ORIGINAL NEW APPLICATION

0000209486

BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

IN THE MATTER OF THE APPLICATION OF 1886 SOLAR ENERGY STATION LLC, IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES, SECTIONS 40-360, ET. SEQ., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE 1886 SOLAR ENERGY STATION INTERCONNECTION PROJECT LOCATED IN COCONINO COUNTY, ARIZONA	DOCKET NO.: L-21260A-23-0218-00224 Case No. **NOTICE OF FILING APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILTY**

1886 Solar Energy Station LLC ("Applicant") through undersigned counsel, provides notice of filing of the Application for a Certificate of Environmental Compatibility for the 1886 Solar Energy Station Interconnection Project under § 40-360.03.

Communications concerning the Application should be addressed to:

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RESPECTFULLY submitted this 24th day of July, 2023, by:

ACKEN LAW

By: */s/ Albert H Acken*
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on July 24, 2023, with:

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

COPIES of the foregoing hand-delivered
on July 24, 2023, to:

Adam Stafford, Chairman
Arizona Power Plant and Transmission
Line Siting Committee
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15 South 15th Avenue
Phoenix, AZ 85004

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By: *aha*

Application

for a

Certificate of Environmental Compatibility

1886 Solar Energy Station Interconnection Project

Prepared for:

State of Arizona Power Plant and Transmission Line Siting Committee

Submitted by:

1886 Solar Energy Station LLC

July 2023

Case No: _____

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INTRODUCTION

Pursuant to Arizona Revised Statutes (ARS) 40-360 et seq., 1886 Solar Energy Station LLC (Applicant) is seeking a Certificate of Environmental Compatibility (CEC) for the proposed 1886 Solar Energy Station Interconnection Project (Interconnection Project). The Interconnection Project will connect the 1886 Solar Energy Station (Solar Project) to the regional electric grid via the Navajo Southern Transmission System's (NSTS) Moenkopi to Cedar Mountain 500-kilovolt (kV) transmission line, which is operated by Arizona Public Service (APS).

The Interconnection Project is an aboveground, 5-mile-long, 500-kV alternating current generation intertie transmission line to interconnect to an APS 500-kV switchyard along the Moenkopi to Cedar Mountain transmission line (APS Switchyard). The APS Switchyard is in early stage development and will be built out as planned generation projects in the area are developed. The APS Switchyard would be the point of interconnection. The Solar Project includes a collection substation (Project Substation) that will increase the voltage of electricity generated by the Solar Project to match the point of interconnection.

The Interconnection Project is approximately 30 miles northwest of Flagstaff, Arizona, in unincorporated Coconino County. The general location and vicinity of the Interconnection Project is shown in Figure 1. There are no thermal electrical generating plants included as part of the Interconnection Project.

1886 Solar Energy Station LLC is a wholly owned subsidiary of Stellar Renewable Power (Stellar). Stellar is a renewable energy company headquartered in Dallas, Texas. Stellar has experience at every stage of developing renewable energy projects (e.g., planning, designing, permitting, constructing, and operating), and has a project development pipeline of over 4.5 gigawatts across the United States.

The Project was included in Stellar's Ten-Year Transmission System Plan filed with the Arizona Corporation Commission on January 27, 2023. Project construction is anticipated to begin as early as the third quarter of 2024, with an expected in-service date as early as the second quarter of 2026.

PROJECT OVERVIEW

The Interconnection Project would extend approximately 5 miles within an approximately 250-foot-wide right-of-way (Project Area). The right-of-way (ROW) will be located within a 500-foot-wide CEC Corridor, which is described in more detail below. The Applicant may widen the ROW up to 500 feet within the CEC Corridor at site-specific locations to accommodate rough terrain or unusually long spans. The Interconnection Project would be adjacent to, and north of, the existing 500-kV Moenkopi to Cedar Mountain transmission line. Approximately 3.6 miles (72%) of the Interconnection Project would be on private property; approximately 1.4 (28%) miles of the Interconnection Project would be on Arizona State Trust land that is managed by the Arizona State Land Department (ASLD). No alternative routes are included as the proposed route follows the existing linear electric transmission infrastructure.

Stellar anticipates the Interconnection Project will require four to five transmission structures per mile, depending on structure type, terrain, turns, and other factors. Transmission structures for the Interconnection Project would be approximately 85 to 165 feet tall, with spans between structures of approximately 1,200 to 1,700 feet. The Interconnection Project will likely use a combination of H-frame tubular steel dead end structures, single-pole tubular steel tangent structures, and single-pole tubular steel dead end/angle structures. The Applicant notes that it may refine minor design characteristics for the Interconnection Project during its final engineering phase. Representative diagrams of the anticipated transmission towers are included in Exhibit G.

The Interconnection Project (and Solar Project) are proposed on the CO Bar Ranch. The CO Bar Ranch is an active cattle ranch operated by Babbitt Ranches comprised of a checkerboard of private property and Arizona State Trust land (managed by the ASLD). The Interconnection Project would traverse private property and ASLD land.

Proposed Route

The Interconnection Project will connect the Project Substation to the APS Switchyard (i.e., the point of interconnection) (Figure 2). The proposed route for the Interconnection Project would start at the Project Substation. The Project Substation would be approximately 2 miles northeast of U.S. Route 180 along the Moenkopi to Cedar Mountain 500-kV transmission line. From the Project Substation the Interconnection Project would proceed northeast for approximately 4.5 miles before turning north. The Interconnection Project would proceed north for approximately 0.15 mile, turn northeast for approximately 0.25 mile, and then turn directly south and enter the APS Switchyard.

The proposed route for the Interconnection Project is displayed on Figure 2 and would traverse the following areas: Township 26 North, Range 4 East, Sections 25, 26, 27, and 34; Township 26 North, Range 5 East, Sections 19, 20, 21, 30.

APS Switchyard

The APS Switchyard will be immediately adjacent to, and on the north side of, the existing Moenkopi to Cedar Mountain transmission line. The Interconnection Project (and other renewable energy developments planned on the CO Bar Ranch) will interconnect to the APS Switchyard (U.S. Bureau of Reclamation [Reclamation] 2022). The APS Switchyard will include major equipment such as 500-kV circuit breakers, switches, and associated bus work. The APS Switchyard will be in Township 26 North, Range 5 East, Section 21. The Interconnection Project will dead end into a dedicated bay in the APS switchyard. The APS Switchyard is in early stage development and will be built out as planned generation projects in the area are developed.

Requested CEC Corridor

The Applicant requests approval of a corridor within which the Interconnection Project would be constructed (CEC Corridor). The requested CEC corridor extends between the Project Substation and the APS Switchyard. Starting at the west end of the Interconnection Project, the CEC Corridor extends approximately 150 feet south of the Project Substation, 500 feet west of the Project Substation, and 500 feet north of the Project Substation. The CEC Corridor then proceeds northeast as a 500-foot-wide area north of the existing Moenkopi to Cedar Mountain 500-kV ROW. Once the CEC Corridor reaches Township 26N, Range 5E, Section 21, the CEC Corridor widens to include private property in Section 21 that is north of the Moenkopi to Cedar Mountain 500-kV transmission line ROW. The CEC Corridor widens in Section 21 to accommodate potential routing variants for the Interconnection Project to approach and enter the APS Switchyard. The requested CEC Corridor is displayed on Figure 3.

The CEC Corridor is in the Township, Range, and Sections identified in Table 1, below. In total, the CEC Corridor is approximately 448 acres, consisting of 363 acres (81 percent) of private property and 85 acres (19 percent) of ASLD lands.

Table 1. CEC Corridor Location

Township	Range	Section
26 North	4 East	27
26 North	4 East	25
26 North	4 East	26
26 North	4 East	34
26 North	4 East	35
26 North	5 East	20
26 North	5 East	19
26 North	5 East	21
26 North	5 East	30

SOLAR PROJECT DESCRIPTION

The Solar Project is a renewable energy development that includes a solar photovoltaic generating facility and battery energy storage system, each with a capacity of up to 500 megawatts (MW). The Solar Project will include arrays of solar photovoltaic panels, lower voltage (e.g., 34.5 kV) collection lines, inverter stations, and an energy storage system made of lithium-ion batteries in a contained facility.

In June 2022, Coconino County approved conditional use permits (CUPs) for a project referred to as the CO Bar Solar Complex. In August 2022, Stellar acquired a portion of CO Bar Solar Complex from the original developer; the portion Stellar acquired is referred to as the 1886 Solar Energy Station. The relevant CUP approvals were transferred to Stellar.

Project Substation

The purpose of the Project Substation is to increase the voltage of the electricity generated by the Solar Project to match the voltage at the point of interconnection.[1] Electricity generated or stored by the Solar Project would travel through lower-voltage (e.g., 34.5 kV) collector lines to the Project Substation where a power transformer would increase the voltage to 500 kV for delivery into the NSTS. All collector lines from the Solar Project will terminate at the Project Substation. The Project Substation is proposed on private property and will occupy approximately 10 acres in Township 26 North, Range 4 East, Section 27 and 34.

PURPOSE AND NEED

The purpose of the Interconnection Project is to allow for delivery of renewable energy into the transmission grid in the southwestern United States. Stellar will execute Power Purchase Agreements for the Solar Project which will likely support the load growth and peak demand requirements of Arizona-based utilities. Adding renewable energy projects meets several objectives at the local, state, and federal levels, including the need for additional energy supplies to serve the region and the priority placed on meeting this need with clean, renewable energy.

[1] The Project Substation would include the following major equipment: 34.5-kV medium-voltage bus and associated switching apparatus; 500-kV bus and switching apparatus; 34.5-kV to 500-kV transformer; steel support structures with foundations; control building; security and perimeter fence; and security and emergency lighting. In accordance with Commission Decision 77761, the Applicant is not requesting authorization to construct the substation. If the Commission determines that authorization for substations is required, the Applicant asks that the Commission provide such authorization as part of this proceeding.

PROPOSED INTERCONNECTION

The Interconnection Project would connect to the regional electrical grid via the existing Moenkopi to Cedar Mountain 500-kV transmission line. The Moenkopi to Cedar Mountain 500-kV transmission line is part of the NSTS, of which the U.S Bureau of Reclamation (Reclamation) is a part owner and APS is the operator. All interconnection requests for the NSTS that result in a Large Generator Interconnection Agreement (LGIA) must be submitted to APS and approved by the owners of the transmission line, including the Regional Director of Reclamation's Lower Colorado Basin Region. Prior to the Regional Director's approval, Reclamation must complete an environmental review of the proposed interconnection in compliance with the National Environmental Policy Act of 1969 (NEPA) (Public Law 91-190). Stellar anticipates that Reclamation as the lead federal agency will prepare an environmental assessment (EA) for the proposed Interconnection Project to assess the environmental effects of the proposed interconnection. Additional information about the Reclamation EA process is described in Exhibit B.

Stellar will execute an LGIA with APS and the NSTS members. Reclamation, as a part owner of the NSTS, is required to approve the LGIA. As part of the interconnection agreement process APS will complete a System Impact Study and a Facilities Study to assess the requirements of the proposed interconnection. Stellar's development predecessor entered into an agreement with APS to complete the System Impact Study in June 2021. The System Impact Study is planned to be completed in October 2023. Facilities studies typically require one year to complete once the System Impact Study is complete; therefore, Stellar anticipates the Facilities Study for the Interconnection Project in October 2024.

ENVIRONMENTAL AND PUBLIC SITING PROCESS

Siting Process

The siting process for the Interconnection Project focused on identifying a reasonably direct route to interconnect the Solar Project to the APS Switchyard. The Applicant sought to minimize environmental impacts and expenses by selecting a direct route, while considering existing land use and infrastructure. Constructing the Interconnection Project immediately adjacent to the existing Moenkopi to Cedar Mountain 500-kV transmission line will help consolidate energy infrastructure and minimize the overall impact of the Interconnection Project.

Public Outreach Process

The Applicant has coordinated with stakeholders, including agencies and the public, to present information about the 1886 Solar Energy Station, including the Interconnection Project, and provide multiple ways to submit comments. Public outreach for the Interconnection Project was launched in June 2023 with an informational mailing to stakeholders, inviting them to attend an in-person open house. Stellar held an in-person open house for the Interconnection Project on June 20, 2023, in Flagstaff, Arizona. Additional information regarding public outreach is described in Exhibit J of this Application.

Public awareness of the Solar Project dates back to the second quarter of 2020 when the original developer of the Solar Project held a virtual public open house as part of the Coconino County CUP process (Coconino County 2022:96).

SUMMARY OF ENVIRONMENTAL COMPATIBILITY

The Interconnection Project is compatible with existing land uses and land management designations in the vicinity, which, as described further in Exhibit B, are supportive of renewable energy.

The Interconnection Project is compatible with planning objectives of the Coconino County Comprehensive Plan. The Comprehensive Plan states that proposed transmission lines "shall consider the protection of viewsheds; the potential for noise disturbances to adjacent residential areas; the conservation of species, habitats, and water resources; the preservation of prehistoric, historic, and cultural sites" (Coconino County 2015:176). Siting the Interconnection Project parallel to an existing transmission corridor helps consolidate electrical infrastructure and minimize potential environmental impacts.

Furthermore, the Interconnection Project would minimally affect the area's natural and human environment. Specifically:

- The Interconnection Project would permanently displace a relatively small amount of habitat and result in only minor impacts to wildlife and vegetation, including special-status species (see Exhibits C and D). Siting the Interconnection Project parallel to the existing Moenkopi to Cedar Mountain transmission line will help to minimize the Interconnection Project's overall environmental impacts. No areas of biological wealth exist in the Interconnection Project vicinity and none would be affected.
- The Interconnection Project is compatible with the existing visual landscape of the area, which is dominated by the existing 500-kV Moenkopi to Cedar Mountain transmission line. Elements of the Interconnection Project would be visually consistent with the existing electrical facilities (see Exhibit E).
- The Interconnection Project will avoid impacts to known historic sites or structures, or archaeological sites, based on past surveys that cover the entire Project Area (see Exhibit E).
- The Interconnection Project will not affect recreation including dispersed recreation on Arizona State Trust land. No developed recreational facilities or parks are present within or near the proposed Project Area (see Exhibit F).
- The Interconnection Project is consistent with the existing soundscape of the immediate area because it would produce sounds similar to those generated by the nearby existing transmission lines (see Exhibit I).

CONCLUSION

The Applicant is committed to avoiding where possible and minimizing where practicable environmental impacts and believes the Interconnection Project is environmentally compatible. The Applicant further believes that the Interconnection Project is in the public interest because the Solar Project's contribution to meeting the need for adequate, economical, and reliable supply of electric power outweighs the impact of the Interconnection Project on the environment and ecology of the state. The Applicant therefore respectfully requests that the Arizona Power Plant and Transmission Line Siting Committee grant, and the Arizona Corporation Commission approve, a CEC for the Interconnection Project.

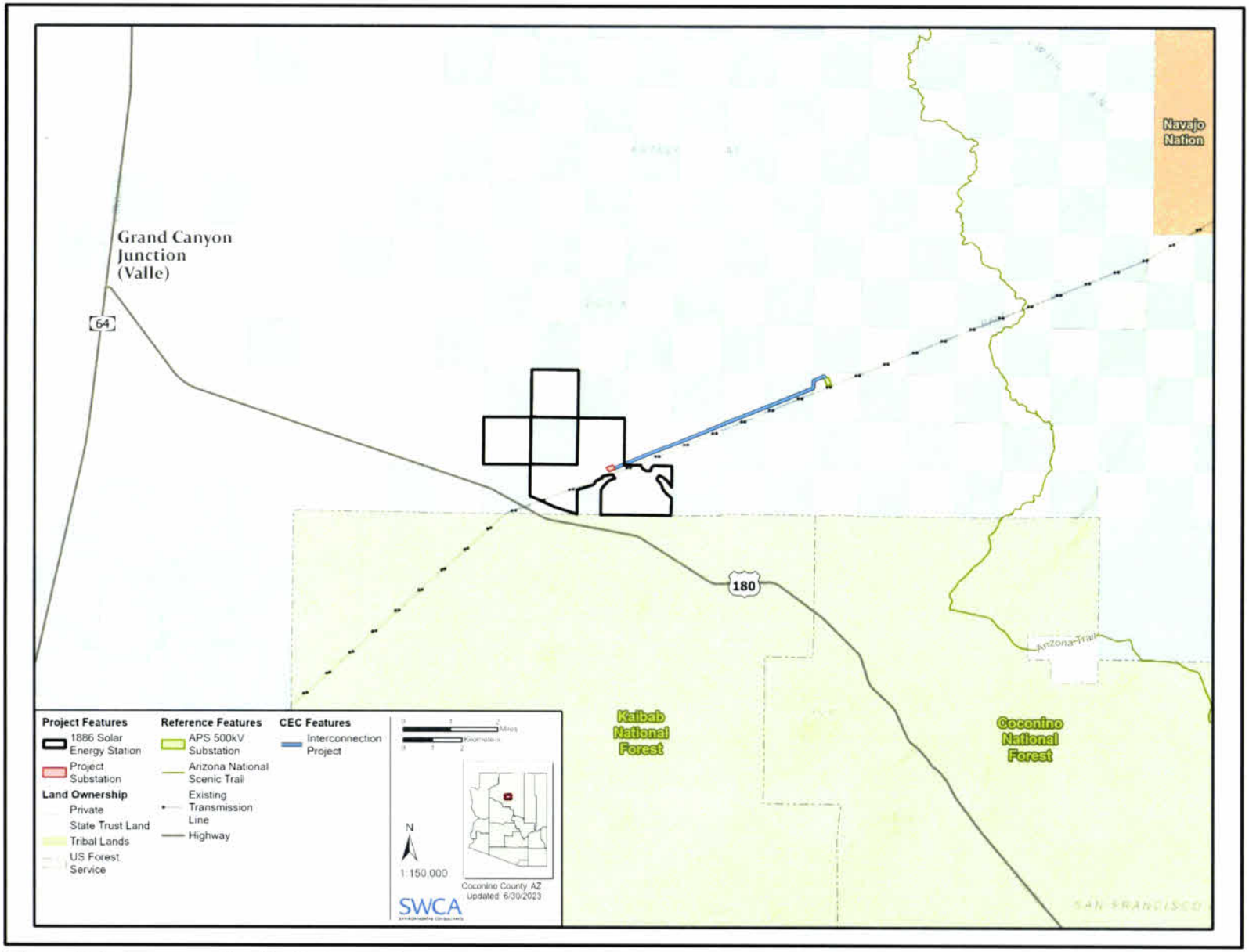

Figure 1. Interconnection Project overview.

