.514064000), (-110.942375000, 32.514089000), (-110.942090000, 32.514119000), (-110.942086000, 32.514120000), (-110.941849000, 32.514127000), (-110.941593000, 32.514135000), (-110.940893000, 32.514146000), (-110.940547000, 32.514145000), (-110.940143000, 32.514159000), (-110.940140000, 32.514159000), (-110.939922000, 32.514165000), (-110.939657000, 32.514170000), (-110.939471000, 32.514170000), (-110.939277000, 32.514171000), (-110.939079000, 32.514169000), (-110.938927000, 32.514168000), (-110.938772000, 32.514165000), (-110.938770000, 32.514165000), (-110.938442000, 32.514151000), (-110.938176000, 32.514129000), (-110.938069000, 32.514113000), (-110.937866000, 32.514057000), (-110.937863000, 32.514056000), (-110.937748000, 32.514020000), (-110.937747000, 32.514020000), (-110.937633000, 32.513982000), (-110.937506000, 32.513939000), (-110.937500000, 32.513937000), (-110.937127000, 32.513783000), (-110.937125000, 32.513783000), (-110.936962000, 32.513713000), (-110.936958000, 32.513711000), (-110.936838000, 32.513652000), (-110.936837000, 32.513651000), (-110.936679000, 32.513570000), (-110.936675000, 32.513567000), (-110.936478000, 32.513449000), (-110.936250000, 32.513307000), (-110.935923000, 32.513114000), (-110.935921000, 32.513113000), (-110.935487000, 32.512849000), (-110.935483000, 32.512846000), (-110.935250000, 32.512691000), (-110.934789000, 32.512381000), (-110.934523000, 32.512208000), (-110.934519000, 32.512205000), (-110.934338000, 32.512071000), (-110.934003000, 32.511875000), (-110.933776000, 32.511773000), (-110.933291000, 32.511551000), (-110.932992000, 32.511438000), (-110.932904000, 32.511417000), (-110.932781000, 32.511396000), (-110.932655000, 32.511377000), (-110.932020000, 32.511355000), (-110.931626000, 32.511354000), (-110.931623000, 32.511354000), (-110.931150000, 32.511342000), (-110.930475000, 32.511333000), (-110.929576000, 32.511320000), (-110.929397000, 32.511324000), (-110.929394000, 32.511325000), (-110.929392000, 32.511325000), (-110.928294000, 32.511318000), (-110.927766000, 32.511320000), (-110.927764000, 32.511320000), (-110.927216000, 32.511312000), (-110.926930000, 32.511303000), (-110.926927000, 32.511303000), (-110.926579000, 32.511282000), (-110.925901000, 32.511254000), (-110.925909000, 32.511116000), (-110.926588000, 32.511144000), (-110.926590000, 32.511144000), (-110.926937000, 32.511166000),

Topographic Map Summary

Date	Quadrangle	Scale
2011	Oracle Junction, AZ (2011)	1" = 2000'
	Oro Valley, AZ (2011)	
1996	Oracle Junction, AZ (1996)	1" = 2000'
	Oro Valley, AZ (1996)	
1988	Oracle Junction, AZ (1988)	1" = 2000'
	Oro Valley, AZ (1981)	
1959	Oracle, AZ (1959)	1" = 5208'
	Mount Lemmon, AZ (1957)	
1913	Winkelman, AZ (1913)	1" = 10420'
	Tucson, AZ (1905)	
1911	Winkelman, AZ (1911)	1" = 10420'
	Tucson, AZ (1905)	

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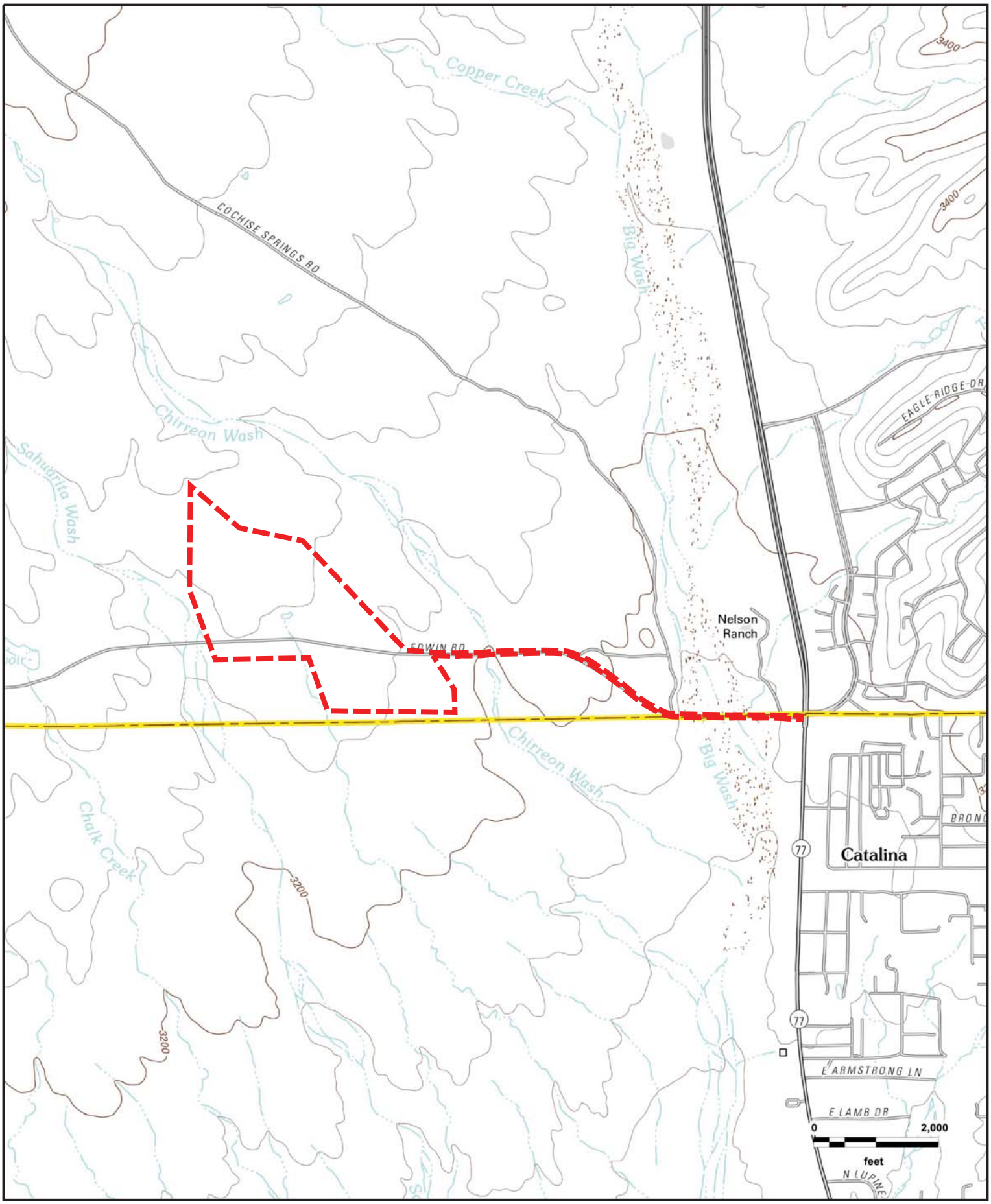

N
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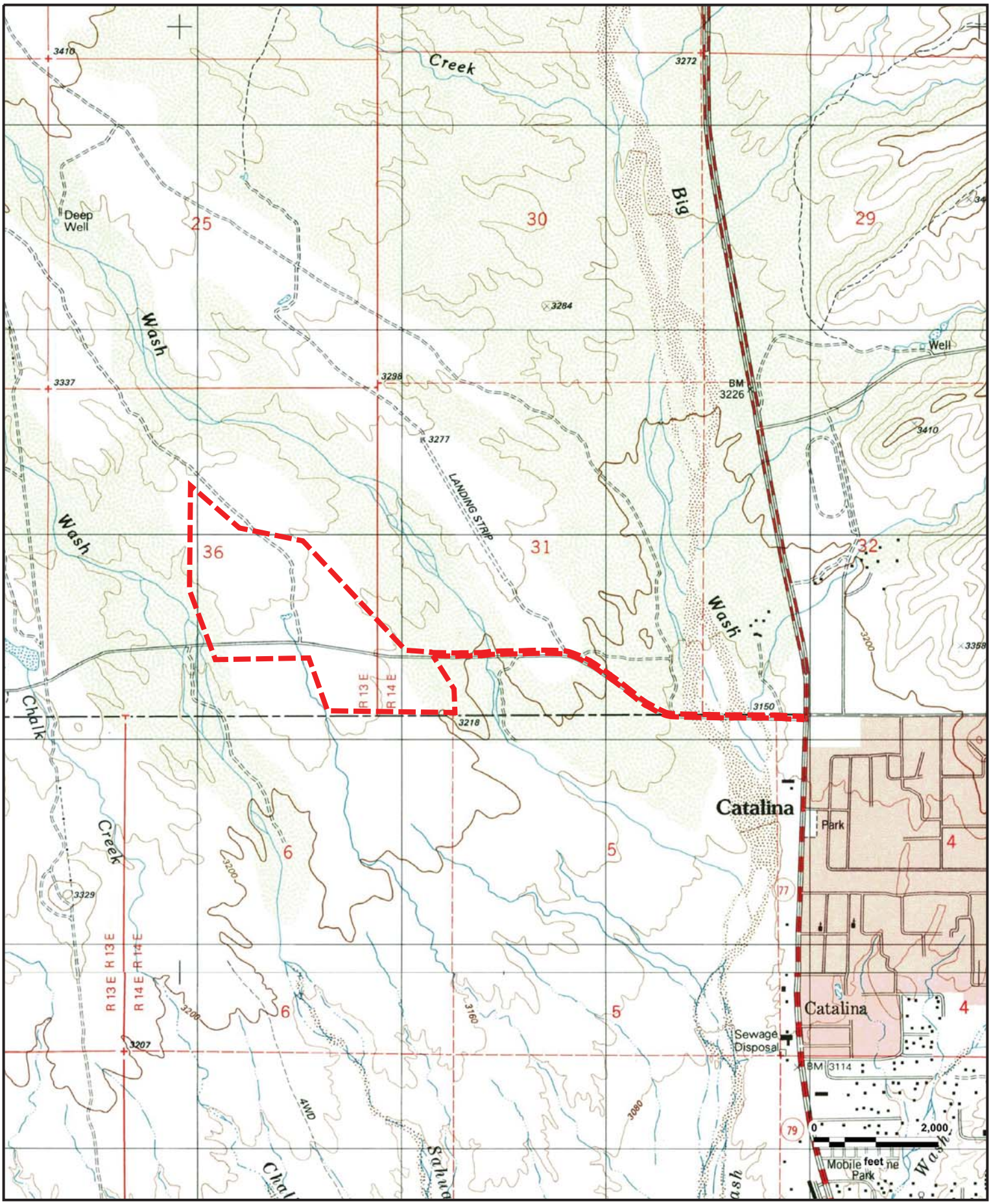
Saddlebrooke Solar Project
Oracle Junction, AZ (2011), Oro Valley, AZ (2011)

GeoSearch

JOB #: 302420 - 07/01/2019



N
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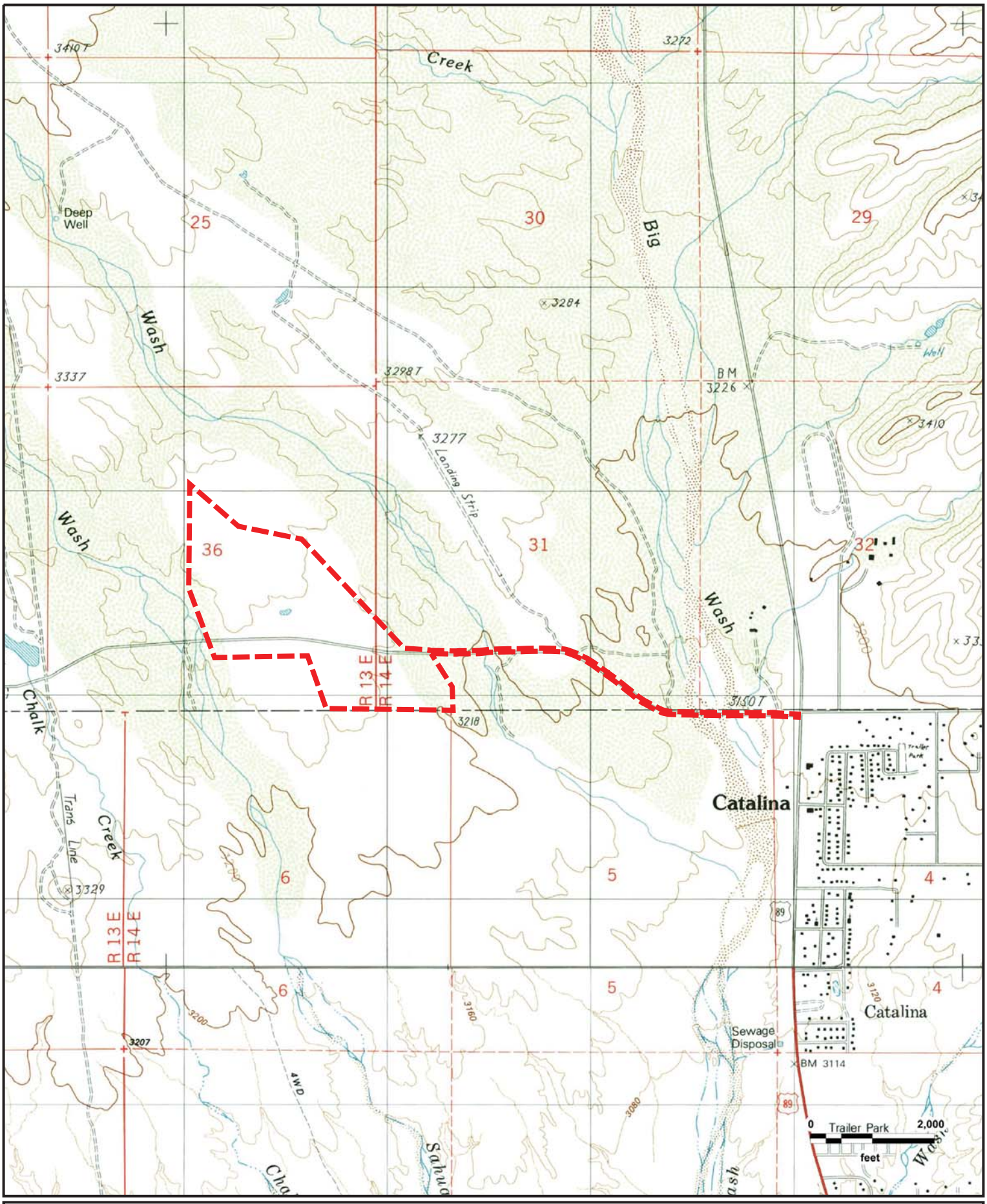
Saddlebrooke Solar Project
Oracle Junction, AZ (1996), Oro Valley, AZ (1996)

GeoSearch

JOB #: 302420 - 07/01/2019



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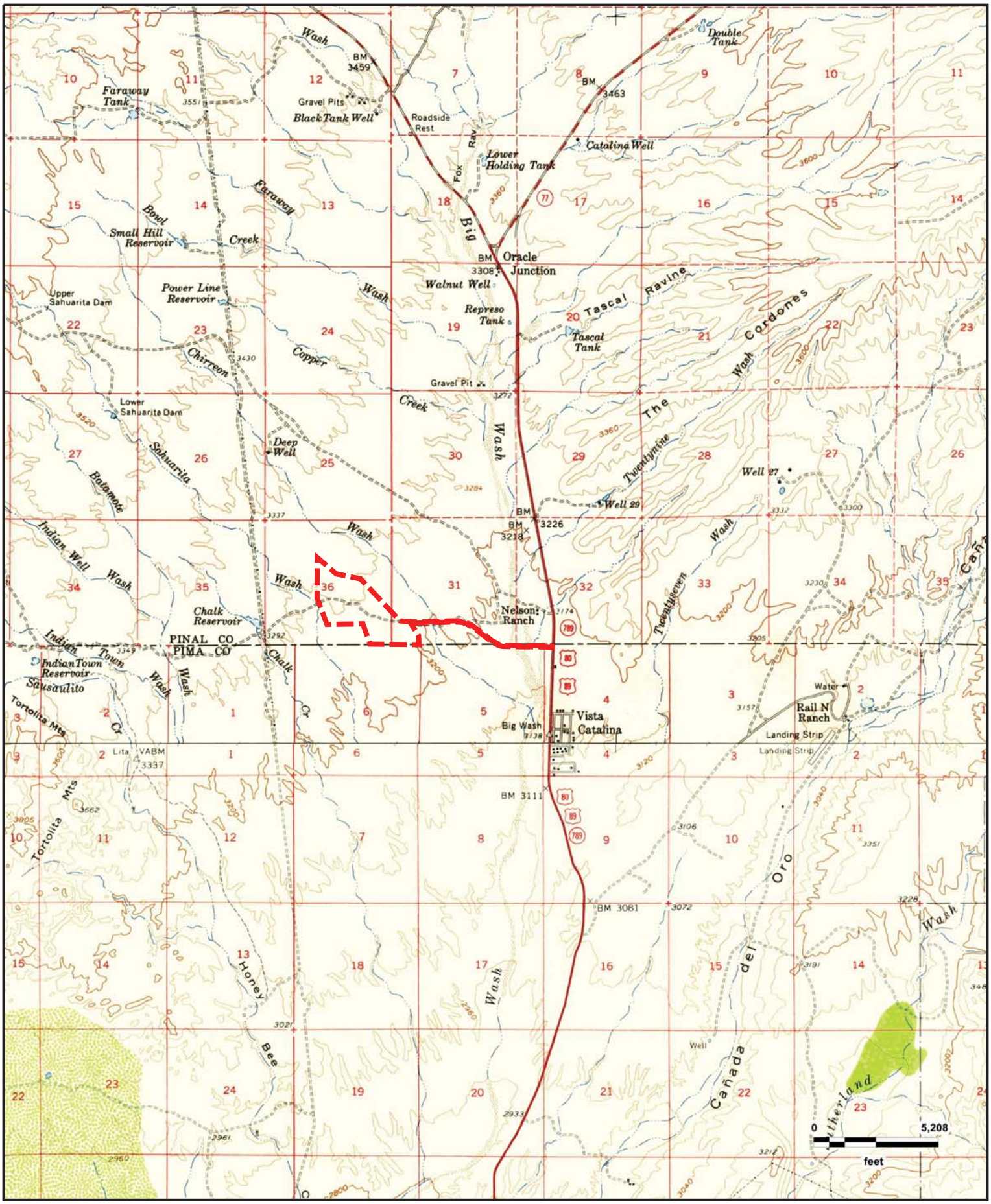
Saddlebrooke Solar Project
Oracle Junction, AZ (1988), Oro Valley, AZ (1981)

GeoSearch

JOB #: 302420 - 07/01/2019



N
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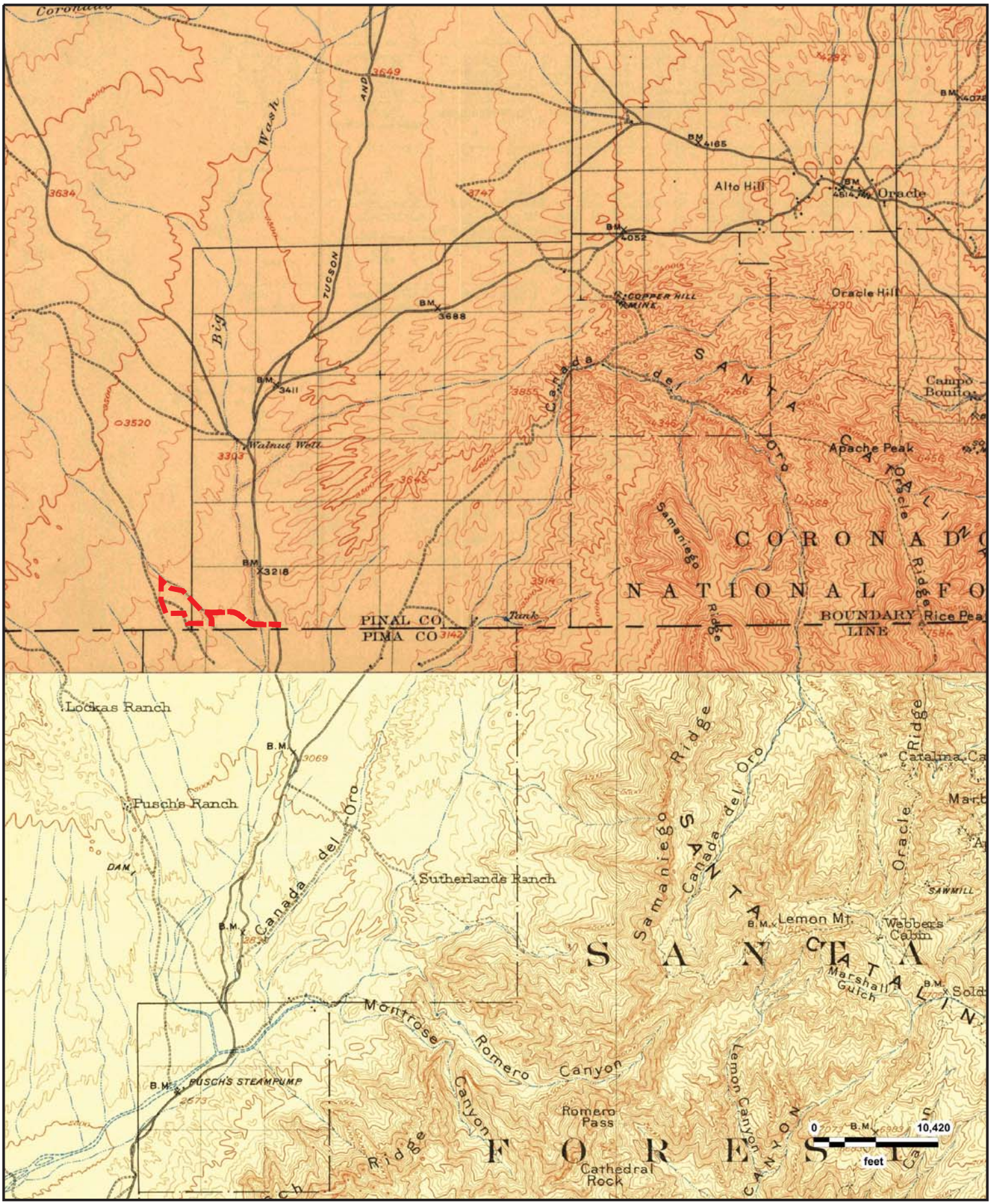
Saddlebrooke Solar Project
Oracle, AZ (1959), Mount Lemmon, AZ (1957)

GeoSearch

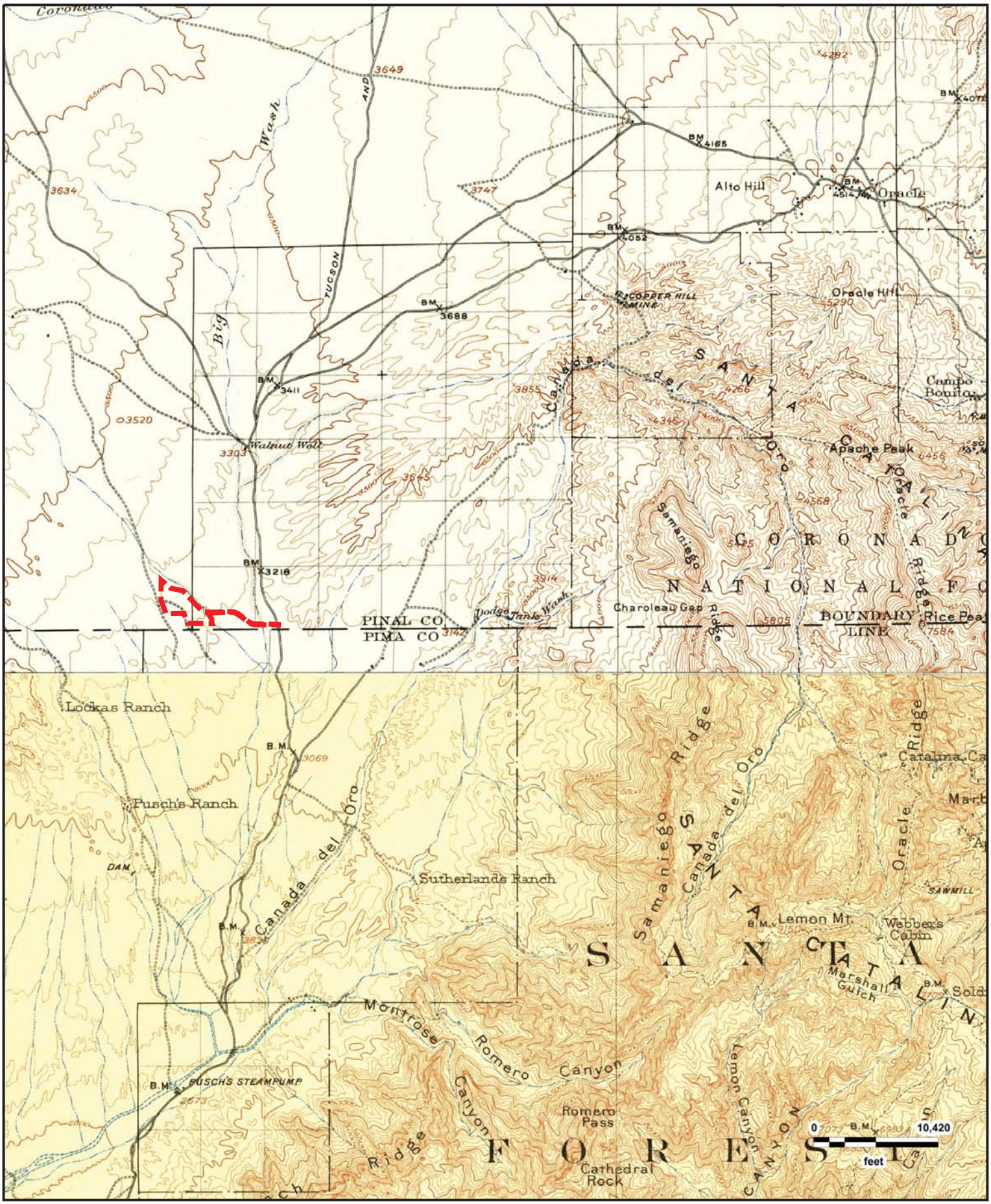
JOB #: 302420 - 07/01/2019



Saddlebrooke Solar Project
Winkelman, AZ (1913), Tucson, AZ (1905)

GeoSearch

JOB #: 302420 - 07/01/2019



Saddlebrooke Solar Project
Winkelman, AZ (1911), Tucson, AZ (1905)

GeoSearch

JOB #: 302420 - 07/01/2019

APPENDIX F

Golder Ranch Fire District Records Search Response

GOLDER RANCH FIRE DISTRICT

www.grfdaz.gov

December 09, 2020

Attn: Cheyenne Herzog
7740 N. 16th Street Suite 300
Phoenix, AZ 85020
Re: Environmental Records/Fire Code Violation

Cheyenne Herzog,

I am writing to you in regards to the properties listed below. There are no aboveground or underground storage tanks listed or on record for the parcels below. There is no documentation on file for any environmental issues, hazardous materials incidents, or spills.