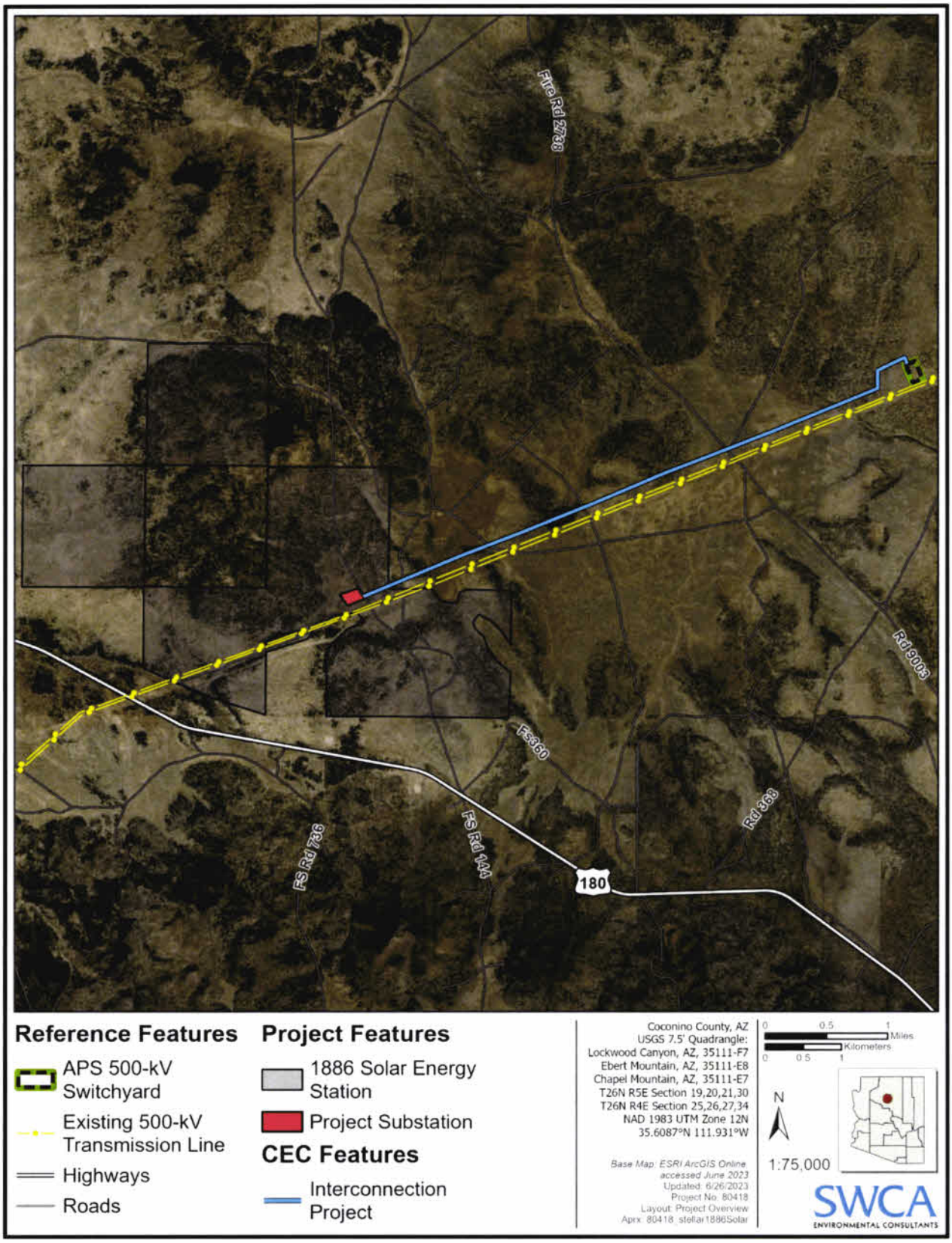

Figure 2. Interconnection Project.

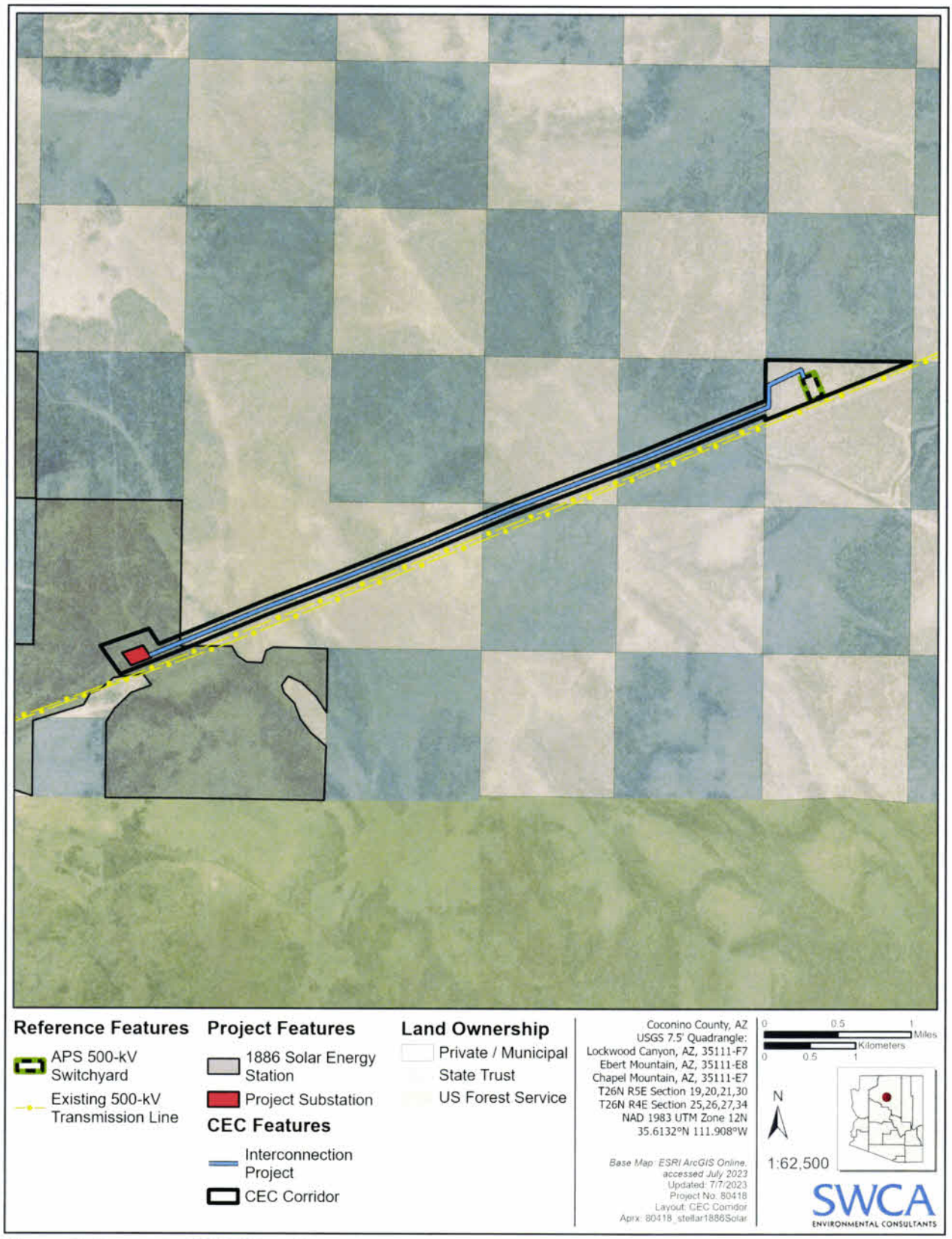

Figure 3. Requested CEC Corridor

LITERATURE CITED

Coconino County. 2015. *Coconino County 2015 Comprehensive Plan*. Available at: https://www.coconino.az.gov/DocumentCenter/View/10608/Coconino-County-Comprehensive-Plan---2017-Approval?bidId=. Accessed May 2023.

Coconino County. 2022. Planning and Zoning Commission Study Session Agenda, Meeting of June 29, 2022. https://www.coconino.az.gov/AgendaCenter/ViewFile/Agenda/_06292022-5889. Accessed June 2023.

U.S. Bureau of Reclamation (Reclamation). 2022. *Final Environmental Assessment for the Babbitt Ranch Energy Center Interconnection Project*. Glendale, Arizona: U.S. Bureau of Reclamation, Phoenix Area Office. December 2022. Available at: https://www.usbr.gov/lc/phoenix/reports/BREC/FinalEA_BREC_Interconection_Project.pdf. Accessed May 2023.

APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

1. **Name and address of the Applicant**

   1886 Solar Energy Station LLC
   14643 Dallas Parkway, Suite 250
   Dallas, Texas 75254

2. **Name, address, and telephone number of a representative of the applicant who has access to technical knowledge and background information concerning this application, and who will be available to answer questions or furnish additional information**

   Kelsey Silver, Development Manger
   Stellar Renewable Power
   14643 Dallas Parkway, Suite 250
   Dallas, Texas 75254
   (720) 601-8211

3. **Date on which the applicant filed a Ten Year Plan in compliance with ARS § 40-360.02, in which the facilities for which this application is made were described**

   The Interconnection Project was included in Stellar's Ten-Year Transmission System Plan which was filed with the Arizona Corporation Commission on January 27,2023.

4. **Description of the proposed facility, including:**

   a. **With respect to an electric generating plant:**

      There are no thermal electrical generating plants included as part of the Interconnection Project.

   b. **With respect to a proposed transmission line:**

      i. **Nominal voltage for which the line is designed; description of the proposed structures and switchyards or substations associated therewith; and purpose for constructing said transmission line**

         (1) Nominal voltage:

         The nominal voltage for the Interconnection Project is 500 kV alternating current.

         (2) Description of the proposed structures:

         Conceptual drawings showing the typical structures are provided in Exhibit G.

         (3) Description of proposed switchyards and substations:

         The purpose of the Project Substation is to increase the voltage of electricity generated and stored by the Solar Project to match the voltage at the point of interconnection. Electricity generated by the Solar Project would travel through lower-voltage (e.g., 34.5 kV) collector lines to the Project Substation where a power transformer would increase the voltage to 500 kV for delivery onto the NSTS. All collector lines from the Solar Project will terminate at the Project Substation. The Project Substation is proposed on private property in Township 26 North, Range 4 East, Sections 27 and 34. The Project Substation would include the following major system equipment: 34.5kV medium-voltage bus and associated switching apparatus;

500-kV bus and switching apparatus; 34.5-kV to 500-kV transformer; steel support structures with foundations; control building; security and perimeter fence; and security and emergency lighting.

The APS Switchyard will include major equipment such as 500-kV circuit breakers, switches, and associated bus facilities. The APS Switchyard would be in Township 26 North, Range 5 East, Section 21 on the north side of the existing Moenkopi to Cedar Mountain 500-kV transmission line.

(4) Purpose for constructing said transmission line:

The Interconnection Project is needed to connect the proposed Solar Project to the regional electrical transmission grid.

ii. Description of geographical points between which the transmission line will run the straight-line distance between such points and the length of the transmission line for each alternative route for which the application is made

(1) Description of geographical points between which the transmission line will run:

The Interconnection Project would originate at the Project Substation in Township 26 North, Range 4 East, Sections 27 and 34.

The Interconnection Project would traverse Township 26 North, Range 4 East, Sections 25, 26, 27, and 34; Township 26 North, Range 5 East, Sections 19, 20, 21, 30.

The Interconnection Project would end at the APS Switchyard in Township 26 North, Range 5 East, Section 21.

(2) Straight-line distance between such points:

The straight-line distance between the points of origin and termination is approximately 4.8 miles.

(3) Length of the transmission line for each alternative route:

Interconnection Project is approximately 5 miles. No alternative routes are proposed.

iii. Nominal width of right-of-way required, nominal length of spans, maximum height of supporting structures and minimum height of conductor above ground

(1) Nominal width of right-of-way required:

The Interconnection Project right-of-way would be 250 feet wide typically. The right-of-way (ROW) will be located within a 500-foot-wide CEC Corridor, which is described in more detail below. The Applicant may widen the ROW up to 500 feet within the CEC Corridor at site-specific locations to accommodate rough terrain or unusually long spans.

The requested CEC corridor extends between the Project Substation and the APS Switchyard. Starting at the west end of the Interconnection Project, the CEC Corridor extends approximately 150 feet south of the Project Substation, 500 feet west of the Project Substation, and 500 feet north of the Project Substation. The CEC Corridor then proceeds northeast as a 500-foot-wide area north of the existing Moenkopi to Cedar Mountain 500-kV ROW. Once the CEC Corridor reaches Township 26N, Range 5E, Section 21, the CEC Corridor widens to include private property in Section 21 that is north of the Moenkopi to Cedar Mountain 500-kV transmission line ROW. The CEC Corridor widens in Section 21 to accommodate potential routing

variants for the Interconnection Project to approach and enter the APS Switchyard. The requested CEC Corridor is displayed on Figure 3, above.

(2) Nominal length of spans:

For the Interconnection Project, span lengths between structures would be approximately 1,200 feet to 1,700 feet. Variation in span length may be needed to meet site-specific engineering requirements including topography.

(3) Maximum height of supporting structures:

The maximum height of the supporting structures would be approximately 165 feet above the ground surface.

(4) Minimum height of conductor above ground:

The minimum height of the conductor above the existing grade will be 50 feet. All clearances will be in accordance with applicable codes and regulations.

iv. To the extent available, the estimated costs of proposed transmission line and route, stated separately. (If application contains alternative routes, furnish an estimate for each route and a brief description of the reasons for any variations in such estimates.)

The estimated cost for the Interconnection Project is $13.5 million.

The estimated cost for land required for the Interconnection Project is approximately $230,000.

v. Description of proposed route and switchyard locations. (If application contains alternative routes, list routes in order of applicant's preference with a summary of reasons for such order of preference and any changes such alternative routes would require in the plans reflected in (i) through (iv) hereof.)

The Interconnection Project will connect the Project Substation to the APS Switchyard (i.e., the point of interconnection) (see Figure 2). The Interconnection Project would be approximately 5 miles long and the entire route would be parallel to the existing Moenkopi to Cedar Mountain 500-kV transmission line.

The proposed route for the Interconnection Project would start at the Project Substation. The Project Substation would be approximately 2 miles northeast of U.S. Route 180 along the Moenkopi to Cedar Mountain 500-kV transmission line. The Interconnection Project would proceed northeast for approximately 4.5 miles before turning north. The Interconnection Project would proceed north for approximately 0.15 mile, turn northeast for approximately 0.25 mile, and then turn directly south and enter the APS Switchyard.

The proposed route for the Interconnection Project would traverse the following areas: Township 26 North, Range 4 East, Sections 25, 26, 27, and 34; Township 26 North, Range 5 East, Sections 19, 20, 21, 30.

vi. For each alternative route for which application is made, list the ownership percentages of land traversed by the entire route (federal, state, Indian, private, etc.).

The proposed route for the Interconnection Project totals approximately 5 miles. Approximately 3.6 miles (72%) of the Interconnection Project would be on private property, and approximately 1.4 (28%) miles of the Interconnection Project would be on

Arizona State Trust land that is managed by the ASLD. No alternative routes are proposed in this application.

5. **List the areas of jurisdiction [as defined in A.R.S. § 40-360(1)] affected by each alternative site or route and designate those proposed sites or routes, if any, which are contrary to the zoning ordinances or master plans of any of such areas of jurisdiction.**

   The Interconnection Project would be on private property and Arizona State Trust lands. The Interconnection Project is entirely within unincorporated Coconino County; therefore, Coconino County has jurisdiction over the land use. Additionally, the ASLD has jurisdiction for Arizona State Trust lands. A single route is proposed for the Interconnection Project; the Interconnection Project is not contrary to the Coconino County zoning ordinance or master plans of either jurisdiction.

6. **Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion.**

   The Applicant has evaluated available secondary and field data related to biological resources, visual resources, cultural resources, recreational resources, land use, noise levels, and communications signals to assess the potential impacts that may result from the construction, operation, and maintenance of the Interconnection Project. These evaluations are included in Exhibits B, C, D, E, F, H, and I in this application. Other environmental studies completed or planned for the Interconnection Project are described in Exhibit B.

STELLAR RENEWABLE POWER
Vijay Venkatachalam
/s/
By Vijay Venkatachalam

I HEREBY CERTIFY that on this 24th day of July 2023, I have delivered to the Arizona Corporation Commission twenty-five (25) copies of this Application for a Certificate of Environmental Compatibility.

EXHIBIT A. LOCATION MAP AND LAND USE MAPS

In accordance with Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, 1886 Solar Energy Station LLC (the Applicant) provides the following location maps and land use information:

> *Where commercially available**, 1) a topographic map, 1:250,000 scale, showing any proposed transmission line route longer than 50 miles and the adjacent area; and 2) a topographic map, a scale of 1:62,500, for routes shorter than 50 miles showing any proposed transmission line route and the adjacent area.*
>
> *Where commercially available, a topographic map, 1:62,500 scale, of each proposed transmission line route longer than 50 miles showing that portion of the route within two miles of any subdivided area. The general land use plan within the area shall be shown on a 1:62,500 map required for Exhibit A-3, and for the map required by this Exhibit A-4, which shall also show the areas of jurisdiction affected and any boundaries between such areas of jurisdiction. If the general land use plan is uniform throughout the area depicted, it may be described in the legend in lieu of an overlay.*
>
> ***If a topographic map is not commercially available, a map of similar scale, which reflects prominent or important physical features of the area in the vicinity of the proposed site or route, shall be substituted.*

Land Use Overview

The following exhibits are required by the Arizona Corporation Commission's Rules of Practice and Procedure R14-3-219 to support the land use studies conducted for this application:

- Exhibit A-1 illustrates the underlying land ownership within a 1-mile study area of the Interconnection Project (Study Area).
- Exhibit A-2 illustrates existing land use within a 1-mile Study Area of the Interconnection Project.
- Exhibit A-3 illustrates planned land use within a 1-mile Study Area of the Interconnection Project.