Pinal County Parcel 304097030
Pinal County Parcel 305317050
Pima County Parcel 222200010

Please note that per 2018 IFC Section 104.6 Official Records, these records are only indicative of any incidents or activities that have occurred within the last five years and shown on file with the Fire and Life Safety Division.

We are the Fire Marshal service provider for the questioned property and the fire service provider.

If you have any questions, please feel free to contact us.

Thank You,
Jennifer Akins
Deputy Fire Marshal
Golder Ranch Fire District
520-818-1017

APPENDIX G

Owner Questionnaires

Kimley»Horn

SITE ASSESSMENT OWNER QUESTIONNAIRE
CHIRREON SOLAR PROJECT (154 AC)

Location	Owner
W. Edwin Road (Pima County Right-of-Way)	Pima County Department of Environmental Quality, April Mattox Stormwater Compliance Manager

Please return via email to Jennifer Simpkins at Jennifer.Simpkins@kimley-horn.com.

Form Completed By: April Mattox
Phone: 520-724-7322
Date: 12/18/2020

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.):

How long have you been associated with, or had knowledge of, the property?

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.

Pima County DOT

2. Please describe the current use(s) of the property or indicate uses on the tenant list.

none

3. Please describe the past (historic) uses of the property, with approximate dates.

none

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies.

no knowledge of ESA

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer "yes" so that we can clarify all past and present environmental conditions.

	Conditions	Yes	No
1.	**Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting petroleum refining and/or other chemical manufacturing *If Yes, please explain:*		x
2.	**Agricultural / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.) *If Yes, please explain:*		x
3.	**Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon *If Yes, please explain:*		x
4.	**Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment *If Yes, please explain:*		x
5.	**Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials *If Yes, please explain:*		x
6.	**Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel *If Yes, please explain:*		x
7.	**Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill *If Yes, please explain:*		x
8.	**PCBs** Transformers, hydraulic equipment *If Yes, please explain:*		x
9.	**Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage *If Yes, please explain:*		x
10.	**Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground *If Yes, please explain:*		x

Conditions	Yes	No
11. Wastewater Issues Floor drains and trenches, sumps, oil water separators on the site *If Yes, please explain:*		x
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil; AND capacity. *If Yes, please explain:*		x
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports *If Yes, please explain:*		x
14. Septic Tanks and Leachfields Currently used or abandoned *If Yes, please explain:*		x
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements *If Yes, please explain:*		x
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit. *If Yes, please explain:*		x
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources *If Yes, please explain:*		x
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property? *If Yes, please explain:*		x

I have completed the above questionnaire to the best of my knowledge.

Signature: April Mattox Date 12/18/2020

Printed name: April Mattox

Company: Pima County Department of Environmental Quality

Attachment: Aerial Photograph

Kimley»Horn

No change per email from
Ed Green dated 12/11/2020

SITE ASSESSMENT OWNER QUESTIONNAIRE
CHIRREON SOLAR PROJECT (154 AC)

Location	Owner
ADOT Right-of-Way connection of State Route 77 to W Edwin Road	ADOT Environmental Planning Ed Green, Hazardous Materials Coordinator

Please return via email to Jennifer Simpkins at Jennifer.Simpkins@kimley-horn.com.

Form Completed By:
Phone:
Date:

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.):

How long have you been associated with, or had knowledge of, the property?

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.

2. Please describe the current use(s) of the property or indicate uses on the tenant list.

3. Please describe the past (historic) uses of the property, with approximate dates.

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies.

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer "yes" so that we can clarify all past and present environmental conditions.

	Conditions	Yes	No
1.	**Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting petroleum refining and/or other chemical manufacturing *If Yes, please explain:*		
2.	**Agricultural / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.) *If Yes, please explain:*		
3.	**Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon *If Yes, please explain:*		
4.	**Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment *If Yes, please explain:*		
5.	**Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials *If Yes, please explain:*		
6.	**Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel *If Yes, please explain:*		
7.	**Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill *If Yes, please explain:*		
8.	**PCBs** Transformers, hydraulic equipment *If Yes, please explain:*		
9.	**Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage *If Yes, please explain:*		
10.	**Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground *If Yes, please explain:*		

Conditions	Yes	No
11. Wastewater Issues Floor drains and trenches, sumps, oil water separators on the site *If Yes, please explain:*		
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil; AND capacity. *If Yes, please explain:*		
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports *If Yes, please explain:*		
14. Septic Tanks and Leachfields Currently used or abandoned *If Yes, please explain:*		
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements *If Yes, please explain:*		
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit. *If Yes, please explain:*		
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources *If Yes, please explain:*		
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property? *If Yes, please explain:*		

I have completed the above questionnaire to the best of my knowledge.

Signature: _____Date_____

Printed name:

Company:

Attachment: Aerial Photograph

Kimley»Horn

SITE ASSESSMENT OWNER QUESTIONNAIRE
SADDLEBROOKE SOLAR PROJECT (175 AC)

Location	Owner
ADOT Right-of-Way connection of State Route 77 to W Edwin Road	ADOT Environmental Planning, Ed Green, Hazardous Materials Coordinator

Please return via email to Jennifer Simpkins at Jennifer.Simpkins@kimley-horn.com.

Form Completed By: Ed Green
Phone: 602.920.3882
Date: 08 Jul 19

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.):

How long have you been associated with, or had knowledge of, the property?

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.
   Vacant

2. Please describe the current use(s) of the property or indicate uses on the tenant list.
   Right of Way (Paved)

3. Please describe the past (historic) uses of the property, with approximate dates.
   Right of Way (State Land)

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies.
   See attached PISA

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer "yes" so that we can clarify all past and present environmental conditions.

	Conditions	Yes	No
1.	**Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting petroleum refining and/or other chemical manufacturing *If Yes, please explain:*		✓
2.	**Agricultural / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.) *If Yes, please explain:*		✓
3.	**Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon *If Yes, please explain:*		✓
4.	**Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment *If Yes, please explain:*		✓
5.	**Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials *If Yes, please explain:*		✓
6.	**Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel *If Yes, please explain:*		✓
7.	**Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill *If Yes, please explain:*		✓
8.	**PCBs** Transformers, hydraulic equipment *If Yes, please explain:*		✓
9.	**Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage *If Yes, please explain:*		✓
10.	**Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground *If Yes, please explain:*		✓

Conditions	Yes	No
11. Wastewater Issues Floor drains and trenches, sumps, oil water separators on the site *If Yes, please explain:*		✓
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil; AND capacity. *If Yes, please explain:*		✓
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports *If Yes, please explain:* See attached report	✓	
14. Septic Tanks and Leachfields Currently used or abandoned *If Yes, please explain:*		✓
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements *If Yes, please explain:*		✓
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit. *If Yes, please explain:*		✓
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources Surveyed for cultural resources - none discovered *If Yes, please explain:*		✓
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property? *If Yes, please explain:*		✓

I have completed the above questionnaire to the best of my knowledge.

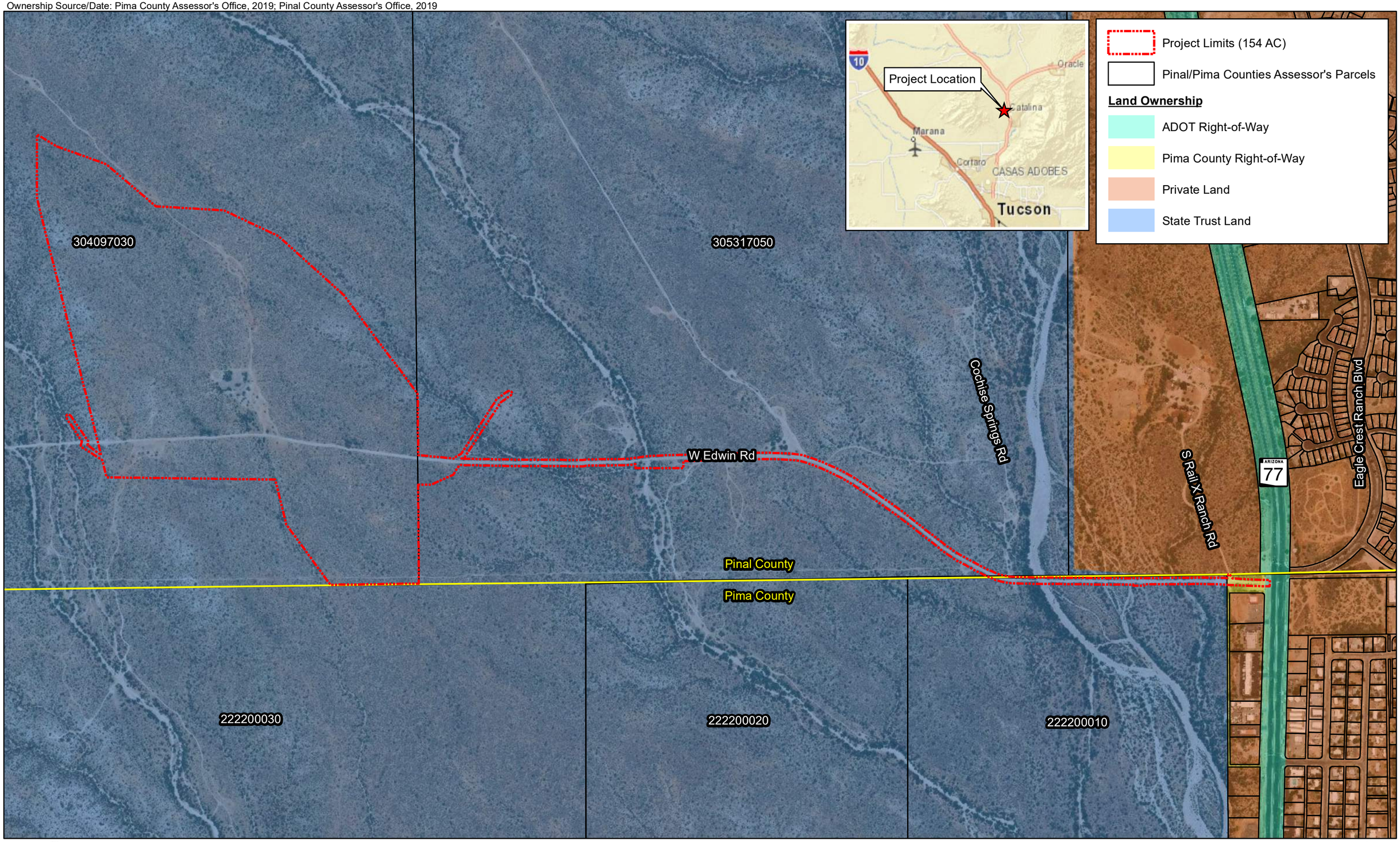
Signature: Ed Green Date 08 jUL 19

Printed name: Ed Green

Company: ADOT

Attachment: Aerial Photograph

Aerial Source/Date: ESRI 2017
Ownership Source/Date: Pima County Assessor's Office, 2019; Pinal County Assessor's Office, 2019



Kimley»Horn
Expect More. Experience Better.

Chirreon Solar Project

Pinal and Pima Counties, Arizona

Aerial Photograph

0 700 1,400 2,800 Feet
Scale: 1"=700'

N W E S

Kimley»Horn

No change per email from Bruce Campbell dated 12/23/2020

SITE ASSESSMENT OWNER QUESTIONNAIRE
CHIRREON SOLAR PROJECT (154 AC)
APPLICATION NO. 03-119780

Parcel Nos.	Owner
Portions of 304097030 and 305317050 within Pinal County and a portion of 222200010 within Pima County	Arizona State Land Department, Bruce Campbell, Environmental Program Specialist

---

Please return via email to Jennifer Simpkins at Jennifer.Simpkins@kimley-horn.com.

Form Completed By:
Phone:
Date:

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.):

How long have you been associated with, or had knowledge of, the property?

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.

2. Please describe the current use(s) of the property or indicate uses on the tenant list.

3. Please describe the past (historic) uses of the property, with approximate dates.

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies.

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer "yes" so that we can clarify all past and present environmental conditions.

	Conditions	Yes	No
1.	**Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting petroleum refining and/or other chemical manufacturing *If Yes, please explain:*		
2.	**Agricultural / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.) *If Yes, please explain:*		
3.	**Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon *If Yes, please explain:*		
4.	**Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment *If Yes, please explain:*		
5.	**Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials *If Yes, please explain:*		
6.	**Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel *If Yes, please explain:*		
7.	**Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill *If Yes, please explain:*		
8.	**PCBs** Transformers, hydraulic equipment *If Yes, please explain:*		
9.	**Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage *If Yes, please explain:*		
10.	**Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground *If Yes, please explain:*		

Conditions	Yes	No
11. Wastewater Issues Floor drains and trenches, sumps, oil water separators on the site *If Yes, please explain:*		
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil; AND capacity. *If Yes, please explain:*		
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports *If Yes, please explain:*		
14. Septic Tanks and Leachfields Currently used or abandoned *If Yes, please explain:*		
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements *If Yes, please explain:*		
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit. *If Yes, please explain:*		
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources *If Yes, please explain:*		
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property? *If Yes, please explain:*		

I have completed the above questionnaire to the best of my knowledge.

Signature: _____Date_____

Printed name:

Company:

Attachment: Aerial Photograph

Kimley»Horn

SITE ASSESSMENT OWNER QUESTIONNAIRE
SADDLEBROOKE SOLAR PROJECT (175 AC)
APPLICATION NO. 03-119780

Parcel Nos.	Owner
Portions of 304097030 and 305317050 within Pinal County and a portion of 222200010 within Pima County	Arizona State Land Department, Bruce Campbell, Environmental Program Specialist

Please return via email to Jennifer Simpkins at Jennifer.Simpkins@kimley-horn.com.

Form Completed By: Bruce Campbell, Arizona State Land Dept.
Phone: 602-542-2578
Date: 7/8/2019

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.):
owner rep.

How long have you been associated with, or had knowledge of, the property?
18 yrs

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.

   None

2. Please describe the current use(s) of the property or indicate uses on the tenant list.

   Native desert - Grazing

3. Please describe the past (historic) uses of the property, with approximate dates.

   Native desert - Grazing

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies. NO

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer "yes" so that we can clarify all past and present environmental conditions.

Conditions	Yes	No
1. Industrial Uses of Subject or Adjoining Properties Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting petroleum refining and/or other chemical manufacturing *If Yes, please explain:*		X
2. Agricultural / Aquiculture Uses Crop production, concentrated animal feeding (poultry, cattle, fish, etc.) *If Yes, please explain:*		X
3. Waste Storage or Disposal Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon *If Yes, please explain:*		X
4. Equipment Use, Storage, or Abandonment Production lines, hydraulic equipment, vehicles, heavy equipment *If Yes, please explain:*		X
5. Hazardous Materials (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials *If Yes, please explain:*		X
6. Petroleum Hydrocarbons (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel *If Yes, please explain:*		X
7. Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill *If Yes, please explain:*		X
8. PCBs Transformers, hydraulic equipment *If Yes, please explain:*		X
9. Surface Water Issues Pits, ponds, or lagoons associated with wastewater storage *If Yes, please explain:*		X
10. Groundwater Issues Monitoring or drinking water wells, injection wells or drains that go directly into the ground *If Yes, please explain:*		X

Conditions	Yes	No
11. Wastewater Issues Floor drains and trenches, sumps, oil water separators on the site *If Yes, please explain:*		X
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil; AND capacity. *If Yes, please explain:*		X
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports *If Yes, please explain:*		X
14. Septic Tanks and Leachfields Currently used or abandoned *If Yes, please explain:*		X
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements *If Yes, please explain:*		X
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit. *If Yes, please explain:*		X
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources *If Yes, please explain:*		X
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property? *If Yes, please explain:*		X

I have completed the above questionnaire to the best of my knowledge.

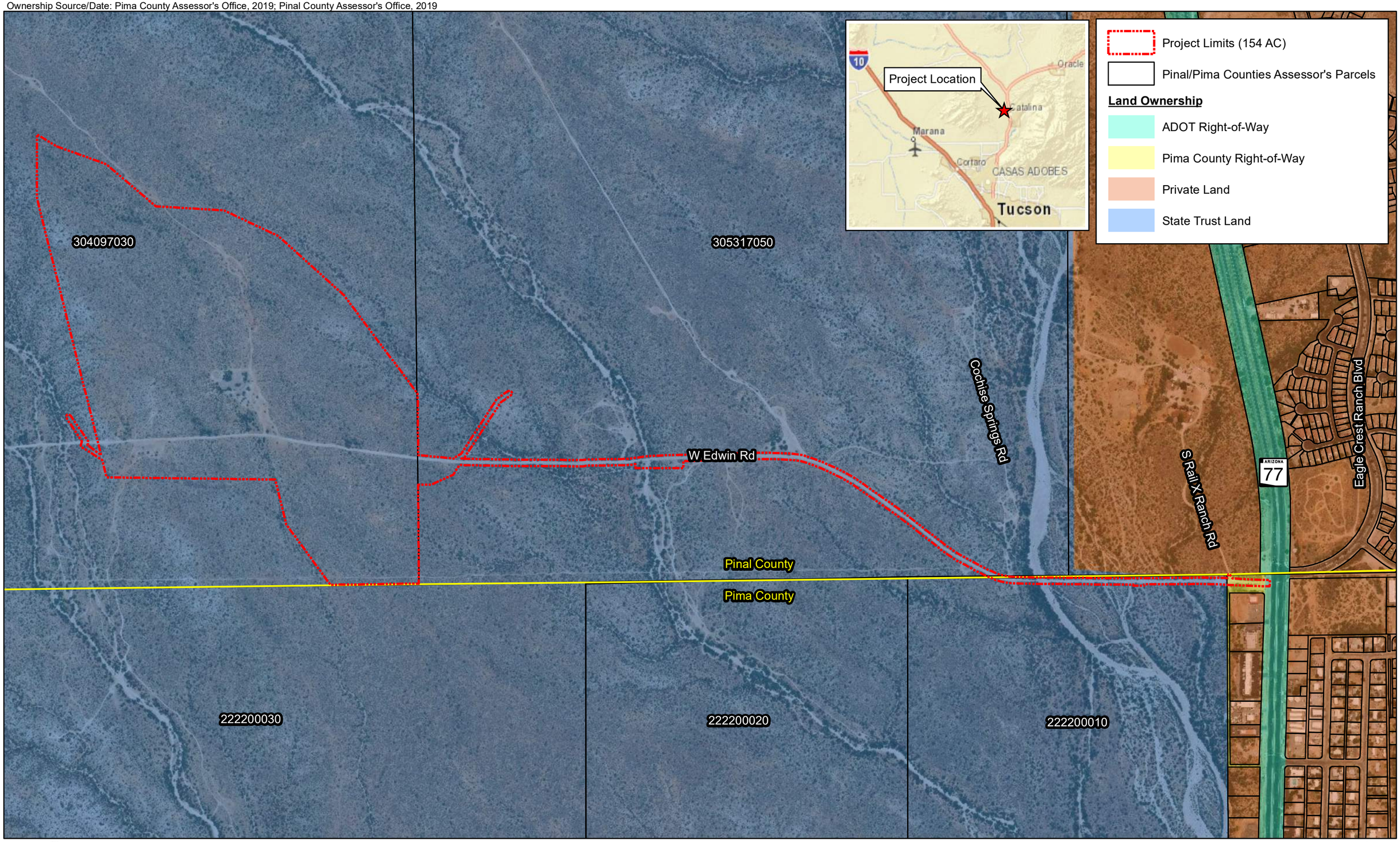
Signature: [signature] Date 7/8/2019

Printed name: Bruce Campbell

Company: Arizona State Land Department

Attachment: Aerial Photograph

Aerial Source/Date: ESRI 2017
Ownership Source/Date: Pima County Assessor's Office, 2019; Pinal County Assessor's Office, 2019



Kimley»Horn
Expect More. Experience Better.

Chirreon Solar Project

Pinal and Pima Counties, Arizona

Aerial Photograph

0 700 1,400 2,800 Feet
Scale: 1"=700'

N W E S

APPENDIX H

GeoSearch RecSearch Report

E RecSearch Report

GeoLens by GeoSearch

Target Property:

Chirreon Solar Projecct
Tucson, Pinal County, Arizona 85232

Prepared For:

Kimley-Horn and Associates-Phoenix

Order #: 158646
Job #: 388454
Project #: 094741038
Date: 12/10/2020

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Unlocatable Report . . . . . See Attachment

Zip Report . . . . . See Attachment

Disclaimer

This report was designed by GeoSearch to meet or exceed the records search requirements of the All Appropriate Inquiries Rule (40 CFR ï¿½312.26) and the current version of the ASTM International E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process or, if applicable, the custom requirements requested by the entity that ordered this report. The records and databases of records used to compile this report were collected from various federal,state and local governmental entities. It is the goal of GeoSearch to meet or exceed the 40 CFR ï¿½312.26 and E1527 requirements for updating records by using the best available technology. GeoSearch contacts the appropriate governmental entities on a recurring basis. Depending on the frequency with which a record source or database of records is updated by the governmental entity, the data used to prepare this report may be updated monthly, quarterly, semi-annually, or annually.

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Target Property Summary

Target Property Information

Chirreon Solar Projecct
Tucson, Arizona 85232

Coordinates
Area centroid (-110.95192, 32.5159583)
3,273 feet above sea level

USGS Quadrangle
Oracle Junction, AZ

Geographic Coverage Information

County/Parish: Pinal (AZ) , Pima (AZ)
ZipCode(s):
Oracle AZ: 85623
Tucson AZ: 85739, 85755

Database Summary

FEDERAL LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSAZ	0	0	TP/AP
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC	0	0	TP/AP
LAND USE CONTROL INFORMATION SYSTEM	LUCIS	0	0	TP/AP
RCRA SITES WITH CONTROLS	RCRASC	0	0	TP/AP
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR	RCRAGR09	0	0	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - NON-GENERATOR	RCRANGR09	0	0	0.1250
BROWNFIELDS MANAGEMENT SYSTEM	BF	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	DNPL	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	NLRRCRAT	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - NON-CORRACTS TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM	SEMS	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM ARCHIVED SITE INVENTORY	SEMSARCH	0	0	0.5000
NATIONAL PRIORITIES LIST	NPL	0	0	1.0000
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	PNPL	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	RCRAC	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - SUBJECT TO CORRECTIVE ACTION FACILITIES	RCRASUBC	0	0	1.0000

SUB-TOTAL		0	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS	0	0	TP/AP
BIENNIAL REPORTING SYSTEM	BRS	0	0	TP/AP
CERCLIS LIENS	SFLIENS	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0	0	TP/AP
EPA DOCKET DATA	DOCKETS	0	0	TP/AP
ENFORCEMENT AND COMPLIANCE HISTORY INFORMATION	ECHOR09	0	0	TP/AP
FACILITY REGISTRY SYSTEM	FRSAZ	0	0	TP/AP

Database Summary

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR09	0	0	TP/AP
HAZARDOUS WASTE COMPLIANCE DOCKET FACILITIES	HWCD	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	ICISNPDES	0	0	TP/AP
MATERIAL LICENSING TRACKING SYSTEM	MLTS	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR09	0	0	TP/AP
PCB ACTIVITY DATABASE SYSTEM	PADS	0	0	TP/AP
PERMIT COMPLIANCE SYSTEM	PCSR09	0	0	TP/AP
SEMS LIEN ON PROPERTY	SEMSLIENS	0	0	TP/AP
SSEHRI PFAS CONTAMINATION SITES	SSEHRIPFAS	0	0	TP/AP
SECTION SEVEN TRACKING SYSTEM	SSTS	0	0	TP/AP
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA	0	0	TP/AP
TOXICS RELEASE INVENTORY	TRI	0	0	TP/AP
ALTERNATIVE FUELING STATIONS	ALTFUELS	0	0	0.2500
FEMA OWNED STORAGE TANKS	FEMAUST	0	0	0.2500
HISTORICAL GAS STATIONS	HISTPST	0	0	0.2500
INTEGRATED COMPLIANCE INFORMATION SYSTEM DRYCLEANERS	ICISCLEANERS	0	0	0.2500
MINE SAFETY AND HEALTH ADMINISTRATION MASTER INDEX FILE	MSHA	0	0	0.2500
MINERAL RESOURCE DATA SYSTEM	MRDS	0	0	0.2500
OPEN DUMP INVENTORY	ODI	0	0	0.5000
SURFACE MINING CONTROL AND RECLAMATION ACT SITES	SMCRA	0	0	0.5000
URANIUM MILL TAILINGS RADIATION CONTROL ACT SITES	USUMTRCA	0	0	0.5000
DEPARTMENT OF DEFENSE SITES	DOD	0	0	1.0000
FORMER MILITARY NIKE MISSILE SITES	NMS	0	0	1.0000
FORMERLY USED DEFENSE SITES	FUDS	0	0	1.0000
FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM	FUSRAP	0	0	1.0000
RECORD OF DECISION SYSTEM	RODS	0	0	1.0000

SUB-TOTAL		0	0	

Database Summary

STATE (AZ) LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
ENVIRONMENTAL USE RESTRICTION SITES	EUR	0	0	TP/AP
ABOVEGROUND STORAGE TANKS	AST	0	0	0.2500
STATE FIRE MARSHAL ABOVEGROUND STORAGE TANKS	AST2	0	0	0.2500
UNDERGROUND STORAGE TANKS	UST	0	0	0.2500
CLOSED SOLID WASTE FACILITIES	CLOSEDSWF	0	0	0.5000
LEAKING UNDERGROUND STORAGE TANKS	LUST	0	0	0.5000
OPEN LANDFILL FACILITIES	OPENLF	0	0	0.5000
VOLUNTARY REMEDIATION PROGRAM AND BROWNFIELDS PROGRAM SITES	VRPBF	0	0	0.5000
ARIZONA SUPERFUND PROGRAM LIST	ASPL	0	0	1.0000
STATE HAZARDOUS WASTE SITES	SHWS	0	0	1.0000
WATER QUALITY ASSURANCE REVOLVING FUND PROGRAM REGISTRY	WQARF	0	0	1.0000