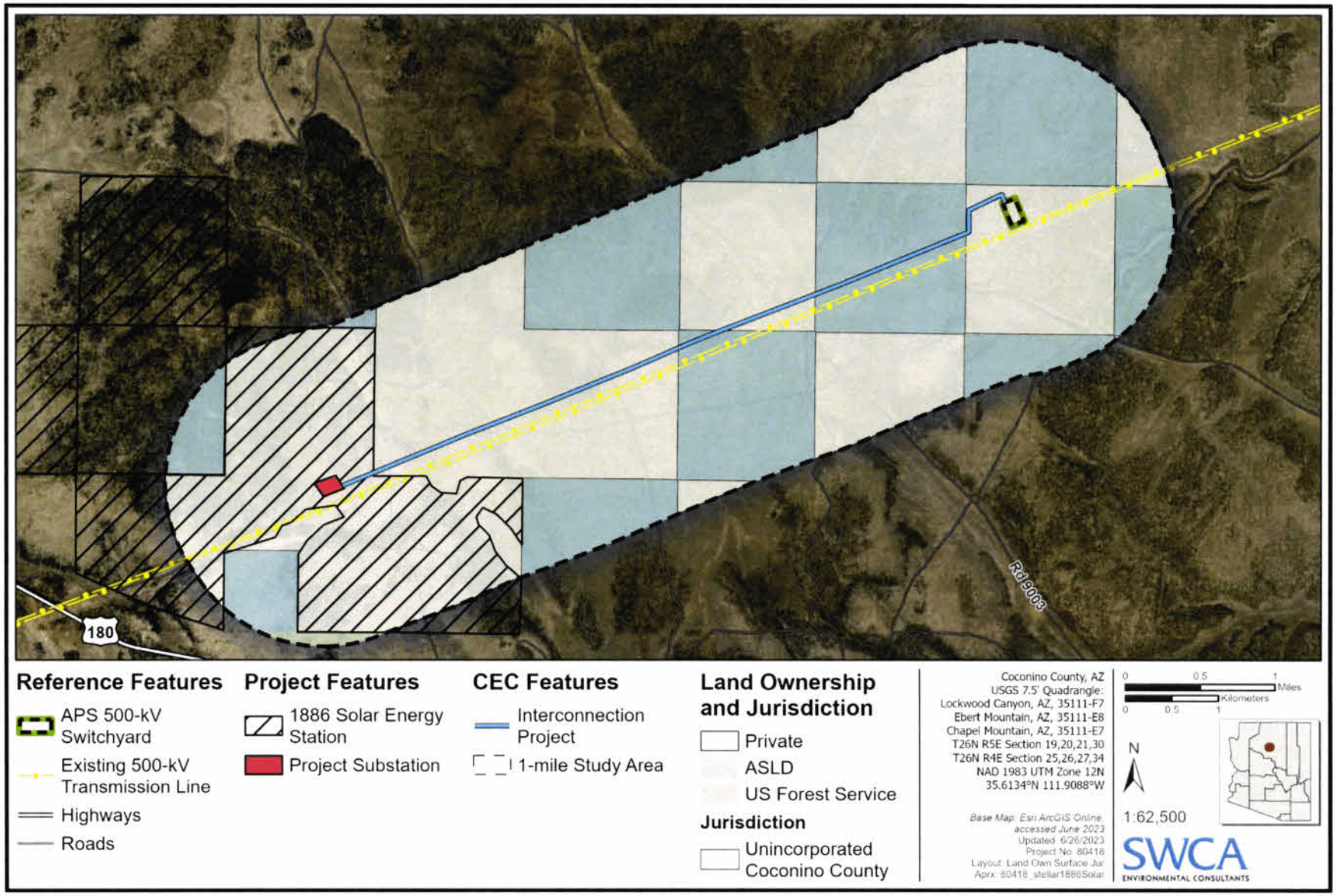

Exhibit A-1. Underlying land ownership within the Interconnection Project's 1-mile study area.

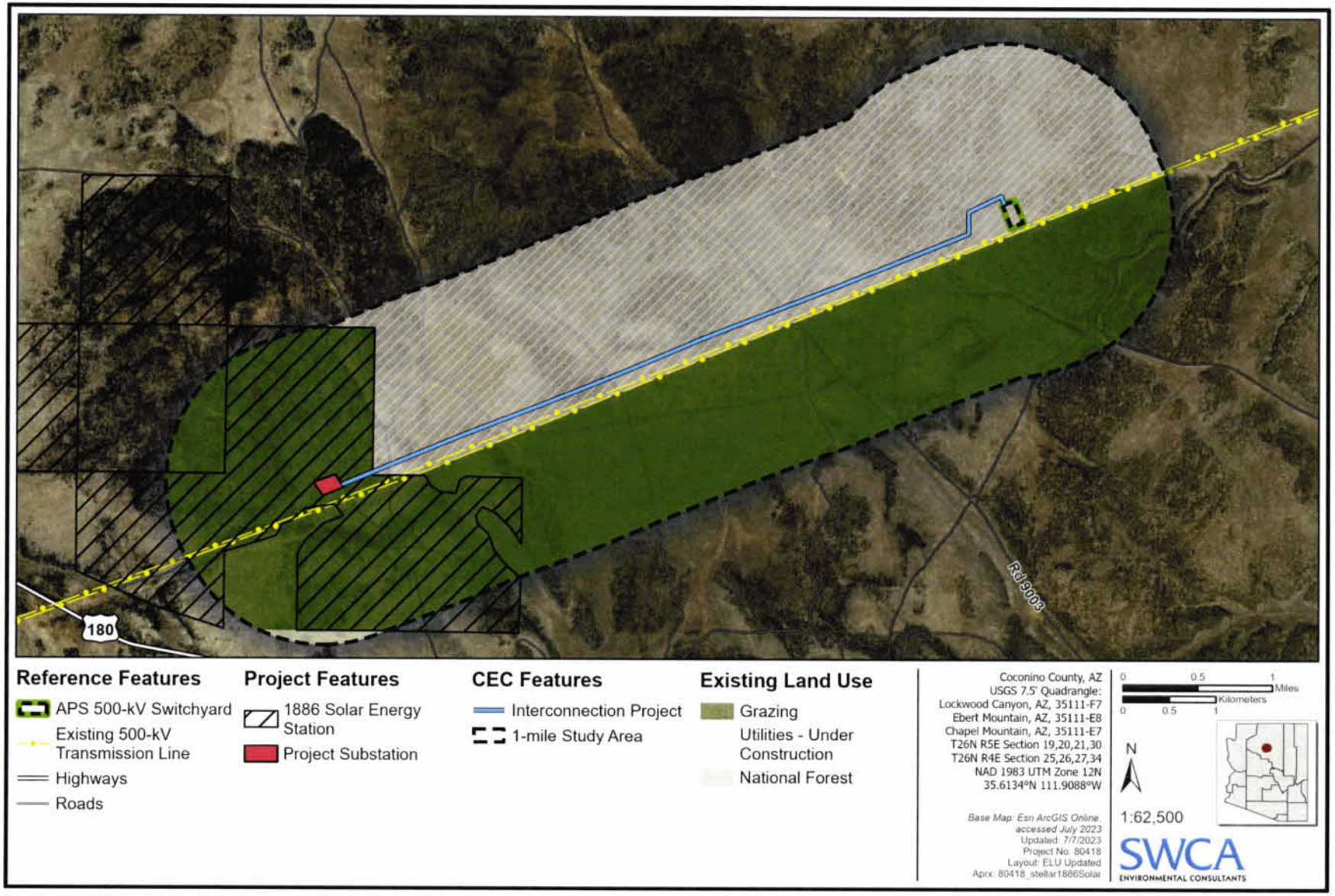

Exhibit A-2. Existing land use within the Interconnection Project's 1-mile Study Area.

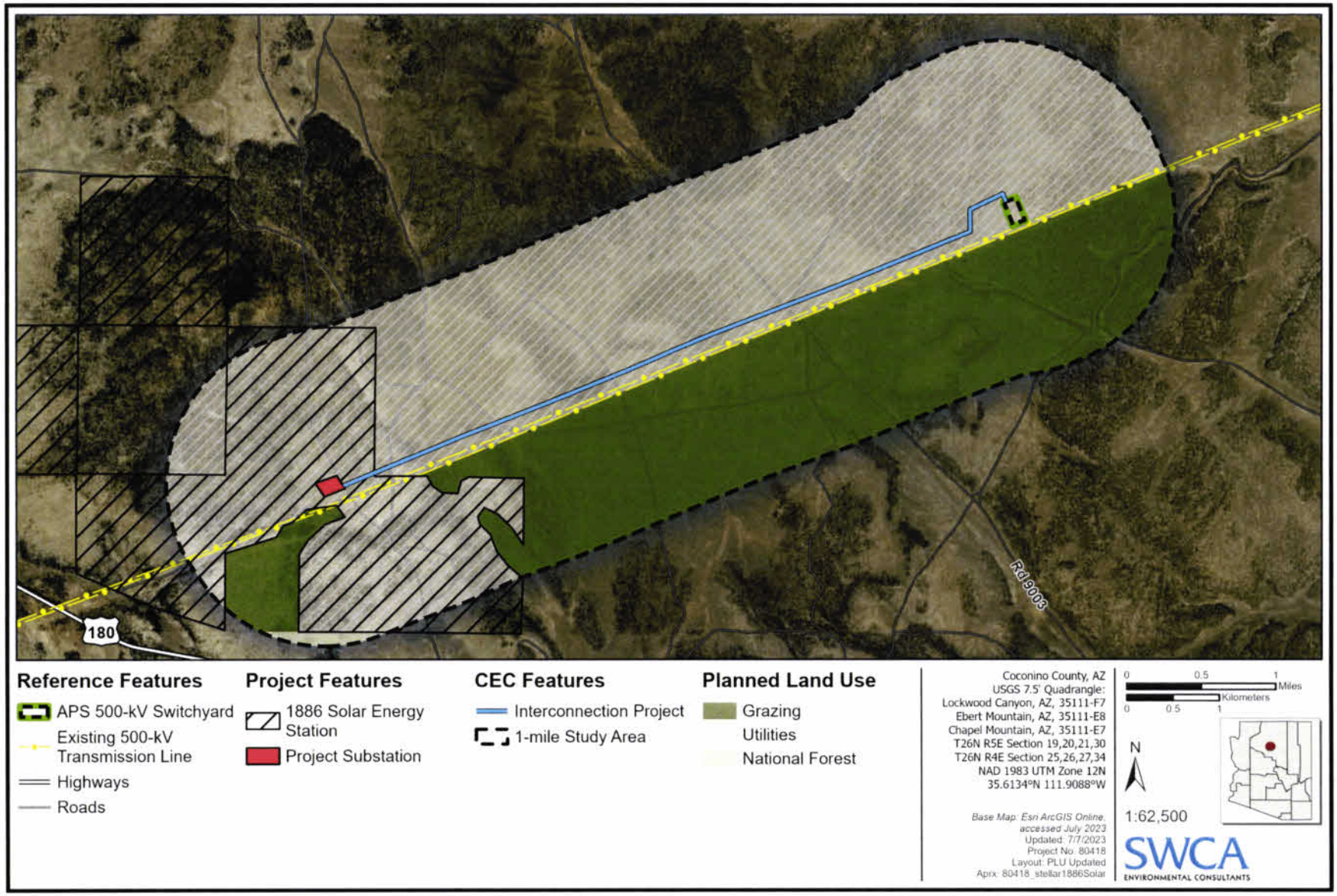

Exhibit A-3. Planned land use within the Interconnection Project's 1-mile Study Area.

EXHIBIT B. ENVIRONMENTAL STUDIES

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

> *Attach any environmental studies which applicant has made or obtained in connection with the proposed site(s) or route(s). If an environmental report has been prepared for any federal agency or if a federal agency has prepared an environmental statement pursuant to Section 102 of the National Environmental Policy Act, a copy shall be included as a part of this exhibit.*

Introduction

As previously noted, the 1886 Solar Energy Station was originally developed as part of the CO Bar Solar Complex. In June 2022, Coconino County approved conditional use permits (CUPs) for CO Bar Solar Complex. In August 2022, Stellar Renewable Power (Stellar) acquired a portion of CO Bar Solar Complex from the original developer; the portion Stellar acquired is referred to as the 1886 Solar Energy Station. The relevant CUP approvals were transferred to Stellar.

Several environmental studies were conducted for the CO Bar Solar Complex. Because the areas surveyed and analyzed in those environmental studies include, overlap, or are adjacent to the 1886 Solar Energy Station Interconnection Project (Interconnection Project) area, the studies contain information relevant to the subject of this application.

The most relevant CO Bar Solar Complex environmental studies are listed below and attached to this exhibit.

- Biological Resources Survey Report for the CO Bar Solar Complex Project Area in Coconino County, Arizona / SWCA Project No. 60018, March 30, 2020
- Cultural Resources Survey for the Co Bar Solar Interconnection Project in Coconino County, Arizona (ASLD Right-of-Way Application No. 014-122282-00-100), July 2021 (see Exhibit B, Attachment B-2 [page 1 only])
- Aquatic Resources Assessment for the CO Bar Solar Complex, Coconino County, Arizona – SWCA Project No. 66178, U.S. Army Corps of Engineers File No. SPL-2021-00470, June 22, 2023 (see Exhibit B, Attachment B-3)

Planned Environmental Studies

Environmental Assessment

The point of interconnection for the Interconnection Project is the Moenkopi to Cedar Mountain 500-kV- transmission line, which is part of the Navajo Southern Transmission System (NSTS), via the APS Switchyard. The NSTS is partly owned by the U.S Bureau of Reclamation and operated by APS. All interconnection requests for the NSTS that result in a Large Generator Interconnection Agreement must be submitted to APS and approved by the owners of the transmission line, including the Regional Director of Reclamation's Lower Colorado Basin Region. Prior to the Regional Director's approval, Reclamation must complete an environmental review of the proposed interconnection in compliance with the National Environmental Policy Act of 1969 (NEPA) (Public Law 91-190). Reclamation, as the lead

federal agency, will prepare an environmental assessment (EA) for the proposed Interconnection Project to assess the environmental effects of the proposed interconnection.

1886 Solar Energy Station LLC (the Applicant) plans to complete the studies in support of the EA including a biological evaluation (BE), further cultural resources studies, as necessary, and aquatic resource assessments. In addition, a native plant inventory for Arizona State Trust land will be required in connection with the Interconnection Project's ASLD right-of-way application. The BE and native plant inventory are described in further detail, below.

BIOLOGICAL EVALUATION

A BE is prepared for projects with a federal nexus to comply with the Endangered Species Act of 1973, as amended. To complete the BE, qualified biologists will review databases and literature that provide information pertaining to sensitive natural resources that could occur in the vicinity of the Interconnection Project. This includes a review of U.S. Fish and Wildlife Service species lists and a search for records of federally listed species within the Project vicinity. Biologists will then visit the site to document and describe vegetation types and other habitat features potentially important to listed or other special-status species, and will record the dominant plant and animal species observed. Based on this site reconnaissance and available sources of information on habitat requirements and distribution, the site will be evaluated for the potential presence of sensitive species. The resulting BE will include a description of field reconnaissance methods, a summary of vegetation communities and other habitat features, narrative descriptions of federally listed species that have the potential to occur in or near the site, and a rationale for why other federally listed species were eliminated from more detailed consideration. If listed species are observed or site conditions suggest that the proposed site may affect habitat critical to or occupied by listed species, the BE may contain recommendations for species-specific surveys. Additionally, other federal, state, and local regulations concerning the biological environment of the site will be addressed. These regulations may include the Migratory Bird Treaty Act of 1918 and Arizona Native Plant Law.

NATIVE PLANT AND NOXIOUS WEED SURVEYS AND INVENTORY

To comply with the Arizona Native Plant Law (ANPL) (ARS 3-904), qualified biologists will conduct a plant inventory that will include ANPL-protected native plants, nonnative plants, noxious weeds, and endangered plant species on state lands within the area. Prior to field surveys, survey plots will be established via desktop analysis using a stratified random sampling design, and the plot locations will be loaded onto tablets for navigation in the field. The plots will be surveyed by walking transects, counting ANPL-listed plants, and noting special-status plants and plants classified as noxious weeds by the Arizona Department of Agriculture. The plot data (number of each plant species per acre in each soil/vegetation combination) will be extrapolated to the total soil/vegetation combination acreage within the survey area. The extrapolation will provide an estimate of the total number and type of ANPL-listed plants that will be removed or destroyed as a result of project surface disturbance activities. Survey results will be reported in a written report that will also include an assessment of the associated valuation of these plants per in accordance with the Arizona State Land Department's (ASLD's) Plant Value List.

Land Use Plans

Existing and Surrounding Land Use

Exhibit A-2 shows existing land use in a 1-mile Study Area around the Interconnection Project. As shown on that figure, surrounding land uses include "utilities under construction" and "grazing." The Applicant is aware that the project area of another renewable energy development encompasses much of the area

north of the Interconnection Project (Reclamation 2022:3). Most of the remaining portions of the Study Area are used for cattle grazing on the CO Bar Ranch. A small portion of the Study Area overlaps the Kaibab National Forest, which is about 0.9 mile south of the Project Substation.

Coconino County Comprehensive Plan

The *Coconino County 2015 Comprehensive Plan* (Comprehensive Plan) (Coconino County 2015) provides a policy framework that guides Coconino County (the County) in making decisions that impact land use, among other things. Specifically, the Comprehensive Plan states that it is "not a regulatory document" but rather that it "provides a plan for future growth and is intended to guide the Planning and Zoning Commission and the Board of Supervisors when making decisions in the pursuit of coordinated, appropriate, and harmonious development in the unincorporated area of Coconino County" (Coconino County 2015:11).

In addition to the Comprehensive Plan, which covers the entire county, Coconino County has adopted nine area plans and one "rural planning area" that focus on guiding development in specific areas. The Interconnection Project does not intersect the planning boundaries of any of the area plans or the rural planning area. Furthermore, the Interconnection Project is outside of the Flagstaff Regional Plan 2020 planning boundary (Coconino County 2015:88). In general, the ASLD coordinates with jurisdictions on general and comprehensive planning efforts (Coconino County 2015:13).