SUB-TOTAL		0	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
AIR QUALITY PERMITS DATABASE	AIRS	0	0	TP/AP
CLANDESTINE DRUG LABORATORIES	CDL	0	0	TP/AP
REGISTERED DRYWELLS	DRYWELLS	0	0	TP/AP
SPILLS DATABASE	SPILLS	0	0	TP/AP
WASTEWATER FACILITY LIST	WWFAC	0	0	TP/AP
BIOHAZARDOUS MEDICAL WASTE FACILITIES	BIOMW	0	0	0.2500
DRY CLEANERS INVENTORY	CLEANERS	0	0	0.5000

SUB-TOTAL		0	0	

Database Summary

LOCAL LISTING

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
CITY OF TUCSON LANDFILLS	COTLF	0	0	0.5000

SUB-TOTAL		0	0	

Database Summary

TRIBAL LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	USTR09	0	0	0.2500
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	LUSTR09	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	ODINDIAN	0	0	0.5000
SUB-TOTAL		0	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
INDIAN RESERVATIONS	INDIANRES	0	0	1.0000
SUB-TOTAL		0	0	

TOTAL		0	0	

Database Radius Summary

FEDERAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRSAFS	0.0200	0	NS	NS	NS	NS	NS	0
BRS	0.0200	0	NS	NS	NS	NS	NS	0
CDL	0.0200	0	NS	NS	NS	NS	NS	0
DOCKETS	0.0200	0	NS	NS	NS	NS	NS	0
EC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
ECHOR09	0.0200	0	NS	NS	NS	NS	NS	0
ERNSAZ	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
FRSAZ	0.0200	0	NS	NS	NS	NS	NS	0
HMIRSR09	0.0200	0	NS	NS	NS	NS	NS	0
HWCD	0.0200	0	NS	NS	NS	NS	NS	0
ICIS	0.0200	0	NS	NS	NS	NS	NS	0
ICISNPDES	0.0200	0	NS	NS	NS	NS	NS	0
LUCIS	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
MLTS	0.0200	0	NS	NS	NS	NS	NS	0
NPDESR09	0.0200	0	NS	NS	NS	NS	NS	0
PADS	0.0200	0	NS	NS	NS	NS	NS	0
PCSR09	0.0200	0	NS	NS	NS	NS	NS	0
RCRASC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
SEMSLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SFLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SSEHRIPFAS	0.0200	0	NS	NS	NS	NS	NS	0
SSTS	0.0200	0	NS	NS	NS	NS	NS	0
TRI	0.0200	0	NS	NS	NS	NS	NS	0
TSCA	0.0200	0	NS	NS	NS	NS	NS	0
RCRAGR09	**0.1250**	**0**	**0**	**NS**	**NS**	**NS**	**NS**	**0**
RCRANGR09	**0.1250**	**0**	**0**	**NS**	**NS**	**NS**	**NS**	**0**
ALTFUELS	0.2500	0	0	0	NS	NS	NS	0
FEMAUST	0.2500	0	0	0	NS	NS	NS	0
HISTPST	0.2500	0	0	0	NS	NS	NS	0
ICISCLEANERS	0.2500	0	0	0	NS	NS	NS	0
MRDS	0.2500	0	0	0	NS	NS	NS	0
MSHA	0.2500	0	0	0	NS	NS	NS	0
BF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
DNPL	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
NLRRCRAT	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**

Database Radius Summary

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
ODI	0.5000	0	0	0	0	NS	NS	0
RCRAT	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SEMS	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SEMSARCH	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SMCRA	0.5000	0	0	0	0	NS	NS	0
USUMTRCA	0.5000	0	0	0	0	NS	NS	0
DOD	1.0000	0	0	0	0	0	NS	0
FUDS	1.0000	0	0	0	0	0	NS	0
FUSRAP	1.0000	0	0	0	0	0	NS	0
NLRRCRAC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
NMS	1.0000	0	0	0	0	0	NS	0
NPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
PNPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RCRAC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RCRASUBC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RODS	1.0000	0	0	0	0	0	NS	0

SUB-TOTAL		0	0	0	0	0	0	0

Database Radius Summary

STATE (AZ) LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRS	0.0200	0	NS	NS	NS	NS	NS	0
CDL	0.0200	0	NS	NS	NS	NS	NS	0
DRYWELLS	0.0200	0	NS	NS	NS	NS	NS	0
EUR	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
SPILLS	0.0200	0	NS	NS	NS	NS	NS	0
WWFAC	0.0200	0	NS	NS	NS	NS	NS	0
AST	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
AST2	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
BIOMW	0.2500	0	0	0	NS	NS	NS	0
UST	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
CLEANERS	0.5000	0	0	0	0	NS	NS	0
CLOSEDSWF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
LUST	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
OPENLF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
VRPBF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
ASPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
SHWS	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
WQARF	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**

SUB-TOTAL		0	0	0	0	0	0	0

Database Radius Summary

LOCAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
COTLF	0.5000	0	0	0	0	NS	NS	0
SUB-TOTAL		0	0	0	0	0	0	0

Database Radius Summary

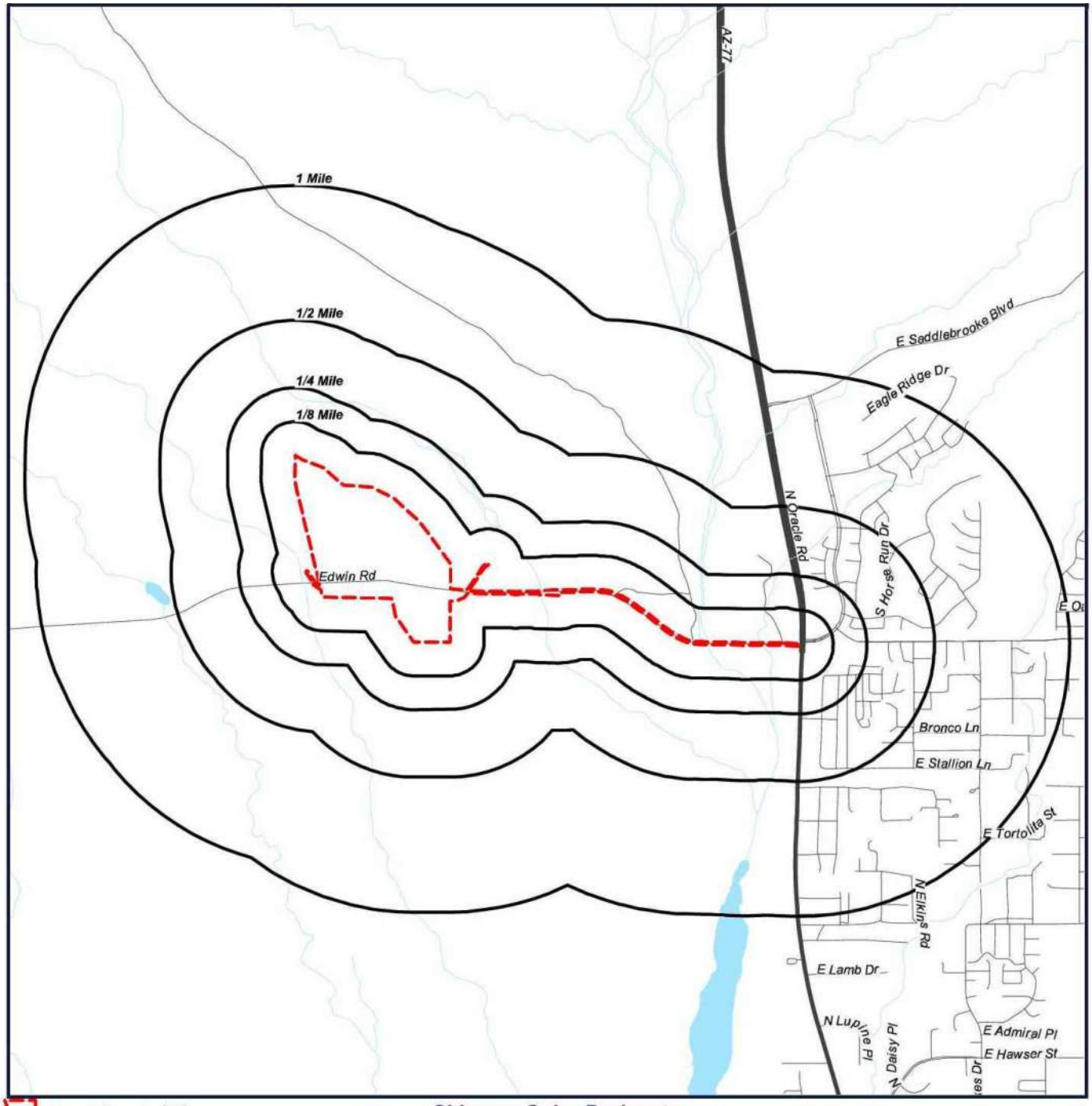
TRIBAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
USTR09	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
LUSTR09	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
ODINDIAN	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
INDIANRES	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0

NOTES:
NS = NOT SEARCHED
TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

Radius Map 1



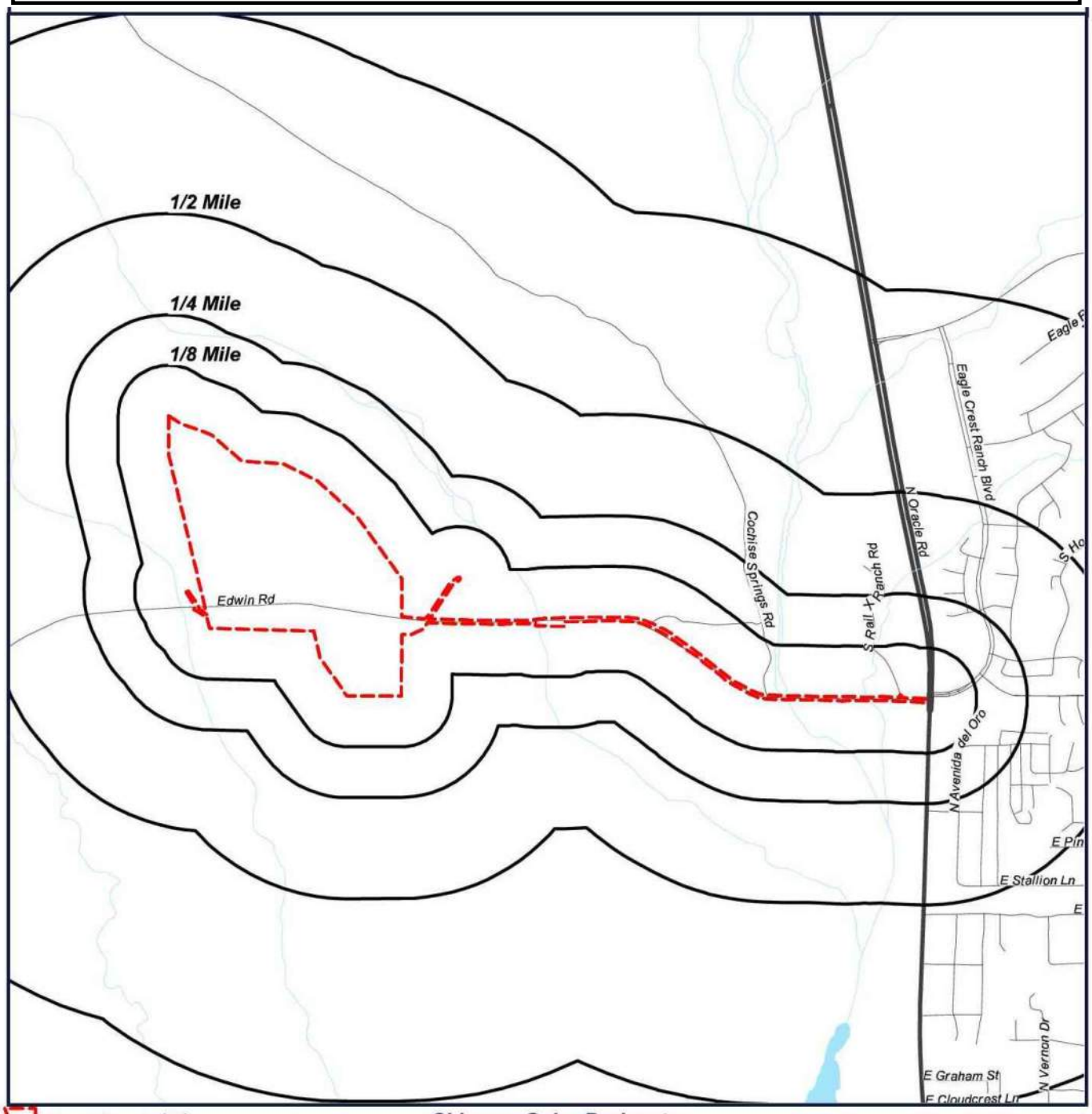
Target Property (TP)

Chirreon Solar Projecct
Tucson, Arizona
85232

N
W E
S

0' 1500' 3000' 4500'
SCALE: 1" = 3000'