The Comprehensive Plan's Land Use and Growth chapter includes policies and goals for various land use categories, including a category called "Ranchland Land Uses." The Comprehensive Plan states that "the intent of this land use category is for a rural lifestyle allowing for large ranches, agricultural grazing land, and open environment" (Coconino County 2015:67). The County's stated goal for the Ranchland Land Use category is to "conserve working ranches, unfragmented landscapes, and the County's rural character" (Coconino County 2015:67). The Applicant is coordinating closely with Babbit Ranches, the landowner and operator of the CO Bar Ranch, to develop the Interconnection Project in a manner that is consistent with Babbit Ranches management objectives.

The Comprehensive Plan's Energy chapter states that "reliable, clean energy is critical to the health, safety, and welfare of residents in Coconino County" (Coconino County 2015:169). The Comprehensive Plan includes the following policies:

- The siting of utility-scale projects and transmission lines shall consider the protection of viewsheds; the potential for noise disturbances to adjacent residential areas; the conservation of species, habitats, and water resources; the preservation of prehistoric, historic, and cultural sites; the conservation of scenic corridors; and the protection of the character of public lands. Underground collection lines are strongly encouraged. (Coconino County 2015:176)
- Additionally, the Comprehensive Plan acknowledges that "utility land uses," including high-voltage transmission lines, are "essential for basic economic infrastructure or social purposes" (Coconino County 2015:75).

As described further in this application's, the Interconnection Project is planned in a manner that minimizes impacts to biological, visual, cultural, and noise resources. The Interconnection Project would not interfere with ranching activities. The Interconnection Project would almost entirely parallel an existing 500-kilovolt transmission line and would not increase residential density. No amendments to the Coconino County Comprehensive Plan are required for the Interconnection Project.

Coconino County Zoning Ordinance

The Interconnection Project is within the County's "General" zoning district. The General zone is a rural land use designation for unincorporated areas of the county not specifically designated for any other zone classification. As noted above, the 1886 Solar Energy Station was formerly part of the CO Bar Solar Complex, which received conditional use permits from Coconino County in June 2022. The relevant CUP approvals for CO Bar Solar Complex were transferred to Stellar.

Literature Cited

Coconino County. 2015. *Coconino County 2015 Comprehensive Plan*. Available at: https://www.coconino.az.gov/DocumentCenter/View/10608/Coconino-County-Comprehensive-Plan---2017-Approval?bidId=. Accessed May 2023.

U.S. Bureau of Reclamation (Reclamation). 2022. *Final Environmental Assessment for the Babbitt Ranch Energy Center Interconnection Project*. Glendale, Arizona: U.S. Bureau of Reclamation, Phoenix Area Office. December 2022. Available at: https://www.usbr.gov/lc/phoenix/reports/BREC/FinalEA_BREC_Interconection_Project.pdf. Accessed May 2023.

EXHIBIT B – ATTACHMENT B-1

Biological Resources Survey Report for the CO Bar Solar Energy Project Area in Coconino County, Arizona / SWCA Project No. 60018, March 30, 2020

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TECHNICAL MEMORANDUM

To: Layne Ashton
Senior Development Manager
Clēnera LLC
800 West Main Street, Suite 900
Boise, Idaho 83701

From: Corina Anderson, SWCA Environmental Consultants

Date: March 30, 2020

Re: **Biological Resources Survey Report for the CO Bar Solar Energy Project Area in Coconino County, Arizona / SWCA Project No. 60018**

INTRODUCTION

SWCA Environmental Consultants (SWCA) was contracted by Clēnera LLC (Clēnera) to identify the presence of any federally listed species protected under the Endangered Species Act of 1973 (16 United States Code [USC] 1531 et seq.) (ESA) within the project area and provide an effects determination for feasibility purposes for the proposed CO Bar Solar Energy Project (project) in Coconino County, Arizona (Figure 1). The project area is located on 8,718 acres of private land approximately 40 miles northwest of the city of Flagstaff, north of U.S. Route 180 in portions of Sections 21, 23, 25–27, 29, and 33–35, Township 26 North, Range 4 East, and Sections 19, 21, 27, 39, 31, and 33, Township 26 North, Range 5 East, Gila and Salt River Baseline and Meridian (Figure 2).

METHODS

SWCA biologist Corina Anderson visited the project area on February 28, 2020, to collect the necessary data to complete this biological overview. A shapefile of the project area provided by the client was loaded onto a tablet for general orientation and to locate the project boundaries. The field reconnaissance consisted of a pedestrian survey of the project area to evaluate vegetation and landscape features considered important to the potential occurrence of special-status plant and animal species. This field reconnaissance did not include any species-specific surveys or any systematic surveys for protected biological components, such as birds' nests or vegetation densities.

Vegetation was classified to the community level according to the map "Biotic Communities of the Southwest."[1] The Natural Resources Conservation Service PLANTS database[2] was used for plant naming conventions. Federally listed species are referred to by the nomenclature used by the U.S. Fish and Wildlife Service (USFWS) during listing.

[1] Brown, D.E. (ed.). 1994. *Biotic Communities: Southwestern United States and Northwestern Mexico*. Salt Lake City: University of Utah Press.

[2] Natural Resources Conservation Service. 2020. PLANTS database. Available at: http://plants.usda.gov/java/. Accessed March 23, 2020.

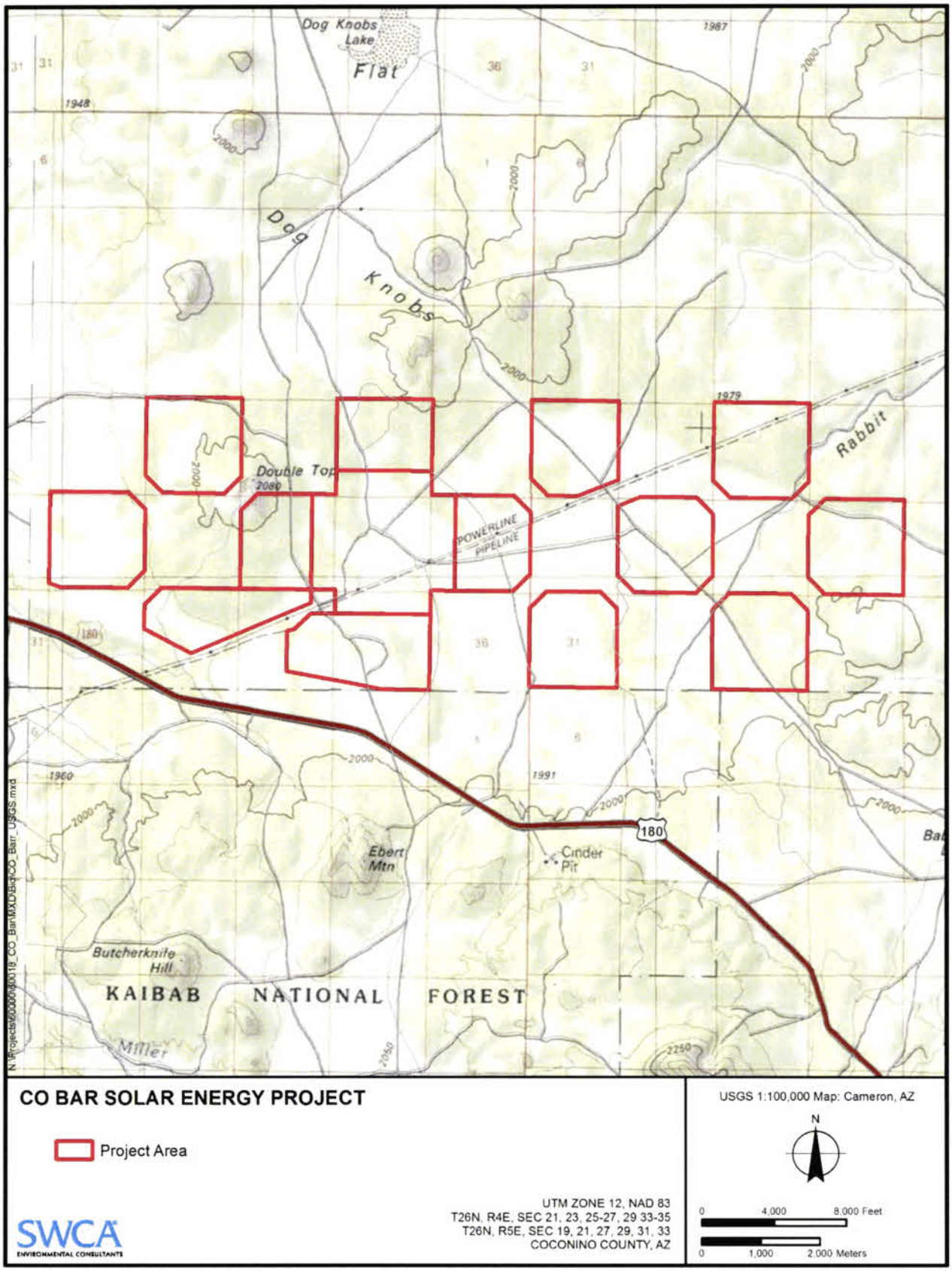

Figure 1. General location of the project area.

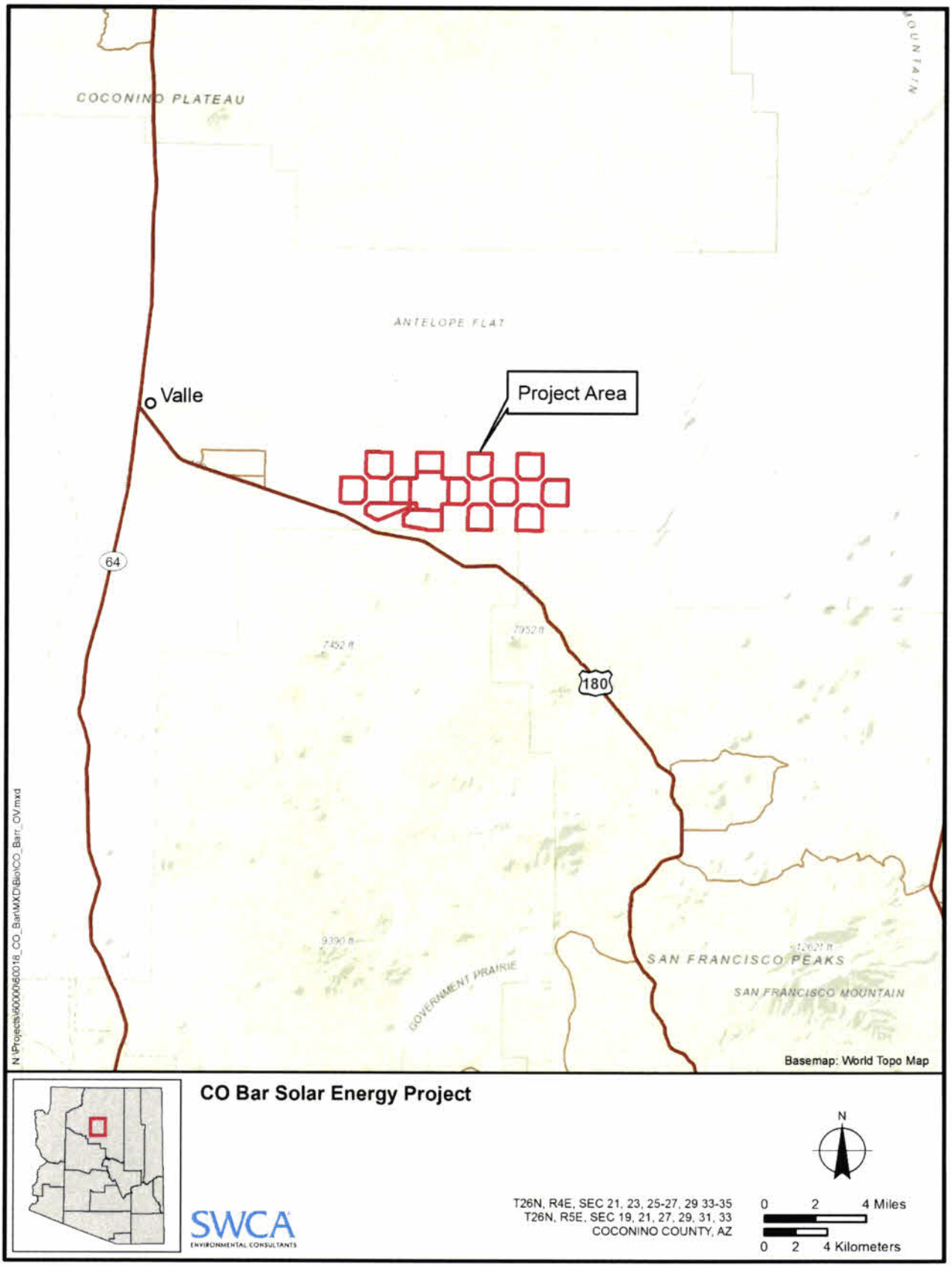

Figure 2. Project area location.

ECOLOGICAL OVERVIEW

The project area is in the Great Basin Conifer Woodland biotic community.[3] It is a mix of pinyon (*Pinus* spp.)-juniper (*Juniperus* spp.) woodland and grassland that has primarily been used for cattle grazing. Several ephemeral, earthen stock tanks are found throughout the project area but there is no perennial source of surface water. The elevation within the project area ranges from approximately 6,345 feet to 6,750 feet above mean sea level (amsl). The San Francisco Peaks are approximately 16 miles to the south, and Grand Canyon National Park is approximately 23 miles north.

No broadleaf deciduous riparian vegetation communities (i.e., communities containing cottonwood [*Populus* spp.], willow [*Salix* spp.], ash [*Fraxinus* spp.], etc.) or suitable bat roost sites (e.g., natural caves or mine features) occur in the project area.

Dominant native plant species observed during the site visit include rubber rabbitbrush (*Ericameria nauseosa*), broom snakeweed (*Gutierrezia sarothrae*), oneseed juniper (*Juniperus monosperma*), twoneedle pinyon (*Pinus edulis*), Fremont's mahonia (*Mahonia fremontii*), Whipple cholla (*Cylindropuntia whipplei*), narrowleaf yucca (*Yucca angustissima*), blue grama (*Bouteloua gracilis*), Indian ricegrass (*Achnatherum hymenoides*), New Mexico feathergrass (*Hesperostipa neomexicana*), and slender wheatgrass (*Elymus trachycaulus*). One nonnative plant, prickly Russian thistle (*Salsola tragus*), was also observed. No species that are listed as noxious weeds by the Arizona Department of Agriculture (ADA) under Arizona Administrative Code R3-4-245 were observed in the project area at the time of the field reconnaissance. However, depending on their growth cycle (i.e., after summer monsoon rains), it is possible that noxious weeds are present in the project area. More information on noxious weeds is available on the ADA website.[4]

Two of the plant species observed—Whipple cholla and narrowleaf yucca—are protected under the Arizona Native Plant Law (Arizona Revised Statutes [ARS] 3-904) (ANPL) as administered by the ADA. Consequently, a Notice of Intent to Clear Land form (Appendix C) must be filed with the ADA 30 days prior to initiating land-clearing activities. More information regarding this state regulation, as well as the form, are on the ADA website.[5]

WILDLIFE

Six avian species were documented within the project area during the site visit: horned lark (*Eremophila alpestris*), mountain bluebird (*Sialia currucoides*), northern flicker (*Colaptes auratus*), American robin (*Turdus migratorius*), common raven (*Corvus corax*), and juniper titmouse (*Baeolophus ridgwayi*).

All avian species observed in the project area are protected under the Migratory Bird Treaty Act (16 USC 703–712) (MBTA), which provides federal protection to all migratory birds, including nests and eggs. In order to relocate or alter any active MBTA-protected nests discovered in the project area, it would be necessary to obtain a permit from the USFWS to maintain compliance with the MBTA. However, Section 1 of the Interim Empty Nest Policy of the USFWS, Region 2, states that if the nest is completely inactive at the time of destruction or movement, a permit is not required to comply with the MBTA. If an active nest is observed before or during construction, measures should be taken to protect the nest from destruction to avoid a violation of the MBTA. No nests were observed in the project area during

[3] Brown, 1994.

[4] Arizona Department of Agriculture (ADA) Plant Services Division. 2020a. Noxious weeds. Available at: https://agriculture.az.gov/pestspest-control/agriculture-pests/noxious-weeds. Accessed March 16, 2020.

[5] Arizona Department of Agriculture (ADA). 2020b. *Protected Native Plants by Category*. Available at: https://apps.azsos.gov/public_services/Title_03/3-04.pdf. Accessed March 16, 2020.

field reconnaissance; however, the site visit was conducted outside of the typical breeding season for many species found in Coconino County.

No prairie dog (*Cynomys* spp.) colonies were observed within the project area. Several burrows were encountered within the project area that were consistent with American badger (*Taxidea taxus*) and fox, such as gray fox (*Urocyon cinereoargenteus*) and kit fox (*Vulpes macrotis*). Pocket gopher (*Thomomys* spp.) mounds were observed in the project area, as well as desert cottontail (*Sylvilagus audubonii*) and black-tailed jackrabbit (*Lepus californicus*) sign. Additionally, elk (*Cervus elaphus*) and coyote (*Canis latrans*) sign was also observed during the site visit.

The project area is located along the east boundary of the Coconino Plateau-Kaibab National Forest Linkage designated by the Arizona Wildlife Linkages Workgroup.[6] This wildlife linkage connects pinyon-juniper and grassland habitat blocks used by elk, mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), northern goshawk (*Accipiter gentilis*), and pronghorn (*Antilocapra americana*). The project area is also located within two diffuse Coconino County Wildlife Movement Areas: Dog Knobs-Ebert Mountain-Government Prairie and South Rim-San Francisco Peaks-Woody Ridge/Bellemont.[7] Diffuse movement areas are a type of wildlife linkage in which animals move within a habitat block across a relatively broad area, rather than between habitat blocks through a well-defined linkage. The South Rim-San Francisco Peaks-Woody Ridge/Bellemont movement area is a seasonal migration corridor, and both movement areas are used by several wildlife species including pronghorn, mule deer, black bear (*Ursus americanus*), mountain lion, and elk.