Radius Map 2



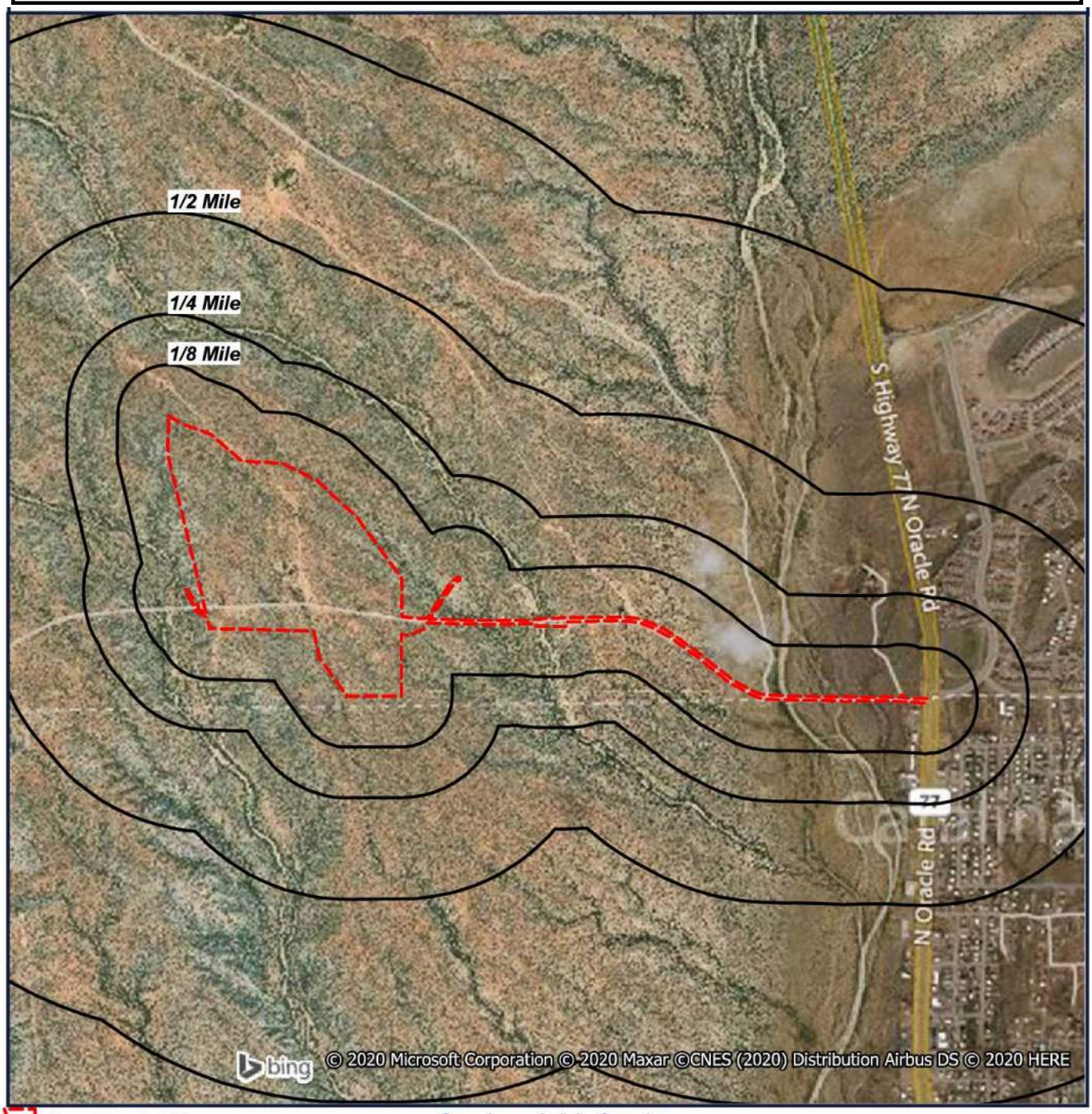
Target Property (TP)

Chirreon Solar Projecct
Tucson, Arizona
85232

N W E S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

Ortho Map



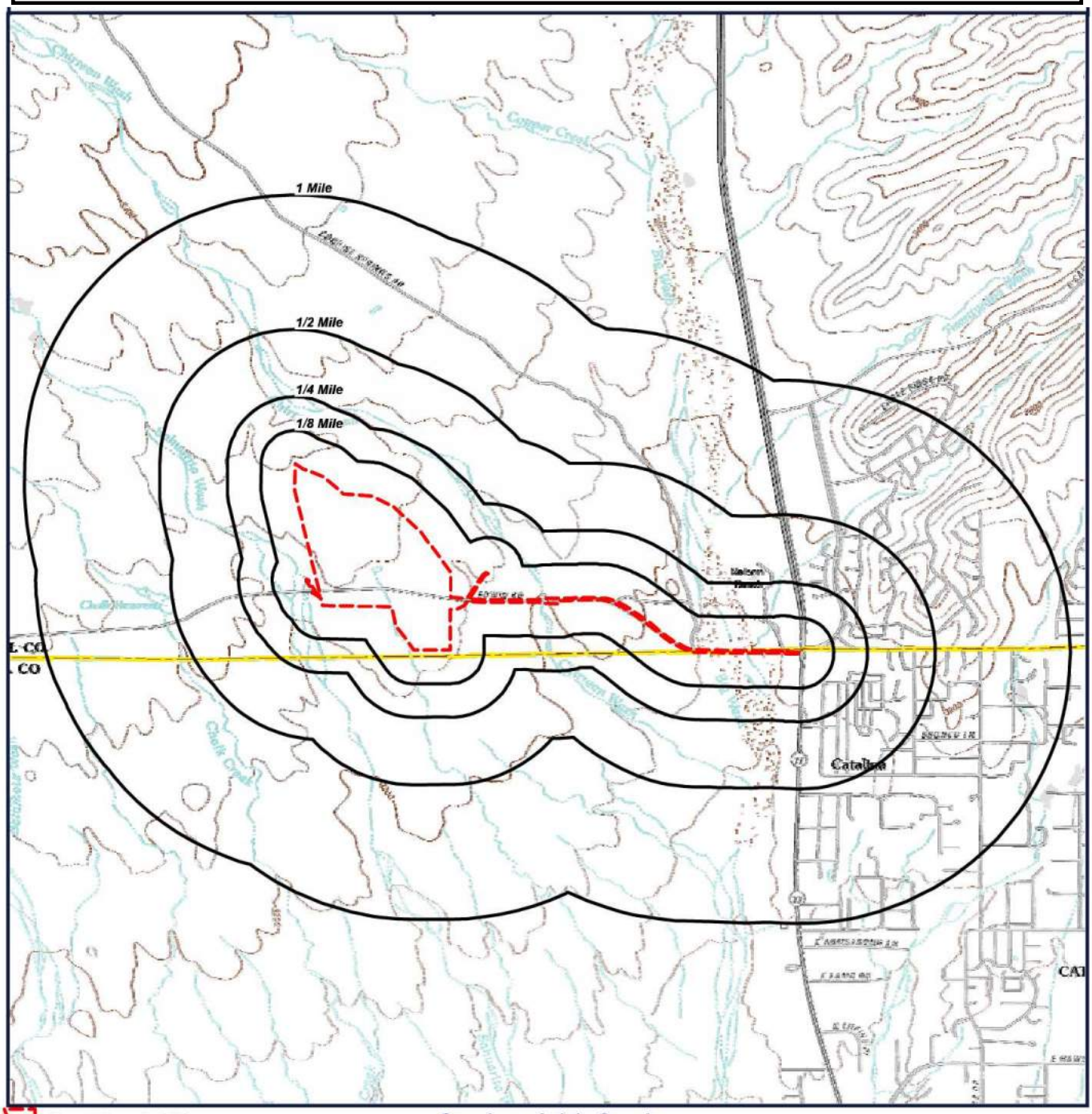
Target Property (TP)

Quadrangle(s): Oracle Junction
Chirreon Solar Projecct
Tucson, Arizona
85232

N
W E
S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

Topographic Map



Target Property (TP)

Quadrangle(s): Oracle Junction
Source: USGS, 11/04/2011
Chirreon Solar Projecct
Tucson, Arizona 85232

N
W E
S

0' 1500' 3000' 4500'
SCALE: 1" = 3000'

Located Sites Summary

No Records Found.

Site Summary By Database

No Records Found.

Elevation Summary

Elevations are collected from the USGS 3D Elevation Program 1/3 arc-second (approximately 10 meters) layer hosted at the NGTOC. .

Target Property Elevation: 3273 ft.

*NOTE: Standard environmental records are displayed in **bold**.*

No Records Found.

Unlocated Sites Summary

This list contains sites that could not be mapped due to limited or incomplete address information.

No Records Found

AIRSAFS Aerometric Information Retrieval System / Air Facility Subsystem

VERSION DATE: 10/20/14

The United States Environmental Protection Agency (EPA) modified the Aerometric Information Retrieval System (AIRS) to a database that exclusively tracks the compliance of stationary sources of air pollution with EPA regulations: the Air Facility Subsystem (AFS). Since this change in 2001, the management of the AIRS/AFS database was assigned to EPA's Office of Enforcement and Compliance Assurance. Enforcement and Compliance History Online (ECHO) Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014, the EPA retired this system for Clean Air Act stationary sources.

ALTFUELS Alternative Fueling Stations

VERSION DATE: 10/28/20

Nationwide list of alternative fueling stations made available by the U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Bio-diesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE).

BF Brownfields Management System

VERSION DATE: 10/08/20

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. The United States Environmental Protection Agency maintains this database to track activities in the various brown field grant programs including grantee assessment, site cleanup and site redevelopment. This database included tribal brownfield sites.

BRS Biennial Reporting System

VERSION DATE: 12/31/17

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The Biennial Report captures detailed data on the generation of hazardous waste from large quantity generators and data on waste management practices from treatment, storage and disposal facilities. Currently, the EPA states that data collected between 1991 and 1997 was originally a part of the defunct Biennial Reporting System and is now incorporated into the RCRAInfo data system.

CDL Clandestine Drug Laboratory Locations

VERSION DATE: 06/17/20

The U.S. Department of Justice ("the Department") provides this information as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. The Department does not establish, implement, enforce, or certify compliance with clean-up or remediation standards for contaminated sites; the public should contact a state or local health department or environmental protection agency for that information.

DNPL Delisted National Priorities List

VERSION DATE: 09/21/20

This database includes sites from the United States Environmental Protection Agency's Final National Priorities List (NPL) where remedies have proven to be satisfactory or sites where the original analyses were inaccurate, and the site is no longer appropriate for inclusion on the NPL, and final publication in the Federal Register has occurred.

DOCKETS EPA Docket Data

VERSION DATE: 12/22/05

The United States Environmental Protection Agency Docket data lists Civil Case Defendants, filing dates as far back as 1971, laws broken including section, violations that occurred, pollutants involved, penalties assessed and superfund awards by facility and location. Please refer to ICIS database as source of current data.

DOD Department of Defense Sites

VERSION DATE: 12/01/14

This information originates from the National Atlas of the United States Federal Lands data, which includes lands owned or administered by the Federal government. Army DOD, Army Corps of Engineers DOD, Air Force DOD, Navy DOD and Marine DOD areas of 640 acres or more are included.

EC Federal Engineering Institutional Control Sites

VERSION DATE: 11/23/20

This database includes site locations where Engineering and/or Institutional Controls have been identified as part of a selected remedy for the site as defined by United States Environmental Protection Agency official remedy decision documents. The data displays remedy component information for Superfund decision documents issued in fiscal years 1982-2017, and it includes final and deleted NPL sites as well as sites with a Superfund Alternative Approach (SAA) agreement in place. The only sites included that are not on the NPL, proposed for NPL, or removed from proposed NPL, are those with an SAA Agreement in place. A site listing does not indicate that the institutional and engineering controls are currently in place nor will be in place once the remedy is complete; it only indicates that the decision to include either of them in the remedy is documented as of the completed date of the document. Institutional controls are actions, such as legal controls, that help minimize the

potential for human exposure to contamination by ensuring appropriate land or resource use. Engineering controls include caps, barriers, or other device engineering to prevent access, exposure, or continued migration of contamination.

ECHOR09 Enforcement and Compliance History Information

VERSION DATE: 11/28/20

The U.S. Environmental Protection Agency's Enforcement and Compliance History Online (ECHO) database, provides compliance and enforcement information for facilities nationwide. This database includes facilities regulated as Clean Air Act stationary sources, Clean Water Act direct dischargers, Resource Conservation and Recovery Act hazardous waste handlers, Safe Drinking Water Act public water systems along with other data, such as Toxics Release Inventory releases.

ERNSAZ Emergency Response Notification System

VERSION DATE: 09/27/20

This National Response Center database contains data on reported releases of oil, chemical, radiological, biological, and/or etiological discharges into the environment anywhere in the United States and its territories. The data comes from spill reports made to the U.S. Environmental Protection Agency, U.S. Coast Guard, the National Response Center and/or the U.S. Department of Transportation.

FEMAUST FEMA Owned Storage Tanks

VERSION DATE: 12/01/16

This is a listing of FEMA owned underground and aboveground storage tank sites. For security reasons, address information is not released to the public according to the U.S. Department of Homeland Security.

FRSAZ Facility Registry System

VERSION DATE: 10/02/20

The United States Environmental Protection Agency's Office of Environmental Information (OEI) developed the Facility Registry System (FRS) as the centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. The Facility Registry System replaced the Facility Index System or FINDS database.