FEDERALLY LISTED SPECIES

The USFWS maintains a list of protected species and the critical habitat that are known to occur in each Arizona county. The USFWS online database was accessed to obtain information on federally listed species that may occur in Coconino County. These species are currently listed or are proposed for listing as endangered or threatened under the ESA. The list also includes candidate species for proposal as threatened or endangered. The ESA specifically prohibits the "take" of a listed species. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct."

Only species listed by the USFWS are afforded protection under the ESA. The special-status species evaluated in this technical memorandum were based on the list of endangered, threatened, and non-essential experimental population species for Coconino County, Arizona, generated through the USFWS Information for Planning and Consultation (IPaC) system, available at the USFWS website.[8] Appendix A provides the IPaC list for Coconino County.

Species Evaluation

The potential for occurrence of each species was summarized according to the categories listed below. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided. Potential for occurrence categories are as follows.

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[6] Arizona Wildlife Linkages Workgroup. 2006. Arizona's Wildlife Linkages Assessment. Available at: https://www.azdot.gov/business/environmental-planning/programs/wildlife-linkages. Accessed March 26, 2020.

[7] Arizona Game and Fish Department Heritage Geographic Information System (AZHGIS). 2020. Arizona Game and Fish Department online environmental review tool. Available at: https://azhgis2.esri.com/. Accessed February 24, 2020.

[8] U.S. Fish and Wildlife Service (USFWS). 2020a. Information for Planning and Consultation. Available at: https://ecos.fws.gov/ipac/. Accessed February 24, 2020.

- *Known to occur*—the species has been documented in the project area by a reliable observer.
- *May occur*—the project area is within the species' currently known range, and vegetation communities, soils, etc., resemble those known to be used by the species.
- *Unlikely to occur*—the project area is within the species' currently known range, but vegetation communities, soils, etc., do not resemble those known to be used by the species, or the project area is clearly outside the species' currently known range.

Those species listed by the USFWS were assigned to one of three categories of possible effect, following USFWS recommendations. The effects determinations recommended by USFWS are as follows.

- *May affect, is likely to adversely affect*—the proposed project is likely to adversely affect a species if 1) the species occurs or may occur in the project area and 2) any adverse effect on listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. In the event that the overall effect of the proposed action is beneficial to the listed species but also is likely to cause some adverse effects, the proposed action "is likely to adversely affect" the listed species.
- *May affect, is not likely to adversely affect*—the project is not likely to adversely affect a species if 1) the species may occur but its presence has not been documented and/or surveys following approved protocol have been conducted with negative results, and/or 2) project activity effects on a listed species are expected to be discountable, insignificant, or completely beneficial.
- **Beneficial effects** are contemporaneous positive effects without any adverse effects on the species. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Discountable effects** are those extremely unlikely to occur. Based on best judgment, a person would not 1) be able to meaningfully measure, detect, or evaluate insignificant effects, or 2) expect discountable effects to occur.
- *No effect*—the project will have no effect on a species if 1) it has no likelihood of effect on a listed species or its designated critical habitat (including effects that may be beneficial, insignificant, or discountable), or 2) the species' habitat does not occur in the project area.

None of the 27 species listed by the USFWS as endangered, threatened, or non-essential experimental population for Coconino County are likely to occur in the project area. The project area is clearly beyond the known geographic or elevational range of these species, or it does not contain vegetation or landscape features known to support these species, or both. Habitat requirements, potential for occurrence, and possible effects of the project for these 27 species are summarized in Table 1.

Table 1. Federally Listed Species Potentially Occurring in Coconino County, Arizona

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Amphibians				
Chiricahua leopard frog (*Rana chiricahuensis*)	T	Found in springs, livestock tanks, and streams in the upper portions of watersheds at elevations of 3,281–8,890 feet amsl.	Unlikely to occur. There is no perennial aquatic habitat present in the project area.	No effect.
Birds				

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
California condor (*Gymnogyps californianus*)	E, XN	Nesting sites are located in caves, crevices, and potholes in isolated regions of the Southwest. Condors forage for carrion along flight routes generally following over foothills and mountains. The USFWS began reintroducing an experimental, nonessential population of California condors into northern Arizona and southern Utah in 1996. These condors are generally found in, or in the vicinity of, Grand Canyon National Park, the Kaibab Plateau, the Vermilion Cliffs, and Zion National Park.	Unlikely to occur. There are no suitable nesting sites in the project area and no consistent sources of carrion. The project area is over 23 miles south of Grand Canyon and outside the typical flight paths of these birds between Grand Canyon, the Vermillion Cliffs, and Zion National Park.[9]	No effect.
Mexican spotted owl (*Strix occidentalis lucida*)	T	Found in mature montane forests and woodlands and steep, shady, wooded canyons. Can also be found in mixed-conifer and pine-oak vegetation types. Generally, nests in older forests of mixed conifers or ponderosa pine–Gambel oak. Nests in live trees on natural platforms (e.g., dwarf mistletoe [*Arceuthobium* spp.] brooms), snags, and canyon walls at elevations between 4,100 and 9,000 feet amsl.	Unlikely to occur. There are no suitable nest sites or food sources in the project area.	No effect.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	E	Found in dense riparian habitats along streams, rivers, and other wetlands where cottonwood (*Populus* spp.), willow (*Salix* spp.), boxelder (*Acer negundo*), saltcedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), buttonbush (*Cephalanthus* spp.), and arrowweed (*Pluchea sericea*) are present. Nests are found in thickets of trees and shrubs, primarily those that are 13–23 feet tall, among dense, homogeneous foliage. Breeding season is between April 15 and September 15. Habitat occurs at elevations below 8,500 feet amsl.	Unlikely to occur. The project area does not contain suitable habitat parameters for this species as there is no dense riparian habitat along streams, rivers, or other wetlands present.	No effect.
Yellow-billed cuckoo (*Coccyzus americanus*)	T	Typically found in riparian woodland vegetation (cottonwood, willow, or saltcedar) at elevations below 6,600 feet amsl. Dense understory foliage appears to be an important factor in nest site selection. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks. Breeding season is between May and August.	Unlikely to occur. The project area does not contain suitable habitat parameters for this species as there are no riparian woodland vegetation or dense understory foliage in or near the project area.	No effect.
Fish				
Apache trout (*Oncorhynchus apache*)	T	Occurs in small, cold, high-gradient streams through mixed-conifer forests and mountain meadows.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Colorado pikeminnow (=squawfish) (*Ptychocheilus lucius*)	E, XN	Occurs in rivers with high silt content, warm water, turbulence, and varied flow by season under 4,000 feet amsl.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.

[9] Personal communication, Corina Anderson, Environmental Specialist, SWCA Environmental Consultants; and Tim Hauck, Condor Reintroduction Program Manager, The Peregrine Fund.

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Gila chub (*Gila intermedia*)	E	Inhabits smaller streams, cienegas, and artificial impoundments ranging in elevation from 2,000–5,500 feet amsl.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Gila trout (*Oncorhynchus gilae*)	T	Found in small, high mountain streams at elevations of approximately 5,000–10,000 feet amsl.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Humpback chub (*Gila cypha*)	E	Occurs at elevations generally below 4,000 feet amsl in a variety of riverine habitats, especially canyon areas with fast currents, deep pools, and boulder habitat. In Arizona, it occurs in the Grand and Marble Canyon portions of the main stem Colorado and lower Little Colorado Rivers.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Little Colorado spinedace (*Lepidomeda vittata*)	T	Inhabits streams and is found in pools with water flowing over fine gravel or silt-mud substrates. Found in East Clear Creek and its tributaries, Chevelon, Silver, and Nutrioso Creeks, and the Little Colorado River.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Loach minnow (*Tiaroga cobitis*)	E	This species is a bottom dweller of small to large perennial creeks and rivers, typically in shallow turbulent riffles with cobble substrate, swift currents, and filamentous algae. Found below 8,000 feet elevation amsl.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Razorback sucker (*Xyrauchen texanus*)	E	Found in backwaters, flooded bottomlands, pools, side channels, and other slower-moving habitats at elevations below 6,000 feet amsl. In Arizona, populations are restricted to Lakes Mohave and Mead and the lower Colorado River below Lake Havasu in the Lower Basin. In the Upper Basin, small remnant populations are found in the Green and Yampa Rivers and the main stem Colorado River.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Spikedace (*Meda fulgida*)	E	Found in moderate to large perennial streams, where it inhabits moderate- to fast-velocity waters over gravel and rubble substrates.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Virgin River chub (*Gila seminuda [=robusta]*)	E	Found most commonly in deep, swift (not turbulent) waters with sand and gravel substrates and boulders or other cover at elevations below 4,500 feet amsl. Endemic to the Virgin River in the extreme northwestern part of Arizona.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.
Woundfin (*Plagopterus argentissimus*)	E, XN	Found in shallow, warm, turbid, fast-flowing rivers at elevations below 4,500 feet amsl. Extirpated from almost all of its historical range except the main stem Virgin River from Pah Tempe Springs to Lake Mead in northwestern Arizona. In Arizona, critical habitat accounts for approximately 31.6 miles of the main stem Virgin River and its 100-year floodplain in Mohave County, Arizona. Experimental, nonessential designation in portions of the Verde, Gila, San Francisco, and Hassayampa Rivers and Tonto Creek.	Unlikely to occur. There is no perennial aquatic habitat in the project area.	No effect.

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Invertebrates				
Kanab ambersnail (*Oxyloma haydeni kanabense*)	E, PD[10]	Found in semiaquatic vegetation watered by springs or seeps at the base of sandstone or limestone cliffs at an elevation of approximately 2,900 feet amsl. It requires either shallow standing water or a perennially wet soil surface. Grass or sedge cover is also necessary.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.
Mammals				
Black-footed ferret (*Mustela nigripes*)	E, XN	Found in grassland plains on mountain basins in association with prairie dogs.	Unlikely to occur. There are no reintroduced populations of black-footed ferrets in the project area.	No effect.
Mexican wolf (*Canis lupus baileyi*)	E, XN	Inhabits oak and pine/juniper savannas in foothills and mixed-conifer woodlands above 4,000 feet amsl.	Unlikely to occur. The project area is outside the 10j experimental population area for this species and approximately 22 miles north of Mexican Wolf Management Zone 2, the northern border of which is located along Interstate 40 south of Flagstaff, Arizona. Currently, there have been no recorded wolf sightings north of Flagstaff.[11]	No effect.
Reptiles				
Northern Mexican gartersnake (*Thamnophis eques megalops*)	T	This species is most abundant at elevations between 3,000 and 5,000 feet amsl in densely vegetated habitat surrounding cienegas, streams, and stock tanks, in or near water along streams in valley floors and generally open areas but not in steep mountain canyon stream habitat[12]. Considered extant in fragmented populations within the middle to upper Verde River drainage, middle to lower Tonto Creek, Cienega Creek, and a small number of isolated wetland habitats elsewhere in southeastern Arizona.	Unlikely to occur. There are no perennial aquatic habitats in the project area and the project area is outside the known geographic range of this species.	No effect.
Plants				
Brady pincushion cactus (*Pediocactus bradyi*)	E	Grows on benches and terraces at 3,850–4,500 feet amsl in the Navajoan Desert near Marble Gorge in a substrate of Kaibab limestone chips overlying soil derived from Moenkopi shale and sandstone outcrops.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.

[10] USFWS. 2020b. Endangered and Threatened Wildlife and Plants; Removing the Kanab Ambersnail from the List of Endangered and Threatened Wildlife. *Federal Register* 85(3):487-492.

[11] USFWS. 2020c. Southwest Region Ecological Services Mexican Wolf website. Available at: https://www.fws.gov/southwest/es/mexicanwolf/. Accessed March 24, 2020.

[12] Rosen, P.C., and C.R. Schwalbe. 1988. *Status of the Mexican and Narrow-headed Garter Snakes* (Thamnophis eques megalops *and* Thamnophis rufipunctatus rufipunctatus) *in Arizona.* Report to U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque, New Mexico.

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Fickeisen plains cactus (*Pediocactus peeblesianus* var. *fickeiseniae*)	E	Occurs on gravelly limestone or gravelly loam in desertscrub at elevations between 4,300 and 5,450 feet amsl. Known only from the vicinity of Gray Mountain in Coconino County and north and west to the Arizona Strip in Coconino and Mohave Counties. It may also occur near Joseph City in Navajo County.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.
Navajo sedge (*Carex specuicola*)	T	Occurs at seep springs on vertical cliffs of pink-red Navajo sandstone at 5,700–6,000 feet amsl.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.
San Francisco Peaks ragwort (*Packera franciscana*)	T	Alpine tundra above southwestern spruce-fir or bristlecone pine forests on talus slopes above 10,900 feet amsl.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.
Sentry milk-vetch (*Astragalus cremnophylax* var. *cremnophylax*)	E	Grows on a white layer of Kaibab limestone with little (less than 0.5 inch) or no soil, in an unshaded opening in the pinyon-juniper-cliffrose plant community above 4,000 feet amsl. Known populations occur only in Coconino County, Arizona on land within Grand Canyon National Park.	Unlikely to occur. The project area is outside the known geographic range of this species.	No effect.
Siler pincushion cactus (*Pediocactus [=Echinocactus, =Utahia] sileri*)	T	Found in red or gray gypsiferous badlands and sandy soil high in soluble salts derived from the Moenkopi Formation at elevations between 2,800 and 5,400 feet amsl. In Arizona, occurs at Fort Pierce, Lost Spring Mountain, and Yellowstone and Shinarump Mesas.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.
Welsh's milkweed (*Asclepias welshii*)	T	Found on sparsely vegetated, semi-stabilized sand dunes derived from Navajo sandstone.	Unlikely to occur. The project area lacks suitable habitat parameters and is outside the known geographic and elevational range for this species.	No effect.

Range or habitat information is from Arizona Game and Fish Department Heritage Geographic Information System (AZHGIS);[13] USFWS IPaC;[14] USFWS Arizona Ecological Services;[15]; *Arizona Rare Plant Field Guide*;[16] Brennan and Holycross;[17] and Corman and Wise-Gervais.[18]

* USFWS Status Definitions:

E = Endangered. Endangered species are those in imminent jeopardy of extinction. The ESA specifically prohibits the take of a species listed as endangered. Take is defined by the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct.

T = Threatened. Threatened species are those in imminent jeopardy of becoming endangered. The ESA prohibits the take of a species listed as threatened under Section 4(d) of the ESA. Take is defined by the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct.

PD = Proposed for Delisting. A species currently listed under the ESA for which the USFWS has published a proposed rule to delist the species.

XN = Experimental, non-essential population of an endangered species. Treated as threatened species on public land and as species proposed for listing on private land.

[13] AZHGIS, 2020.

[14] USFWS, 2020.

[15] Arizona Ecological Services Document Library. Available at: https://www.fws.gov/southwest/es/arizona/reading.htm. Accessed March 2020.

[16] Arizona Rare Plant Committee. n.d. [2001]. Arizona Rare Plant Field Guide. Washington, D.C.: U.S. Government Printing Office.

[17] Brennan, T.C. and A.T. Holycross. 2006. *A Field Guide to Amphibians and Reptiles in Arizona*. Phoenix: Arizona Game and Fish Department.

[18] Corman, T.E., and C. Wise-Gervais. 2005. *Arizona Breeding Bird Atlas*. Albuquerque: University of New Mexico Press.

AGENCY CORRESPONDENCE

The Arizona Game and Fish Department (AGFD) maintains a statewide database, known as the Heritage Data Management System (HDMS), which tracks records for federally listed species and other species of special concern. This database can be accessed through the HDMS online environmental review tool.[19] SWCA accessed the database and received a response document and receipt (Appendix B). The receipt portion of the response document provides information such as special-status species information, presence or absence of designated critical habitat, special handling guidelines for wildlife, and preliminary project-type recommendations as given by the AGFD. SWCA and its clients are not required to complete the receipt portion of this document. However, SWCA will complete and submit the receipt portion to the AGFD if SWCA believes additional AGFD departmental review is necessary concerning this project or if the client requests it.

The HDMS-generated response reported that golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), American peregrine falcon (*Falco peregrinus anatum*), and Arizona rabbitbrush (*Chrysothamnus molestus*) have been documented within 5 miles of the project area. Bald eagle, Arizona rabbitbrush, and peregrine falcon are all Species of Concern to the USFWS, but the term has no official status.[20] Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act in addition to the MBTA.

The project area does not contain cliffs or snags large enough to support an eagle nest. Although bald eagles can occur anywhere in Arizona in winter, large, fish bearing waters essential for bald eagle breeding are not present anywhere near the project area. The nearest known bald eagle nest is located at White Lake, approximately 33 miles south of the project area.[21] The presence of bald eagles within the project area would likely be limited to occasional hunters or scavengers. The nearest golden eagle nest is approximately 5.2 miles from the project area.[22] Golden eagles, as well as peregrine falcons, are anticipated to pass through the project area intermittently to hunt or forage, but the lack of suitable nesting substrate makes it unlikely that they would attempt to breed at that location.

Arizona rabbitbrush may occur within the project area but it is not currently afforded legal protection on private land.

CONCLUSION

The following conclusions are based on the results of the pre-field desktop and biological field survey of the proposed project area:

- Two of the plant species observed in the project area are protected under the ANPL: Whipple cholla and narrowleaf yucca. A Notice of Intent to Clear Land form (see Appendix C) must be filed with the ADA 30 days prior to initiating land-clearing activities.[23] By submitting the form, no constraint to project development.
- If the project design becomes altered to include Arizona State land, then the ASLD native plant inventory requirements would apply, which include inventorying native plants as listed under the

[19] AZHGIS, 2020.

[20] AGFD website. 2020. Status definitions. Available at: https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/. Accessed March 24, 2020.

[21] Southwestern Bald Eagle Management Committee website. 2020. Arizona bald eagle nest locations. Available at: https://www.swbemc.org/nestSites.html. Accessed March 27, 2020.

[22] SWCA Environmental Consultants. 2020. Unpublished data.

[23] This form can also be downloaded from the ADA website at: https://agriculture.az.gov/plantsproduce/native-plants.

ANPL, noxious weeds, and plant species listed under the ESA. Currently, however, the entire proposed project area is located on private land and is not subject to the ASLD. Therefore, ASLD requirements would need to be addressed if the project design expands to land administered by the ASLD, but currently, no constraint to project development.

- No federally listed plant species have the potential to occur in the proposed project area, and none were observed during field surveys. Therefore, no constraint to project development.
- Suitable nesting habitat for migratory birds is present throughout the proposed project area. Substrate exists for many passerine species' nests, though none were observed at the time of the survey. If feasible, vegetation removal associated with the proposed project would occur outside the migratory bird breeding season (March 1–August 31). Any vegetation removal during the breeding bird season should be preceded by pre-construction nesting surveys approximately 2 weeks prior to vegetation removal to identify any occupied nests. Occupied nesting substrate should not be removed, and nest contents (eggs and/or young) should not be harmed until young have fledged. Because of the abundance of similar habitat in the surrounding area, the impacts on the bird populations that would utilize those habitat types within the proposed project area would be low. Therefore, no constraint to project development.
- Although bald and golden eagles may pass through the project area occasionally while hunting or scavenging, they are unlikely to breed within the proposed project area, precluding nest disturbance. Therefore, no constraint to project development.
- No federally listed animal species have the potential to occur in the proposed project area, and none were observed during field surveys. Therefore, no constraint to project development.

LIMITATIONS AND WARRANTY

Within the limitations of schedule, budget, and scope of work, SWCA warrants that this study was conducted in accordance with accepted environmental science practices, including the technical guidelines, evaluation criteria, and species' listing status in effect at the time this evaluation was performed, as outlined in the report.

The results and conclusions of this report represent the best professional judgment of SWCA scientists and are based on information provided by the project proponent and on information obtained from agencies and other sources during the course of the study. No other warranty, expressed or implied, is made.

APPENDIX A

USFWS-Listed Species IPaC Database Receipt

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
Phone: (602) 242-0210 Fax: (602) 242-2513
http://www.fws.gov/southwest/es/arizona/
http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html

In Reply Refer To:
Consultation Code: 02EAAZ00-2020-SLI-0605
Event Code: 02EAAZ00-2020-E-01345
Project Name: Clenera CO Bar Solar Facility

March 25, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The Fish and Wildlife Service (Service) is providing this list under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). The list you have generated identifies threatened, endangered, proposed, and candidate species, and designated and proposed critical habitat, that may occur within one or more delineated United States Geological Survey 7.5 minute quadrangles with which your project polygon intersects. Each quadrangle covers, at minimum, 49 square miles. In some cases, a species does not currently occur within a quadrangle but occurs nearby and could be affected by a project. Please refer to the species information links found at:
http://www.fws.gov/southwest/es/arizona/Docs_Species.htm
http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf .

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to consult with us if their projects may affect federally listed species and/or designated critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, we recommend preparing a biological evaluation similar to a Biological Assessment to determine whether the project may

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If the Federal action agency determines that listed species or critical habitat may be affected by a federally funded, permitted or authorized activity, the agency must consult with us pursuant to 50 CFR 402. Note that a "may affect" determination includes effects that may not be adverse and that may be beneficial, insignificant, or discountable. You should request consultation with us even if only one individual or habitat segment may be affected. The effects analysis should include the entire action area, which often extends well outside the project boundary or "footprint." For example, projects that involve streams and river systems should consider downstream effects. If the Federal action agency determines that the action may jeopardize a proposed species or adversely modify proposed critical habitat, the agency must enter into a section 7 conference. The agency may choose to confer with us on an action that may affect proposed species or critical habitat.
Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend considering them in the planning process in the event they become proposed or listed prior to project completion. More information on the regulations (50 CFR 402) and procedures for section 7 consultation, including the role of permit or license applicants, can be found in our Endangered Species Consultation Handbook at:
http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

We also advise you to consider species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668 et seq.). The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when authorized by the Service. The Eagle Act prohibits anyone, without a permit, from taking (including disturbing) eagles, and their parts, nests, or eggs. Currently 1026 species of birds are protected by the MBTA, including species such as the western burrowing owl (Athene cunicularia hypugea). Protected western burrowing owls are often found in urban areas and may use their nest/burrows year-round; destruction of the burrow may result in the unpermitted take of the owl or their eggs.

If a bald eagle (or golden eagle) nest occurs in or near the proposed project area, you should evaluate your project to determine whether it is likely to disturb or harm eagles. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles:
https://www.fws.gov/migratorybirds/pdf/management/
nationalbaldeaglenanagementguidelines.pdf
https://www.fws.gov/birds/management/managed-species/eagle-management.php.

The Division of Migratory Birds (505/248-7882) administers and issues permits under the MBTA and Eagle Act, while our office can provide guidance and Technical Assistance. For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following: https://www.fws.gov/birds/policies-and-regulations/incidental-take.php. Guidance for minimizing impacts to migratory birds for communication tower projects (e.g. cellular, digital television, radio, and emergency broadcast) can be found at:

https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

Activities that involve streams (including intermittent streams) and/or wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We recommend that you contact the Corps to determine their interest in proposed projects in these areas. For activities within a National Wildlife Refuge, we recommend that you contact refuge staff for specific information about refuge resources.
If your action is on tribal land or has implications for off-reservation tribal interests, we encourage you to contact the tribe(s) and the Bureau of Indian Affairs (BIA) to discuss potential tribal concerns, and to invite any affected tribe and the BIA to participate in the section 7 consultation. In keeping with our tribal trust responsibility, we will notify tribes that may be affected by proposed actions when section 7 consultation is initiated.

We also recommend you seek additional information and coordinate your project with the Arizona Game and Fish Department. Information on known species detections, special status species, and Arizona species of greatest conservation need, such as the western burrowing owl and the Sonoran desert tortoise (Gopherus morafkai) can be found by using their Online Environmental Review Tool, administered through the Heritage Data Management System and Project Evaluation Program https://www.azgfd.com/Wildlife/HeritageFund/.

For additional communications regarding this project, please refer to the consultation Tracking Number in the header of this letter. We appreciate your concern for threatened and endangered species. If we may be of further assistance, please contact our following offices for projects in these areas:

Northern Arizona: Flagstaff Office 928/556-2001
Central Arizona: Phoenix office 602/242-0210
Southern Arizona: Tucson Office 520/670-6144

Sincerely,
/s/ Jeff Humphrey Field Supervisor

Attachment

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
(602) 242-0210

Project Summary

Consultation Code: 02EAAZ00-2020-SLI-0605

Event Code: 02EAAZ00-2020-E-01345

Project Name: Clenera CO Bar Solar Facility

Project Type: POWER GENERATION

Project Description: Solar facility in Coconino County.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/35.630837679519495N112.04240624328523W

Counties: Coconino, AZ

Endangered Species Act Species

There is a total of 29 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Black-footed Ferret *Mustela nigripes* Population: U.S.A. (WY and specified portions of AZ, CO, MT, SD, and UT, see 17.84(g)(9)) No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Experimental, non-essential population of black-footed ferrets established pursuant to Section 10(j) of the ESA. Section 7 consultation not required except on lands administered by the U.S. Fish and Wildlife Service or the National Park Service. Species profile: https://ecos.fws.gov/ecp/species/6953	Experimental Population, Non-Essential
Black-footed Ferret *Mustela nigripes* Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Special incidental take provisions pursuant to Section 10(a)(1)(A) of the ESA apply to a reintroduced population of black-footed ferrets. Contact the Arizona Ecological Services Field Office for additional details. Species profile: https://ecos.fws.gov/ecp/species/6953	Endangered
Mexican Wolf *Canis lupus baileyi* Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3916	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. (specific portions of Arizona, Nevada, and Utah) There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8193	Experimental Population, Non-Essential
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/129/office/22410.pdf	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northern Mexican Gartersnake *Thamnophis eques megalops* There is **proposed** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7655	Threatened

Amphibians

NAME	STATUS
Chiricahua Leopard Frog *Rana chiricahuensis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1516	Threatened

Fishes

NAME	STATUS
Apache Trout *Oncorhynchus apache* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3532	Threatened
Colorado Pikeminnow (=squawfish) *Ptychocheilus lucius* Population: Salt and Verde R. drainages, AZ No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3531	Experimental Population, Non-Essential
Gila Chub *Gila intermedia* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/51	Endangered
Gila Trout *Oncorhynchus gilae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/781	Threatened
Humpback Chub *Gila cypha* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3930	Endangered
Little Colorado Spinedace *Lepidomeda vittata* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6640	Threatened
Loach Minnow *Tiaroga cobitis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6922	Endangered
Razorback Sucker *Xyrauchen texanus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/530	Endangered
Spikedace *Meda fulgida* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6493	Endangered
Virgin River Chub *Gila seminuda (=robusta)* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1772	Endangered
Woundfin *Plagopterus argentissimus* Population: Gila R. drainage, AZ, NM No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/49	Experimental Population, Non-Essential

Snails

NAME	STATUS
Kanab Ambersnail *Oxyloma haydeni kanabensis* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6642	Endangered

Flowering Plants

NAME	STATUS
Brady Pincushion Cactus *Pediocactus bradyi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6292	Endangered
Fickeisen Plains Cactus *Pediocactus peeblesianus fickeiseniae* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5484	Endangered
Navajo Sedge *Carex specuicola* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8579	Threatened
San Francisco Peaks Ragwort *Packera franciscana* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1721	Threatened
Sentry Milk-vetch *Astragalus cremnophylax var. cremnophylax* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8439	Endangered
Siler Pincushion Cactus *Pediocactus (=Echinocactus,=Utahia) sileri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3607	Threatened
Welsh's Milkweed *Asclepias welshii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8400	Threatened

Critical habitats

There are 10 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Fickeisen Plains Cactus *Pediocactus peeblesianus fickeiseniae* https://ecos.fws.gov/ecp/species/5484#crithab	Final

NAME	STATUS
Humpback Chub *Gila cypha* https://ecos.fws.gov/ecp/species/3930#crithab	Final
Little Colorado Spinedace *Lepidomeda vittata* https://ecos.fws.gov/ecp/species/6640#crithab	Final
Mexican Spotted Owl *Strix occidentalis lucida* https://ecos.fws.gov/ecp/species/8196#crithab	Final
Narrow-headed Gartersnake *Thamnophis rufipunctatus* For information on why this critical habitat appears for your project, even though Narrow-headed Gartersnake is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/2204#crithab	Proposed
Navajo Sedge *Carex specuicola* https://ecos.fws.gov/ecp/species/8579#crithab	Final
Northern Mexican Gartersnake *Thamnophis eques megalops* https://ecos.fws.gov/ecp/species/7655#crithab	Proposed
Razorback Sucker *Xyrauchen texanus* https://ecos.fws.gov/ecp/species/530#crithab	Final
San Francisco Peaks Ragwort *Packera franciscana* https://ecos.fws.gov/ecp/species/1721#crithab	Final
Yellow-billed Cuckoo *Coccyzus americanus* https://ecos.fws.gov/ecp/species/3911#crithab	Proposed

APPENDIX B

AZHGIS Online Environmental Review Response

Arizona Environmental Online Review Tool Report

Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:
Clenera CO Bar Solar Facility

User Project Number:
60018

Project Description:
Solar energy production and storage facility.

Project Type:
Energy Storage/Production/Transfer, Energy Production (generation), photovoltaic solar facility (new)

Contact Person:
Corina Anderson

Organization:
SWCA Environmental Consultants

On Behalf Of:
PRIVATE

Project ID:
HGIS-10555

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

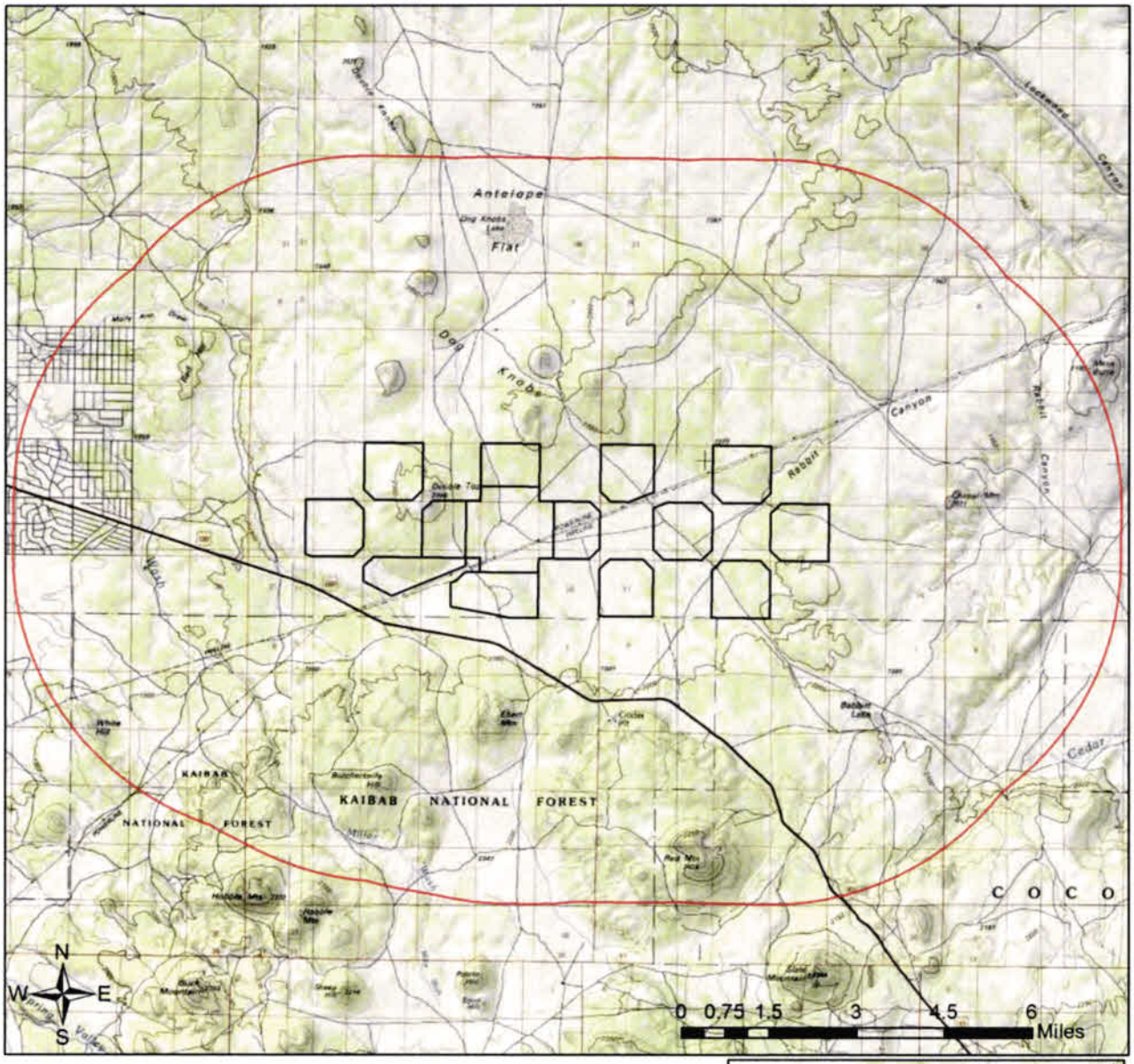
Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
   Project Evaluation Program, Habitat Branch
   Arizona Game and Fish Department
   5000 West Carefree Highway
   Phoenix, Arizona 85086-5000
   Phone Number: (623) 236-7600
   Fax Number: (623) 236-7366
   Or
   PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

Clenera CO Bar Solar Facility

USA Topo Basemap With Locator Map



Project Boundary

Buffered Project Boundary

Project Size (acres): 8,718.71

Lat/Long (DD): 35.6068 / -111.9185

County(s): Coconino

AGFD Region(s): Flagstaff

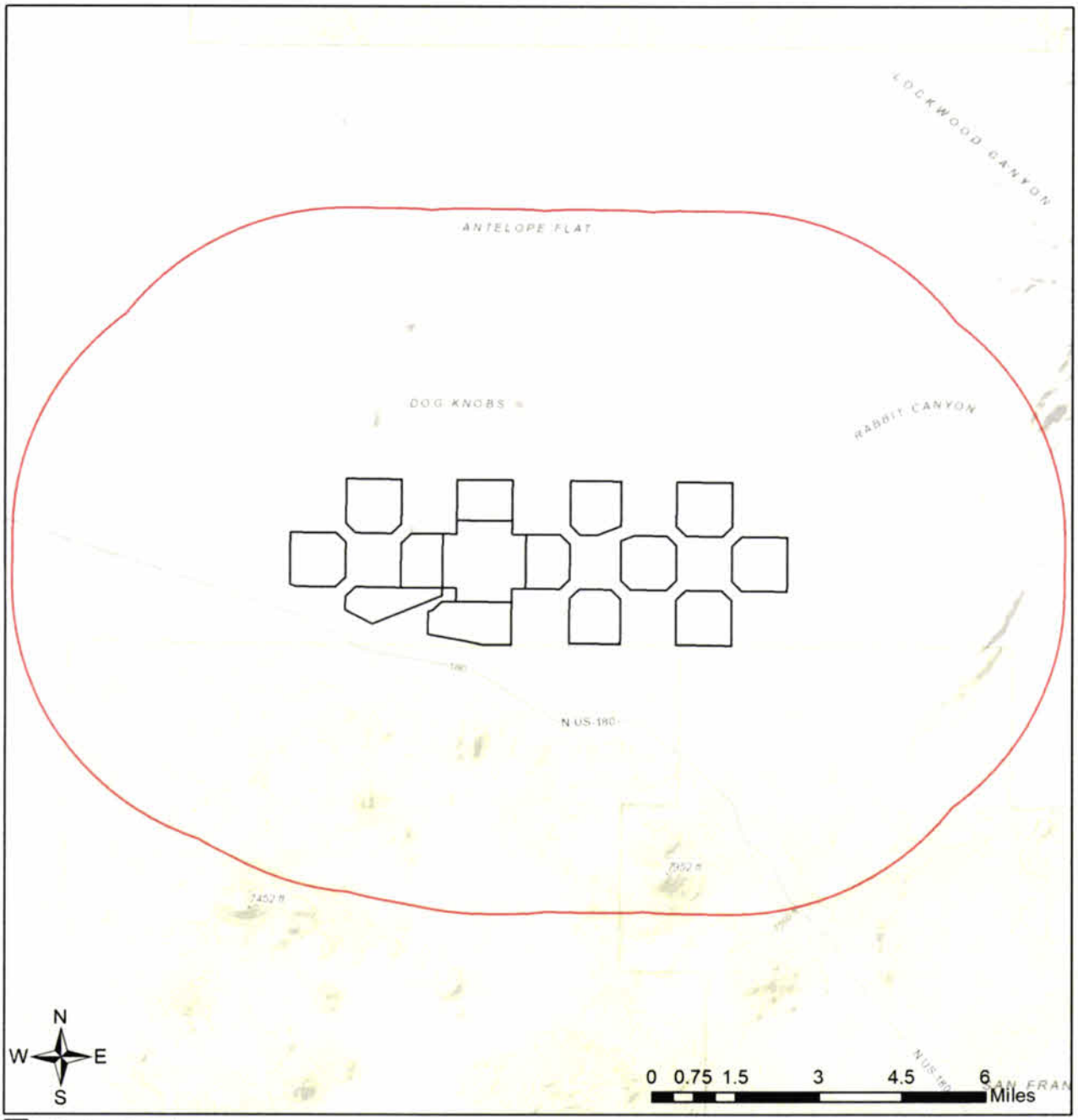
Township/Range(s): T25N, R4E; T25N, R5E; T26N, R4E +