FUDS Formerly Used Defense Sites

VERSION DATE: 12/31/18

The Formerly Used Defense Sites (FUDS) inventory includes properties previously owned by or leased to the United States and under Secretary of Defense Jurisdiction, as well as Munitions Response Areas (MRAs). The remediation of these properties is the responsibility of the Department of Defense. This data is provided by the U.S. Army Corps of Engineers (USACE), the boundaries/polygon data are based on preliminary findings and not

all properties currently have polygon data available. DISCLAIMER: This data represents the results of data collection/processing for a specific USACE activity and is in no way to be considered comprehensive or to be used in any legal or official capacity as presented on this site. While the USACE has made a reasonable effort to insure the accuracy of the maps and associated data, it should be explicitly noted that USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein. For additional information on Formerly Used Defense Sites please contact the USACE Public Affairs Office at (202) 528-4285.

FUSRAP Formerly Utilized Sites Remedial Action Program

VERSION DATE: 03/04/17

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

HISTPST Historical Gas Stations

VERSION DATE: NR

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

HMIRSR09 Hazardous Materials Incident Reporting System

VERSION DATE: 10/27/20

The HMIRS database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

HWCD Hazardous Waste Compliance Docket Facilities

VERSION DATE: 04/29/20

This list of the Federal Agency Hazardous Waste Compliance Docket Facilities is maintained by the United States Environmental Protection Agency (EPA). According to the EPA, Section 120(c) of CERCLA requires EPA to establish a listing, known as the Federal Facility Hazardous Waste Compliance Docket (Docket), of Federal facilities which are managing or have managed hazardous waste; or have had a release of hazardous waste. Thus, the Docket identifies all Federal facilities that must be evaluated to determine whether they pose a risk to human health and the environment and it makes this information available to the public. In order for the Docket to remain current and accurate it requires periodic updating.

ICIS Integrated Compliance Information System (formerly DOCKETS)

VERSION DATE: 09/19/20

ICIS is a case activity tracking and management system for civil, judicial, and administrative federal Environmental Protection Agency enforcement cases. ICIS contains information on federal administrative and federal judicial cases under the following environmental statutes: the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-to-Know Act - Section 313, the Toxic Substances Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.

ICISCLEANERS Integrated Compliance Information System Drycleaners

VERSION DATE: 09/19/20

This is a listing of drycleaner facilities from the Integrated Compliance Information System (ICIS). The U.S. Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments. The following Primary SIC Codes are included in this data: 7211, 7212, 7213, 7215, 7216, 7217, 7218, and/or 7219; the following Primary NAICS Codes are included in this data: 812320, 812331, and/or 812332.

ICISNPDES Integrated Compliance Information System National Pollutant Discharge Elimination System

VERSION DATE: 04/26/20

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. This database is provided by the U.S. Environmental Protection Agency.

LUCIS Land Use Control Information System

VERSION DATE: 09/01/06

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

MLTS Material Licensing Tracking System

VERSION DATE: 06/29/17

MLTS is a list of approximately 8,100 sites which have or use radioactive materials subject to the United States Nuclear Regulatory Commission (NRC) licensing requirements. Disclaimer: Due to agency regulations and policies, this database contains applicant/licensee location information which may or may not be related to the physical location per MLTS site.

MRDS Mineral Resource Data System

VERSION DATE: 03/15/16

MRDS (Mineral Resource Data System) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps. A few updates last occurred 2015 and early 2016 for select mine site area/s.

MSHA Mine Safety and Health Administration Master Index File

VERSION DATE: 08/07/20

The Mine dataset lists all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970. It includes such information as the current status of each mine (Active, Abandoned, NonProducing, etc.), the current owner and operating company, commodity codes and physical attributes of the mine. Mine ID is the unique key for this data. This information is provided by the United States Department of Labor - Mine Safety and Health Administration (MSHA).

NLRRCRAC No Longer Regulated RCRA Corrective Action Facilities

VERSION DATE: 09/14/20

This database includes RCRA Corrective Action facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements.

NLRRCRAT No Longer Regulated RCRA Non-CORRACTS TSD Facilities

VERSION DATE: 09/14/20

This database includes RCRA Non-Corrective Action TSD facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly treated, stored or disposed of hazardous waste.

NMS Former Military Nike Missile Sites

VERSION DATE: 12/01/84

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline,

heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

NPDESR09 National Pollutant Discharge Elimination System

VERSION DATE: 04/01/07

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES database was collected from the U.S. Environmental Protection Agency (EPA) from December 2002 through April 2007. Refer to the ICIS and/or ICIS-NPDES database as source of current data. This database includes permitted facilities located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

NPL National Priorities List

VERSION DATE: 09/21/20

This database includes United States Environmental Protection Agency (EPA) National Priorities List sites that fall under the EPA's Superfund program, established to fund the cleanup of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action.

ODI Open Dump Inventory

VERSION DATE: 06/01/85

The open dump inventory was published by the United States Environmental Protection Agency. An “open dump” is defined as a facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944) and which is not a facility for disposal of hazardous waste. This inventory has not been updated since June 1985.

PADS PCB Activity Database System

VERSION DATE: 10/09/19

PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of Polychlorinated Biphenyls (PCB) who are required to notify the U.S. Environmental Protection Agency of such activities.

PCSR09 Permit Compliance System

VERSION DATE: 08/01/12

The historic Permit Compliance System tracked enforcement status and permit compliance of facilities controlled

by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. This database includes permitted facilities located in EPA Region 9 states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa. This system has since been modernized by United States Environmental Protection Agency and is now integrated into the Integrated Compliance Information System (ICIS). Please refer to the ICIS database as the current source for this data.

PNPL Proposed National Priorities List

VERSION DATE: 09/21/20

This database contains sites proposed to be included on the National Priorities List (NPL) in the Federal Register. The United States Environmental Protection Agency investigates these sites to determine if they may present long-term threats to public health or the environment.

RCRAC Resource Conservation & Recovery Act - Corrective Action Facilities

VERSION DATE: 09/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with corrective action activity.

RCRAGR09 Resource Conservation & Recovery Act - Generator

VERSION DATE: 09/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities currently generating hazardous waste. EPA Region 9 includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

RCRANGR09 Resource Conservation & Recovery Act - Non-Generator

VERSION DATE: 09/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities classified as non-generators. Non-Generators do not presently generate hazardous waste. EPA

Region 9 includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

RCRASC RCRA Sites with Controls

VERSION DATE: 11/17/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with institutional controls in place.

RCRASUBC Resource Conservation & Recovery Act - Subject to Corrective Action Facilities

VERSION DATE: 09/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities subject to corrective actions.

RCRAT Resource Conservation & Recovery Act - Non-CORRACTS Treatment, Storage & Disposal Facilities

VERSION DATE: 09/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities recognized as hazardous waste treatment, storage, and disposal sites (TSD).

RODS Record of Decision System

VERSION DATE: 09/21/20

These decision documents maintained by the United States Environmental Protection Agency describe the chosen remedy for NPL (Superfund) site remediation. They also include site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, and scope and role of response action.

SEMS Superfund Enterprise Management System

VERSION DATE: 09/21/20

The U.S. Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs.

SEMSARCH Superfund Enterprise Management System Archived Site Inventory

VERSION DATE: 09/21/20

The U.S. Environmental Protection Agency’s (EPA) Superfund Enterprise Management System Archived Site Inventory (List 8R Archived) replaced the CERCLIS NFRAP reporting system in 2015. This listing reflects sites at which the EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program.

SEMSLIENS SEMS Lien on Property

VERSION DATE: 06/22/20

The U.S. Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs. This is a listing of SEMS sites with a lien on the property.

SFLIENS CERCLIS Liens

VERSION DATE: 06/08/12

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which United States Environmental Protection Agency has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties. This database contains those CERCLIS sites where the Lien on Property action is complete. Please refer to the SEMSLIENS database as source of current data.

SMCRA Surface Mining Control and Reclamation Act Sites

VERSION DATE: 06/24/20

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of

Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

SSEHRIPFAS SSEHRI PFAS Contamination Sites

VERSION DATE: 12/12/19

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Disclaimer: The source conveys this database undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Limited location details are available with this data. Please access the following source link for the most current information: https://pfasproject.com/pfas-contamination-site-tracker/

SSTS Section Seven Tracking System

VERSION DATE: 08/04/20

The United States Environmental Protection Agency tracks information on pesticide establishments through the Section Seven Tracking System (SSTS). SSTS records the registration of new establishments and records pesticide production at each establishment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requires that production of pesticides or devices be conducted in a registered pesticide-producing or device-producing establishment. "Production" includes formulation, packaging, repackaging, and relabeling. For this database, the Product Information is only available for establishments up through 2014 or prior years, product details are no longer released by the EPA within the current SSTS non-Confidential Business Information data.

TRI Toxics Release Inventory

VERSION DATE: 12/31/18

The Toxics Release Inventory, provided by the United States Environmental Protection Agency, includes data on toxic chemical releases and waste management activities from certain industries as well as federal and tribal facilities. This inventory contains information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

TSCA Toxic Substance Control Act Inventory

VERSION DATE: 12/31/16

The Toxic Substances Control Act (TSCA) was enacted in 1976 to ensure that chemicals manufactured, imported, processed, or distributed in commerce, or used or disposed of in the United States do not pose any unreasonable risks to human health or the environment. TSCA section 8(b) provides the United States Environmental Protection Agency (EPA) authority to "compile, keep current, and publish a list of each chemical substance that is manufactured or processed in the United States." This TSCA Chemical Substance Inventory contains non-confidential information on the production amount of toxic chemicals from each manufacturer and importer site. The EPA has collected Chemical Data Reporting (CDR) data since in 1986 (as Inventory Update Reporting). Collections occur approximately every four years and reporting requirements changed from collection to collection.

USUMTRCA Uranium Mill Tailings Radiation Control Act Sites

VERSION DATE: 03/04/17

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

AIRS Air Quality Permits Database

VERSION DATE: 11/21/19

The Arizona Department of Environmental Quality Air Quality Division provides this list of operating air quality permits of industrial facilities that emit significant quantities of air pollutants to ensure that the emissions do not harm public health or cause significant deterioration in air quality. Title V and non Title V facilities are included in this database. Major, minor, synthetic major, and synthetic minor emissions are included in this database.

ASPL Arizona Superfund Program List

VERSION DATE: 04/03/20

The Arizona Superfund Program List (ASPL) is comprised of the following elements: Water Quality Assurance Revolving Fund (WQARF) Registry sites, EPA National Priorities List (NPL) sites and Department of Defense (DOD) sites requiring Arizona Department of Environmental Quality (ADEQ) Superfund Programs Section oversight. Prior to July 5, 2000, the ADEQ Superfund Programs Section published a list of sites entitled “Arizona CERCLIS Information Data System” (ACIDS). The ACIDS list has been replaced as an active list by the ASPL.

AST Aboveground Storage Tanks

VERSION DATE: 06/17/20

The Arizona Department of Environmental Quality (ADEQ) maintains this listing of aboveground storage tanks (AST) for which they issue exemption certificates for. Anyone with an aboveground storage tank (AST), Vaulted system or tanks on Native American Land can apply for an exemption certificate. This list includes open, closed, not validated, and returned mail AST certificates. ADEQ does not regulate the installation, operation, maintenance, or closure of aboveground storage tanks.

AST2 State Fire Marshal Aboveground Storage Tanks

VERSION DATE: 12/05/19

The Arizona Office of the State Fire Marshal, Department of Forestry and Fire Management, maintains this list of aboveground storage tank permits.

BIOMW Biohazardous Medical Waste Facilities

VERSION DATE: 07/07/20

This list of biohazardous medical waste facilities is maintained by the Arizona Department of Environmental Quality (ADEQ) Waste Programs Division. This list includes: Biohazardous Medical Waste Disposal Facilities, Biohazardous Medical Waste Treatment Facilities, Biohazardous Medical Waste Storage & Transfer Facilities, Registered Biohazardous Medical Waste Transporters, and Registered Alternative Biohazardous Medical Waste Treatment Technologies. "Medical waste" means any solid waste that is generated in diagnosing, treating or immunizing a human being or animal or in any research relating to that diagnosis, treatment or immunization, or in producing or testing biologicals, and includes discarded drugs. "Biohazardous medical waste" is medical

waste that is composed of one or more of the following: cultures and stocks; human blood and blood products; human pathologic wastes; medical sharps; and research animal wastes. The Arizona Department of Environmental Quality adopted specific rules for handling biohazardous medical waste and discarded drugs. Non-biohazardous medical waste is handled as solid waste.

CDL Clandestine Drug Laboratories

VERSION DATE: 12/08/17

The Arizona Department of Environmental Quality (ADEQ) provides this statewide list of drug labs. This list contains both remediated and unremediated sites. As of December 2017, the ADEQ no longer maintains this list.

CLEANERS Dry Cleaners Inventory

VERSION DATE: NR

This list of dry cleaners includes sites from two sources: the 2006 Dry Cleaner Inventory Project by Miller Brooks Environmental and the 2016 Arizona Department of Environmental Quality (ADEQ) Dry Cleaners list. The 2016 ADEQ Dry Cleaners list does not distinguish between contaminated or non-contaminated facilities and only provides limited details per facility with a Place ID. The 2006 Dry Cleaner Inventory Project was provided by Miller Brooks Environmental, Inc. for the ADEQ to assist in the identification, prioritization, investigation, and remediation of sites that have released hazardous substances into the lands and waters of the state. This Inventory includes the following types of sites: Sites with Known Contamination (sites with documented contamination, or a history of release and/or prior site characterization and remedial activities); Sites with High Potential for Release (sites with multiple owners, sites that have been in operation more than 10 years, sites that specifically operated between 1935 and 1984, and high-volume sites); and Sites with Low Potential for Release (sites that have been in operation only after 1985, or prior to 1934, sites that “broker” cleaning services to other facilities, and sites that operate primarily as a coin-operated laundry facility). Disclaimer: Due to the time spanned between these listings and available details, multiple listings may occur. Per ADEQ, these listings are no longer updated.