USGS Quad(s): CHAPEL MOUNTAIN; DOG KNOBS +

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap

Clenera CO Bar Solar Facility

Web Map As Submitted By User



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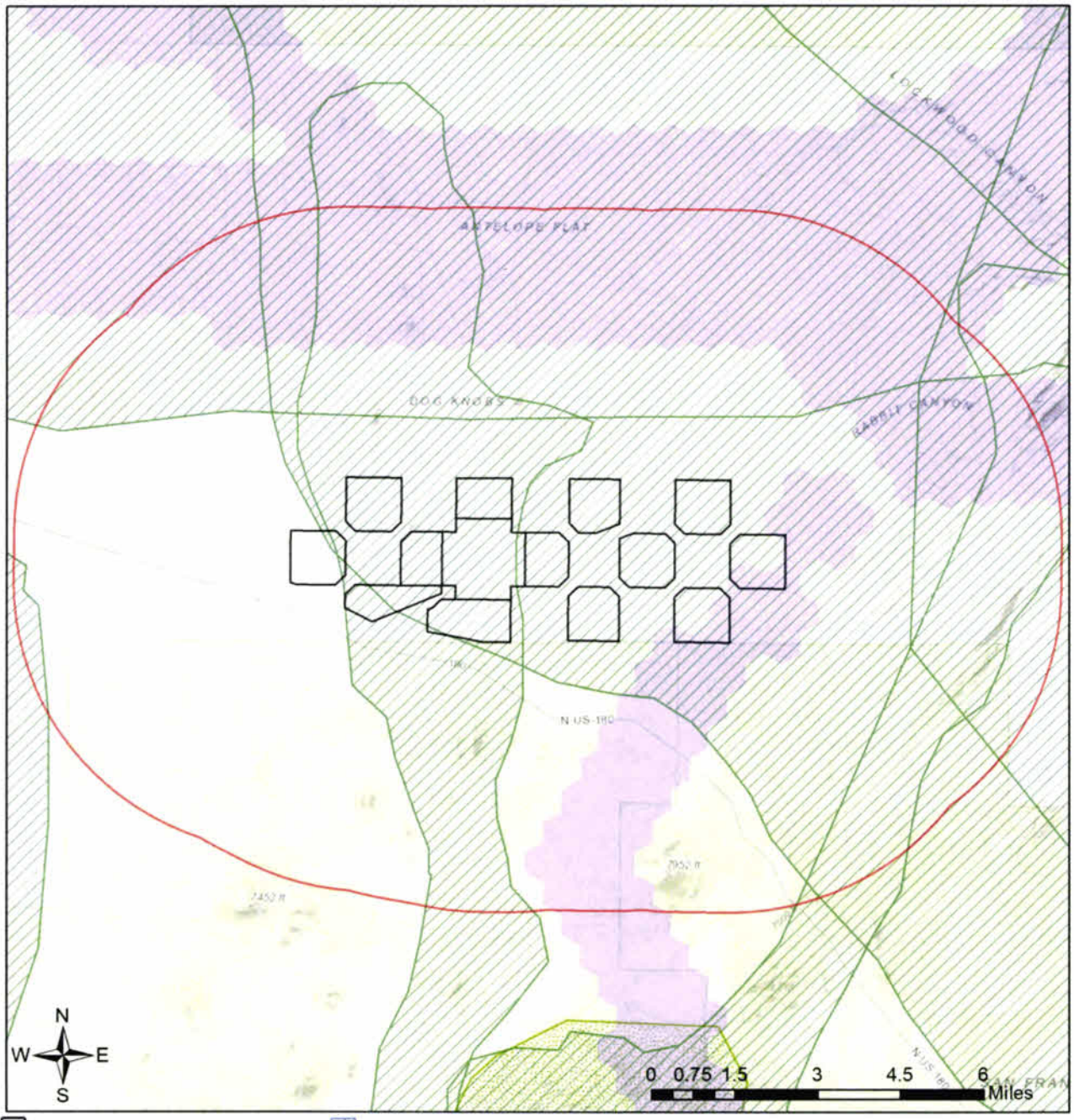
Clenera CO Bar Solar Facility

Important Areas



- Project Boundary
- Buffered Project Boundary

County Stakeholder Assessment

- Wildlife Crossing Area
- Wildlife Movement Area - Diffuse
- Wildlife Movement Area - Landscape
- Wildlife Movement Area - Riparian/Wash
- Wildlife Connectivity
- Important Connectivity Zones
- Pinal County Riparian
- Critical Habitat
- Important Bird Areas

Project Size (acres): 8,718.71

Lat/Long (DD): 35.6068 / -111.9185

County(s): Coconino

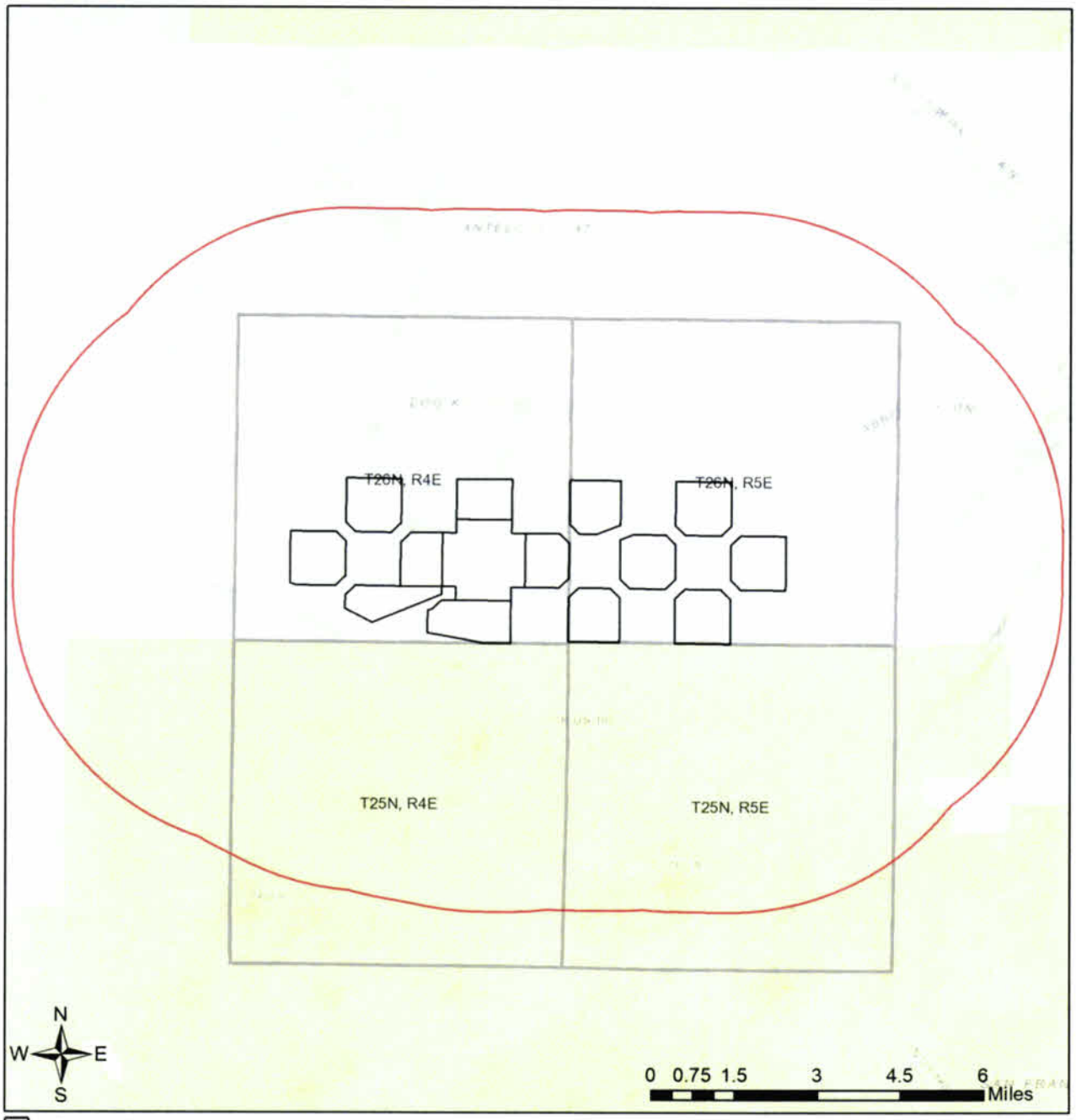
AGFD Region(s): Flagstaff

Township/Range(s): T25N, R4E; T25N, R5E; T26N, R4E +

USGS Quad(s): CHAPEL MOUNTAIN; DOG KNOBS +

Clenera CO Bar Solar Facility

Township/Ranges and Land Ownership



- Project Boundary
- Buffered Project Boundary
- Township/Ranges

Land Ownership

- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military
- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge

Project Size (acres): 8,718.71

Lat/Long (DD): 35.6068 / -111.9185

County(s): Coconino

AGFD Region(s): Flagstaff

Township/Range(s): T25N, R4E; T25N, R5E; T26N, R4E +

USGS Quad(s): CHAPEL MOUNTAIN; DOG KNOBS +

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 5 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Aquila chrysaetos	Golden Eagle	BGA		S		1B
Chrysothamnus molestus	Tusayan Rabbitbrush	SC	S			
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	SC, BGA	S	S		1A

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/

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Special Areas Documented within the Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Dog Knobs - Ebert Mountain - Government Prairie	Coconino County Wildlife Movement Area - Diffuse					
Important Connectivity Zone	Wildlife Connectivity					
South Rim - San Francisco Peaks - Woody Ridge/Bellemont area	Coconino County Wildlife Movement Area - Diffuse					

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/

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Species of Greatest Conservation Need Predicted within the Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Accipiter gentilis	Northern Goshawk	SC	S	S		1B
Ambystoma mavortium nebulosum	Arizona Tiger Salamander					1B
Antilocapra americana americana	American Pronghorn					1B
Aquila chrysaetos	Golden Eagle	BGA		S		1B
Aspidoscelis pai	Pai Striped Whiptail					1B
Baeolophus ridgwayi	Juniper Titmouse					1C
Buteo regalis	Ferruginous Hawk	SC		S		1B
Buteo swainsoni	Swainson's Hawk					1C
Cardellina rubrifrons	Red-faced Warbler					1C
Chordeiles minor	Common Nighthawk					1B
Contopus cooperi	Olive-sided Flycatcher	SC				1C
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus cerberus	Arizona Black Rattlesnake					1B
Cynomys gunnisoni	Gunnison's Prairie Dog	SC		S		1B
Empidonax wrightii	Gray Flycatcher					1C
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Gymnorhinus cyanocephalus	Pinyon Jay			S		1B

Species of Greatest Conservation Need Predicted within the Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Microtus longicaudus	Long-tailed Vole					1B
Microtus mexicanus	Mexican Vole					1B
Mustela nigripes	Black-footed Ferret	LE,XN				1A
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Neotamias cinereicollis	Gray-collared Chipmunk					1B
Neotoma stephensi	Stephen's Woodrat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Panthera onca	Jaguar	LE				1A
Patagioenas fasciata	Band-tailed Pigeon					1C
Peucedramus taeniatus	Olive Warbler					1C
Psiloscops flammeolus	Flammulated Owl					1C
Rallus limicola	Virginia Rail					1C
Spizella breweri	Brewer's Sparrow					1C
Sturnella magna	Eastern Meadowlark					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Vireo vicinior	Gray Vireo		S			1C

Species of Economic and Recreation Importance Predicted within the Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Antilocapra americana americana	America Pronghorn					1B
Cervus elaphus	Elk					
Odocoileus hemionus	Mule Deer					
Patagioenas fasciata	Band-tailed Pigeon					1C
Puma concolor	Mountain Lion					
Zenaida macroura	Mourning Dove					

Project Type: Energy Storage/Production/Transfer, Energy Production (generation), photovoltaic solar facility (new)

Project Type Recommendations:

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, https://agriculture.az.gov/. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/quality/?cid=stelprdb1044769 The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information https://www.azgfd.com/hunting/regulations.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

For any powerlines built, proper design and construction of the transmission line is necessary to prevent or minimize risk of electrocution of raptors, owls, vultures, and golden or bald eagles, which are protected under state and federal laws. Limit project activities during the breeding season for birds, generally March through late August, depending on species in the local area (raptors breed in early February through May). Conduct avian surveys to determine bird species that may be utilizing the area and develop a plan to avoid disturbance during the nesting season. For underground powerlines, trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herptefauna (snakes, lizards, tortoise) from entering ditches. In addition, indirect affects to wildlife due to construction (timing of activity, clearing of rights-of-way, associated bridges and culverts, affects to wetlands, fences) should also be considered and mitigated.

Based on the project type entered, coordination with State Historic Preservation Office may be required (http://azstateparks.com/SHPO/index.html).

Based on the project type entered, coordination with U.S. Fish and Wildlife Service (Migratory Bird Treaty Act) may be required (http://www.fws.gov/southwest/es/arizona/).

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at PEP@azgfd.gov.

Project Location and/or Species Recommendations:
HDMS records indicate that one or more **Listed, Proposed, or Candidate** species or **Critical Habitat** (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at http://www.fws.gov/southwest/es/arizona/ or:

Phoenix Main Office
9828 North 31st Avenue #C3
Phoenix, AZ 85051-2517
Phone: 602-242-0210
Fax: 602-242-2513

Tucson Sub-Office
201 N. Bonita Suite 141
Tucson, AZ 85745
Phone: 520-670-6144
Fax: 520-670-6155

Flagstaff Sub-Office
SW Forest Science Complex
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
Phone: 928-556-2157
Fax: 928-556-2121

HDMS records indicate that **Peregrine Falcons** have been documented within the vicinity of your project area. Please review the Peregrine Falcon Management Guidelines at: https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/planningFor/wildlifeFriendlyGuidelines/peregrineFalconConservGuidelines.pdf.

Analysis indicates that your project is located in the vicinity of an identified ***wildlife habitat connectivity feature***. The **County-level Stakeholder Assessments** contain five categories of data (Barrier/Development, Wildlife Crossing Area, Wildlife Movement Area- Diffuse, Wildlife movement Area- Landscape, Wildlife Movement Area- Riparian/Washes) that provide a context of select anthropogenic barriers, and potential connectivity. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: https://www.azgfd.com/wildlife/planning/habitatconnectivity/identifying-corridors/.
Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

Analysis indicates that your project is located in the vicinity of an identified ***wildlife habitat connectivity feature***. The **Statewide Wildlife Connectivity Assessment's Important Connectivity Zones** (ICZs) represent general areas throughout the landscape which contribute the most to permeability of the whole landscape. ICZs may be used to help identify, in part, areas where more discrete corridor modeling ought to occur. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: https://s3.amazonaws.com/azgfd-portal-wordpress/azgfd.wp/wp-content/uploads/0001/01/23120719/ALIWCA_Final_Report_Perkl_2013_lowres.pdf.
Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

APPENDIX C

ASLD Notice of Intent to Clear Land Form

Arizona Department of Agriculture (ADA)
Licensing and Registration Section
1688 West Adams, Phoenix, Arizona 85007
Phone: (602) 542-6408
Fax: (602) 542-0466

Notice of Intent to Clear Land

ARS § 3-904

Pursuant to A.R.S. § 3-904 the undersigned, as Owner of the Property described herein, gives this Notice of Intent to Clear Land of protected native plants.

1. **Owner/landowner's agent.** The owner or landowner's agent of the Property upon which protected native plants will be affected:

   Owner's Name _____ Phone _____

   Address _____

   Agent's Name _____ Phone _____

   Address _____

2. **Property.** The description and location of the Property upon which protected native plants will be affected:

   County

   Name of Property/Project _____

   Address _____

   Physical Location (attach map) _____

   (Note: Map must also show surrounding land for 1/2 mile in each direction)

   Tax Parcel ID Nos. _____

   Legal Description (or attach copy) _____

   Number of Acres to be Cleared _____

3. **Owner's Intent.** Landowner's intentions when clearing private land of protected native plants.

   ☐ Owner intends to allow salvage of the plants, and agrees to be contacted by native plant salvagers.

   ☐ Owner intends to transplant the plants onto the same property, or to another property he also owns.

   ☐ Owner has already arranged for salvage of the plants.

   ☐ Owner does not intend to allow salvage of the plants.

   ☐ Other _____

4. **Approximate starting date.** _____
   (See notice period listed on reverse side)

The information contained in this application is true and accurate to the best of my knowledge. I understand that providing false information is a felony in Arizona

Signature _____ **Date** _____

Notice to salvagers: Consent of the landowner is required before entering any lands described in this notice.

Explanation Of This Form

1. **Notice of Intent to Clear Land.**
   The majority of the desert plants fall into one of four groups specially protected from theft, vandalism or unnecessary destruction. They include all of the cacti, the unique plants like Ocotillo, and trees like Ironwood, Palo Verde and Mesquite. In most cases the destruction of these protected plants may be avoided if the private landowner gives prior notice to the Arizona Department of Agriculture.

2. **Notice Period.**
   When properly completed, this form is to be sent to the Department within the time periods described below. Landowners/ developers are encouraged to salvage protected native plants whenever possible.

3. **Information to Interested Parties.**
   The information in this notice will be posted in the applicable state office of the Department and mailed to those parties (salvage operators, revegetation experts) who have an interest in these plants and may approach the landowner with the possibility of saving the plant(s) from unnecessary destruction.