CLOSEDSWF Closed Solid Waste Facilities

VERSION DATE: 05/19/20

This list of closed solid waste facilities is provided by the Arizona Department of Environmental Quality (ADEQ) Waste Programs Division. Please note this data can include facilities and/or facility details that may not have been updated by the ADEQ since 1999-2000.

DRYWELLS Registered Drywells

VERSION DATE: 05/14/18

This listing of registered drywells is maintained by the Arizona Department of Environmental Quality (ADEQ) Water Quality Division. As of May 2018, ADEQ stopped accepting paper forms and will no longer be updating this list.

EUR Environmental Use Restriction Sites

VERSION DATE: 12/01/20

The Arizona Department of Environmental Quality (ADEQ) maintains this inventory of Declaration of Environmental Use Restriction (DEUR) and Voluntary Environmental Mitigation Use Restriction (VEMUR) sites. Active, released, modified, and cancelled DEUR/VEMUR sites are included in this list. A Declaration of Environmental Use Restriction (DEUR) is a restrictive land use covenant that is required when a property owner elects to use an institutional control or engineering control as a means to meet remediation goals. A Voluntary Environmental Mitigation Use Restriction (VEMUR) is a restrictive land use covenant that, prior to July 18, 2000, was required when a property owner elected to remediate the property to non-residential uses. Effective July 18, 2000, the DEUR replaced the VEMUR as a restrictive use covenant. Please note: Arizona Revised Statute §39-121.03(A) authorizes state agencies to charge for the reproduction of the public record based on the "value of the reproduction on the commercial market as best determined by the public body" when a records request is for a "commercial purpose" as defined by the statute. ADEQ has determined that requests for this data list meet the requirements of a commercial purpose. For this reason, GeoSearch is limited in obtaining frequent updates based on the associated costs.

LUST Leaking Underground Storage Tanks

VERSION DATE: 10/13/20

This list of confirmed and closed leaking underground storage tanks is maintained by The Arizona Department of Environmental Quality (ADEQ). The ADEQ Underground Storage Tank (UST) Program defines a leaking underground storage tank (LUST) as a UST that leaked some petroleum or hazardous substances into the soil or ground water. All leaking USTs require an investigation and possible cleanup. Generally, releases from regulated USTs are the responsibility of the ADEQ UST Corrective Action Section. ADEQ does not regulate releases from unregulated USTs or above ground storage tanks. Please note this disclaimer from ADEQ: "Details provided are based on documentation submitted to ADEQ. ADEQ recommends a review of the physical case files through our records center to verify information."

OPENLF Open Landfill Facilities

VERSION DATE: 04/15/20

This database of open landfill facilities is provided by the Arizona Department of Environmental Quality (ADEQ) Waste Programs Division's Solid Waste Management Section. This list includes the following types of open landfills: Not ADEQ Regulated Landfills, Non-Municipal Solid Waste Landfills, Private Landfills, and Municipal Solid Waste Landfills.

SHWS State Hazardous Waste Sites

VERSION DATE: 08/03/95

The Arizona CERCLIS Information Data System (ACIDS) list was used by the Arizona Department of Environmental Quality Superfund Programs Section (SPS) prior to July 2000. The ACIDS list consists of

locations subject to investigations concerning possible contamination of soil, surface water, or groundwater under the State Water Quality Assurance Revolving Fund (WQARF) and Federal CERCLA programs. The ACIDS list has been archived and is no longer being distributed or updated. The ACIDS list has been replaced by the Arizona Superfund Program List (ASPL).

SPILLS Spills Database

VERSION DATE: 11/15/01

The Arizona Department of Environmental Quality's (ADEQ) Emergency Response Unit works to minimize injuries, deaths, property damage and threats to human health and the environment from chemical spills, fires, explosions and other pollutant releases by stabilizing emergency incidents through its role as the environmental support agency of the state of Arizona Emergency Response and Recovery Plan. The ADEQ began tracking spills in this database in 1984, and last updated the database on November 15, 2001. For records of incidents after this date, see the National Response Center database (ERNS).

UST Underground Storage Tanks

VERSION DATE: 10/13/20

This list of underground storage tanks (UST) is maintained by the Arizona Department of Environmental Quality (ADEQ). The ADEQ Underground Storage Tank Program regulates the majority of USTs in Arizona with the exception of those in Indian Country. Nearly all USTs at these sites contain petroleum. These sites include marketers who sell gasoline to the public (such as service stations and convenience stores) and non-marketers who use tanks solely for their own needs (such as fleet service operators and local governments). This database excludes vaulted underground storage tanks which are not required to be registered with the DEQ. Please note this disclaimer from ADEQ: "Details provided are based on documentation submitted to ADEQ. ADEQ recommends a review of the physical case files through our records center to verify information."

VRPBF Voluntary Remediation Program and Brownfields Program Sites

VERSION DATE: 04/10/20

The Waste Programs Division of the Arizona Department of Environmental Quality (ADEQ) maintains this listing of Voluntary Remediation Program (VRP) and Brownfields Program sites. As stated by the ADEQ, Brownfields remediation project sites are required to apply for, and be accepted into the VRP. Oversight by the VRP helps ensure the Brownfields remediation projects protect human health and the environment. Through VRP, interested parties investigate and clean up soil and groundwater contaminated sites in cooperation with ADEQ. ADEQ reviews proposed voluntary remedial actions and provides a determination of no further action after successful site cleanup. Active, closed, denied, open, terminated, transferred, and withdrawn sites are all included in this list. Please note: Arizona Revised Statute §39-121.03(A) authorizes state agencies to charge for the reproduction of the public record based on the "value of the reproduction on the commercial market as best determined by the public body" when a records request is for a "commercial purpose" as defined by the statute. ADEQ has determined that requests for this data list meet the requirements of a commercial purpose. For this reason, GeoSearch is limited in obtaining frequent updates based on the associated costs.

WQARF Water Quality Assurance Revolving Fund Program Registry

VERSION DATE: 09/15/20

This list of water quality assurance revolving fund (WQARF) sites is maintained by the Arizona Department of Environmental Quality (ADEQ). The ADEQ states that a WQARF site is defined in statute as the “geographical areal extent of contamination” (Arizona Revised Statutes § 49-281.14). The Remedial Projects Section uses the Arizona WQARF, created under the Environmental Quality Act of 1986, to support hazardous substance cleanup efforts in the state. ADEQ established a registry of sites in Arizona where groundwater and/or soil contamination is present and qualify for funds from the WQARF. Sites on the WQARF Registry are evaluated and given a score based on the type and location of contaminant(s) and the possibility for human exposure to the contaminant(s) present. The scores are used to help determine relative risk at the site, but do not necessarily indicate a direct risk to people or the environment. The maximum score a site can receive is 120.

WWFAC Wastewater Facility List

VERSION DATE: 01/08/20

This list of waste water facilities is maintained by the Arizona Department of Environmental Quality Water Quality Division. The Arizona Department of Environmental Quality (ADEQ) uses water quality permits to safeguard Arizona's waters that are affected by pollutants that come from an identifiable source. These permits protect groundwater and surface water quality by controlling discharges from domestic wastewater treatment plants, mining operations, industrial facilities, on-site sewage disposal systems, direct reuse of reclaimed water and stormwater discharges associated with industrial activity as well as discharges to dry wells.

Environmental Records Definitions - LOCAL

COTLF City of Tucson Landfills

VERSION DATE: 07/27/20

This list of open and closed landfills is provided by the Environmental Services Division of the City of Tucson. This list is queried from the City of Tucson GIS mapper of Environmental Concerns. Facilities included in this list are: landfills, dumps, disposal sites, and disposal pits.

Environmental Records Definitions - TRIBAL

INDIANRES Indian Reservations

VERSION DATE: 09/27/17

This database is extracted from select geographic and cartographic information from the U.S. Census Bureau. The Bureau of Indian Affairs (BIA) within the U.S. Department of the Interior (DOI) provides the list of federally recognized tribes. The American Indian/Alaska Native/Native Hawaiian (AIANNH) Areas includes the following legal entities: federally recognized American Indian reservations and off-reservation trust land areas, state-recognized American Indian reservations, and Hawaiian home lands (HHLs). The boundaries for federally recognized American Indian reservations and off-reservation trust lands are as of January 2017. The boundaries for state-recognized American Indian reservations and for state designated tribal statistical areas were delineated by state governor-appointed liaisons for the 2010 Census through the State American Indian Reservation Program and Tribal Statistical Areas Program respectively.

LUSTR09 Leaking Underground Storage Tanks On Tribal Lands

VERSION DATE: 04/08/20

This database, provided by the United States Environmental Protection Agency (EPA), contains leaking underground storage tanks on Tribal lands located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

ODINDIAN Open Dump Inventory on Tribal Lands

VERSION DATE: 11/08/06

This Indian Health Service database contains information about facilities and sites on tribal lands where solid waste is disposed of, which are not sanitary landfills or hazardous waste disposal facilities, and which meet the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944).

USTR09 Underground Storage Tanks On Tribal Lands

VERSION DATE: 04/08/20

This database, provided by the United States Environmental Protection Agency (EPA), contains underground storage tanks on Tribal lands located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

APPENDIX I

Resumes

Jennifer Simpkins, REP

Senior Environmental Scientist

Professional Credentials

- Master of Science, Environmental Resource Management, Florida Institute of Technology, 2000
- Bachelor of Science, Environmental Science, University of West Alabama, 1999
- Registered Environmental Professional (REP) No. 6063
- HAZWOPER Certification
- Meets Environmental Professional Definition

Biography

Jennifer has more than 19 years of experience in managing environmental regulatory compliance issues for both the private and public sector throughout Arizona. She is experienced in preparing biological evaluations including habitat analysis, threatened and endangered species evaluations, and designing and conducting species-specific surveys. She is also well versed in Section 404 permitting with extensive experience preparing Preliminary Jurisdictional Delineations (PJDs), Approved Jurisdictional Delineations (AJDs), as well as individual and general (regional and nationwide) permit applications. Jennifer has experience in conducting Preliminary Initial Site Assessments (PISAs) and Phase I/II Environmental Site Assessments (ESAs). Her National Environmental Policy Act (NEPA) experience includes Categorical Exclusions (CEs), Environmental Assessments (EAs), and Environmental Impact Statements (EISs). Jennifer is currently serving as Project Manager for environmental on-call contracts for ADOT, Maricopa County Department of Transportation (MCDOT), and the City of Phoenix.

Project Experience

- Phase I Environmental Site Assessment Scatter Wash Battery Storage Project 13.3-Acre Subject Property Phoenix, Maricopa County, Arizona. 2020.
- Phase I Environmental Site Assessment Update for Lockett Wind Farm 26,531-Acre Subject Property, Wilbarger County, Texas. 2019.
- Phase I Environmental Site Assessment Update for Sage Draw Wind Farm 40,940-Acre Subject Property, Garza and Lynn Counties, Texas. 2019.
- Phase I Environmental Site Assessment for NWC Loop 202 and Kyrene Road 54.2-Acre Subject Property, Chandler, Maricopa County, Arizona. 2019.
- Phase I Environmental Site Assessment for Chandler Boulevard Bike Lanes: I-10 to 56th Street 0.046-Acre Subject Property, Chandler, Maricopa County, Arizona. 2019.
- Phase I Environmental Site Assessment for Storyrock Section D 37.7-Acre Subject Property, Scottsdale, Maricopa County, Arizona. 2019.
- Phase I Environmental Site Assessment for Sage Draw Wind Farm 47,254-Acre Subject Property, Garza and Lynn Counties, Texas. 2019.
- Phase I Environmental Site Assessment Update for Chandler Heights Road (Arizona Avenue to McQueen Road) 6.7-Acre Subject Property, Chandler, Maricopa County, Arizona. 2018.
- Phase I Environmental Site Assessment for Queen Creek Road Improvements (McQueen Road to Gilbert Road) 9.67-Acre Subject Property, Chandler, Maricopa County, Arizona. 2018.

Cheyenne Herzog

Environmental Scientist

Professional Credentials

- Masters of Science, Applied Biological Sciences, Arizona State University
- Bachelor of Science, Applied Biological Sciences, Arizona State University

Biography

Cheyenne has over a year of experience working in environmental regulatory compliance. As a wildlife research aide and research technician she conducted numerous wildlife surveys for various taxa. She has experience preparing Biological Evaluations (BEs), Preliminary Initial Site Assessments (PISAs), Section 404 Preliminary Jurisdictional Delineations (PJDs), Section 404 Approved Jurisdictional Delineations (AJDs), and Nationwide Permit (NWP) applications. Her National Environmental Policy Act (NEPA) experience includes Environmental Assessments (EA) and preparing supporting documentation for Categorical Exclusions (CEs). Cheyenne also has geographic information systems (GIS) experience with data collection, geographic analysis, information conversion, and cartographic display. She is proficient in the use of Environmental Systems Research Institute (ESRI) GIS applications and extensions

Project Experience

- PISA I-40 VSL Project, Flagstaff, Arizona. 2020.
- PISA SRP-MIC Pima Rd Improvements, Scottsdale, AZ. 2020
- PISA SR82 Comoro Canyon, Santa Cruz County, AZ. 2020.
- PISA Tonto Creek Bridge, Gila County, AZ. 2020.