Notice to Landowner:

1. The owner may not begin destruction of protected native plants until he receives confirmation from the Arizona Department of Agriculture and the time prescribed below has elapsed. The "Confirmed" stamp only verifies that the Notice has been filed.

Size of area over which the Destruction of Plants will occur	Length of Notice Period
Less than one acre	20 days, oral or written
One acre or more, but less than 40 acres	30 days, written
40 acres or more	60 days, written

2. If you are clearing land over an area of less than one acre, oral notice may be given by calling the applicable state office at the telephone number given below.
3. If the land clearing or plant salvage does not occur within one year, a new Notice is required.
4. This Notice must be sent to the applicable state office of the Department of Agriculture at the address given below:

Phoenix Office
1688 W. Adams
Phoenix, AZ 85007
(602) 364-0935

Tucson Office
400 W. Congress Ste. 124
Tucson, AZ 85701
(520) 628-6317
M-F 8a.m. - 11:30a.m

Notice to salvagers: Consent of the landowner is required before entering any lands described in this notice.

rev 05/07

EXHIBIT B – ATTACHMENT B-2

Page 1 of the Cultural Resources Survey for the Co Bar Solar Interconnection Project in Coconino County, Arizona (ASLD Right-of-Way Application No. 014-122282-00-100), July 2021

Cultural Resources Survey for the CO Bar Solar Interconnection Project in Coconino County, Arizona (ASLD Right-of-Way Application No. 014-122282-00-100)

JULY 2021

PREPARED FOR

Clēnera, LLC

PREPARED BY

SWCA Environmental Consultants

EXHIBIT B – ATTACHMENT B-3

Aquatic Resources Assessment for the CO Bar Solar Energy Project, Coconino County, Arizona – SWCA Project No. 66178, U.S. Army Corps of Engineers File No. SPL-2021-00470, June 22, 2023

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.®

20 East Thomas Road, Suite 1700
Phoenix, Arizona 85012
Tel 602.274.3831 Fax 602.274.3958
www.swca.com

2136

TECHNICAL MEMORANDUM

To: Therese Carpenter
U.S. Army Corps of Engineers
Arizona Regulatory Branch
3636 N. Central Avenue, Suite 900
Phoenix, AZ 85012-1939

From: Victoria Casteel, Water Resources Specialist

Date: June 22, 2023

Re: **Aquatic Resources Assessment for the CO Bar Solar Energy Project, Coconino County, Arizona – SWCA Project No. 66178, USACE File No. SPL-2021-00470**

INTRODUCTION

SWCA Environmental Consultants (SWCA) was contracted by Clēnera, LLC (Clēnera), to complete an aquatic resources assessment for the CO Bar Solar Energy Project (project). The project is on approximately 14,784 acres of privately owned land and Arizona State Trust land and located approximately 30 miles northwest of the city of Flagstaff, in Coconino County, Arizona (project area) (Figure 1). The project area is located northeast of U.S. Route 180 and includes all or portions of Sections 21, 23, 25, 26, 27, 29, 33, 34, and 35 of Township 26 North, Range 4 East; Sections 19, 21, 27, 29, 31, and 33 of Township 26 North, Range 5 East, Gila and Salt River Baseline and Meridian (U.S. Geological Survey [USGS] 7.5-minute topographic series maps: Ebert Mountain, Dog Knobs, Chapel Mountain, and Lockwood Canyon, Arizona) (Figure 2).The midpoint coordinates of the project area are 35.607211°, −111.916265° (North American Datum of 1983).

In early 2020, SWCA completed an aquatic resources assessment for a smaller project footprint of approximately 9,036 acres (original survey area). Since that time, the project area expanded by approximately 5,748 acres (new survey area). This memorandum summarizes the aquatic resources assessment of the new survey area and an updated assessment of the original survey area (see Figure 2). The original survey area and the new survey area comprise the project area.

SWCA conducted this assessment of potential waters of the U.S. (WOTUS) as part of a due diligence effort to evaluate the potential extent of the U.S. Army Corps of Engineers' (USACE's) jurisdiction under Section 404 of the Clean Water Act (CWA) within the project area. This memorandum can be used for planning purposes to help inform the design of development to minimize and avoid impacts to potential WOTUS to the maximum extent practicable. The memorandum is also intended to support a request to the USACE for a written determination of WOTUS in the project area. The purpose of this assessment is twofold: 1) to document whether any natural or constructed drainages within the project area may be WOTUS as defined under 33 Code of Federal Regulations (CFR) 328.3 and would thus be subject to federal regulation under Section 404 of the Clean Water Act (CWA) (33 United States Code 1344); and 2) to determine the geographic limits of federal jurisdiction (as outlined in 33 CFR 328.4–5) of any WOTUS that may be present within the project area.

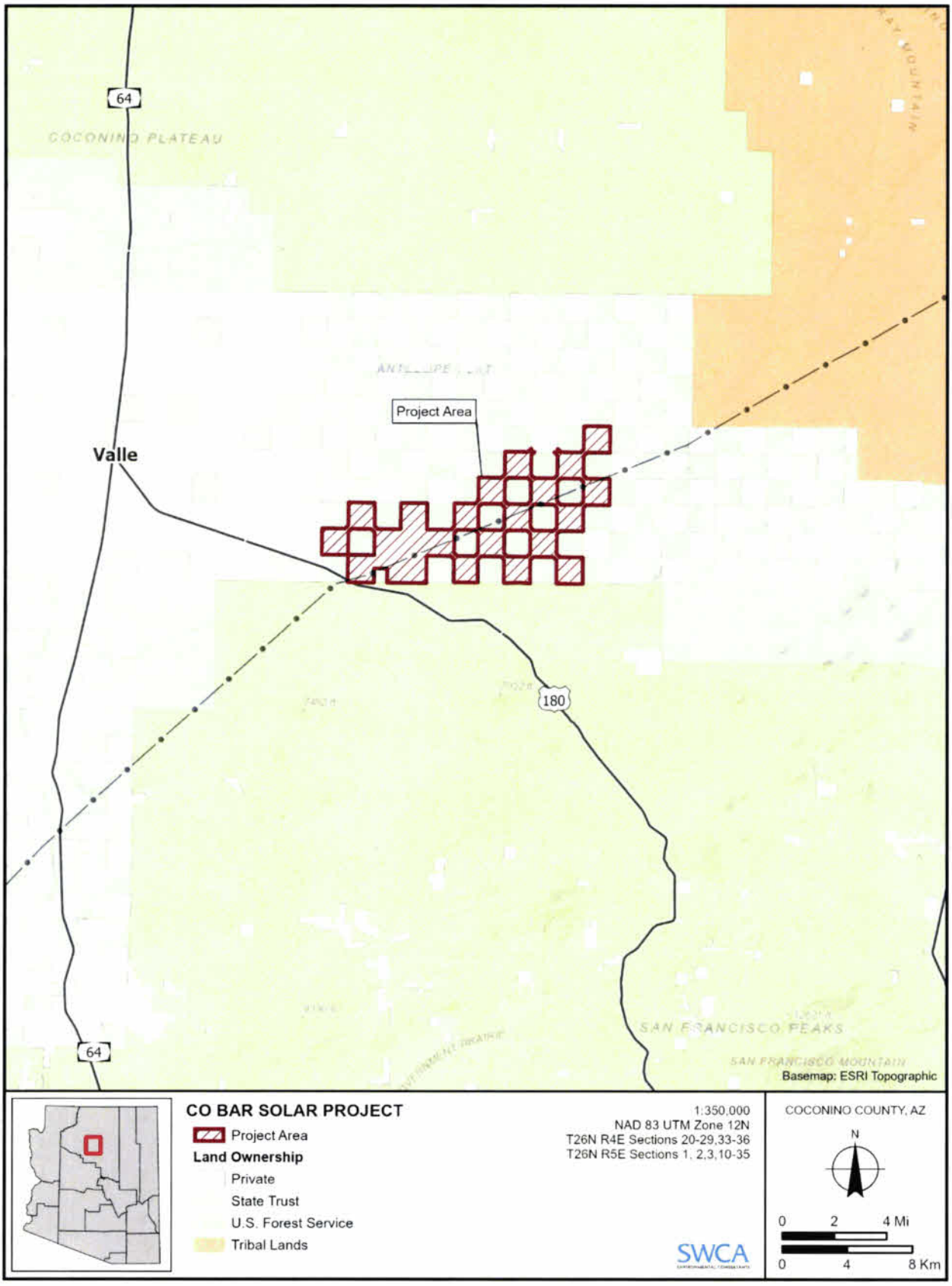

Figure 1. General location of the project area.

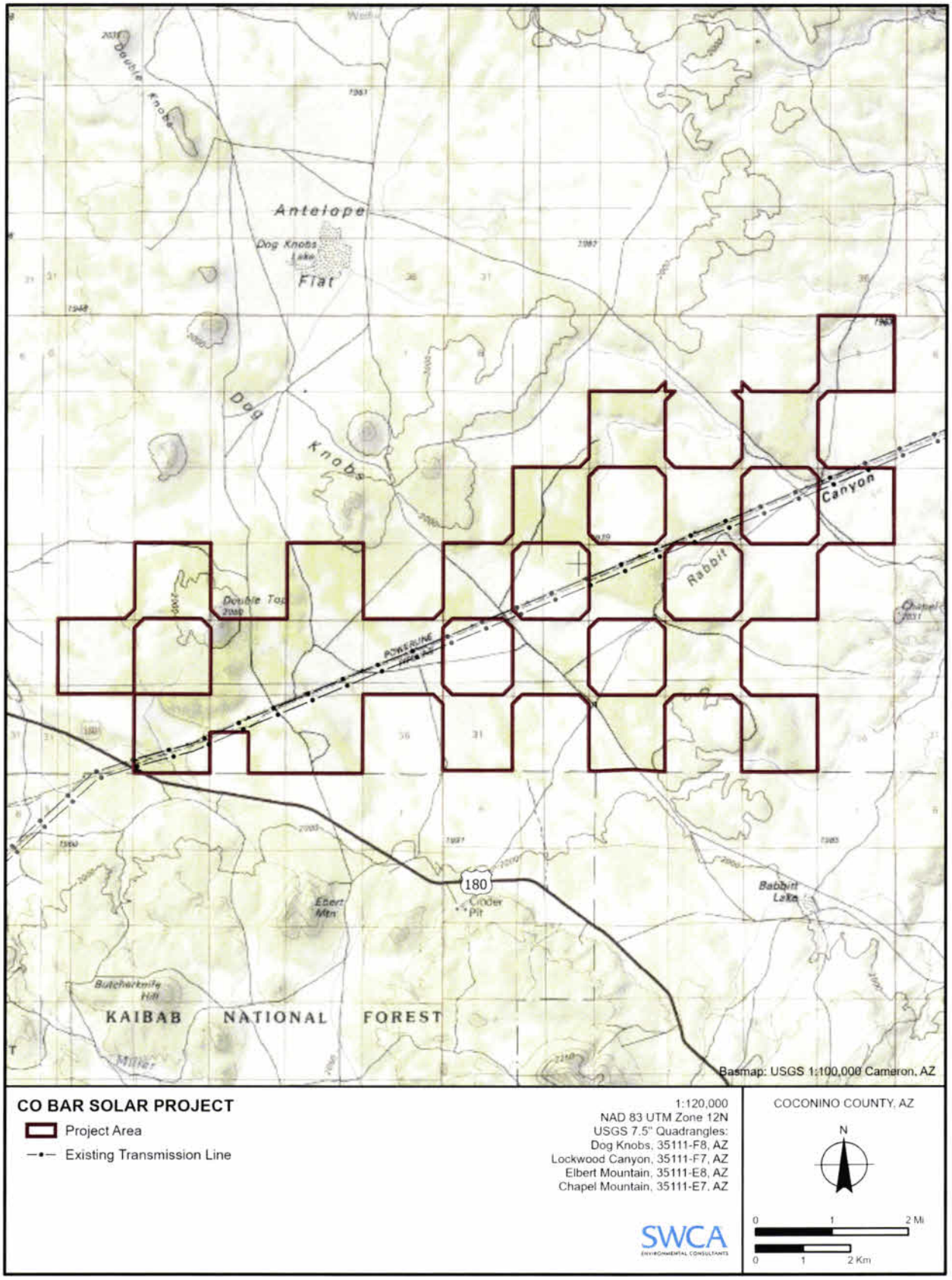

Figure 2. Topographic map of the project area.

METHODS

This memorandum and associated field reconnaissance were completed in accordance with current USACE regulations and guidance. SWCA consulted the USACE's *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008), *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (USACE 2017), *Corps of Engineers Wetland Delineation Manual* (USACE 1987), and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2)* (USACE 2008).

In addition, the *User Manual for a Beta Streamflow Duration Assessment Method for the Arid West of the United States (Version 1.0)* (SDAM; Mazor et al. 2021) was used to help characterize the flow regimes. Flow regime for each surface water feature was established based on information gathered during the desktop review and field reconnaissance. To assist in flow regime characterizations, plant species observed along surface water features during the field reconnaissance were compared with the wetland indicator plant list for Arizona (USACE 2018) to determine their wetland indicator status in the Arid West region.

Before conducting field investigations, SWCA personnel completed a desktop review to identify potential WOTUS, including wetlands and other special aquatic sites, as defined under the CWA (United States Code Title 33 Part 328.3 (a)), within the project area. SWCA accessed several public databases to characterize surface water features and provide additional data relating to their function. The following data sources were accessed:

- Aerial photographs (Google Earth 2021)
- U.S. Environmental Protection Agency (EPA) Watershed Assessment, Tracking & Environmental Results System (WATERS) Surface Water Information System, which includes National Hydrography Dataset (NHD) streams, USGS watersheds, and other surface water feature data (EPA 2021)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapper (USFWS 2021)
- Arizona Department of Environmental Quality (ADEQ) eMaps (ADEQ 2021)
- USGS topographic maps (Ebert Mountain, Dog Knobs, Chapel Mountain, and Lockwood Canyon, Arizona, 7.5-minute quadrangles) (USGS 2021)
- Natural Resources Conservation Service (NRCS) Soil Survey data (NRCS 2021a)
- Federal Emergency Management Agency (FEMA) insurance maps (FEMA 2021)
- USACE Antecedent Precipitation Tool (USACE 2021)
- Arizona Department of Water Resources (ADWR) Registry of Wells in Arizona (Wells 55) (ADWR 2021)
- National Oceanic and Atmospheric Administration (NOAA) Regional Climate Centers Applied Climate Information System (NOAA 2021)
- USGS National Land Cover Database (USGS 2016)
- Southwest Regional Gap Analysis Project (SWReGAP) vegetation communities (SWReGAP 2016)

Field investigations were performed on February 26 and 27, 2020, and May 21, 2021, to assess the potential limits of WOTUS, if present, by examining surface water features in the project area for ordinary high-water mark (OHWM) and flow regime indicators. SWCA water resources specialists surveyed the project area on foot, investigating drainage features for the presence of OHWMs and documenting associated plant assemblages. Ground-level photographs and notes regarding feature width and depth, flow regime observations, and presence or absence of OHWM indicators were recorded at representative data points. Data point locations were recorded using GPS technology. Field GPS data were then transferred to geographic information system (GIS) platforms and mapped on aerial imagery using AutoCAD/GIS software to create figures that depict data points and any observed drainage features within the project area.

Physical characteristics that may be considered indicators of an OHWM are listed in guidance developed by the USACE; they include typical bed and banks with discrete breaks in slope, distinct changes in surrounding substrates, presence of shelving, and bands of vegetation along channel banks (USACE 2005).

Identified surface water features were characterized by flow persistence as perennial, intermittent, or ephemeral based on available desktop data and field observations, including application of the SDAM. Perennial streams typically flow year-round because the water table is located above the streambed; groundwater is therefore the primary source of surface water in the stream, but flows are also supplemented by upstream rainfall and snowmelt runoff. By contrast, intermittent streams only flow seasonally as the result of rainfall, snowmelt runoff, and/or rising groundwater that discharges into the stream channel. The groundwater rises in response to seasonal increases in upstream precipitation. Finally, ephemeral streambeds are above the water table throughout the year and only flow during and shortly after precipitation events. Rainfall runoff is the primary source of water for stream flow in ephemeral streams (Curtis et al. 2011).

RESULTS

Project Area Setting

Topography and Land Use

Elevations in the project area range from approximately 6,350 to 6,700 feet above mean sea level. Topography is generally flat to rolling. Geographic features in the vicinity include the following low mountains: Double Top between project parcels, the Dog Knobs to the north, Ebert Mountain within the Kaibab National Forest to the south, Red Hill to the west, and Chapel Mountain to the east.

The project area and lands to the west, north, and east consist of a checkerboard of parcels that alternate between private ownership and State Trust land. The project area consists primarily of private lands, with select areas of State Trust land at the corners where the private parcels meet. The project area and adjacent lands are undeveloped rangeland, with minor disturbance from dirt roads and ranching activities. The State Trust lands are managed by the Arizona State Land Department as the Antelope Flat grazing allotment. The U.S. Forest Service manages the lands adjacent to the south as part of the Coconino and Kaibab National Forests.

Hydrography

The area lies within the Miller Wash and Rabbit Canyon-Cedar Wash watersheds (10-digit Hydrologic Unit Codes 1501000404 and 1502001606, respectively), as defined by the USGS Watershed Boundary Dataset (EPA 2021). Stormwater flows over uplands as sheetflow and through a series of swale-like

drainage features. The drainage features within the eastern portion of the project area (including Rabbit Canyon) flow toward Lockwood Canyon to the east; the drainage features within the western portion of the project area flow toward Miller Wash to the west of the project area. Lockwood Canyon and Miller Wash are indirect tributaries to the Colorado River, which is greater than 80 river miles from the project area via both tributaries.

The USFWS NWI dataset identifies 48.6 acres of linear riverine features and 3.1 acres of pond features in the project area (Table 1). The USGS NHD identifies 21.5 linear miles of streams/river features and 3.6 acres of lake/pond features in the project area (EPA 2021). No surface water features are mapped by ADEQ in the project area. Outstanding Arizona Waters or waterbodies designated as impaired or not attaining water quality standards are not mapped within or in the vicinity of the project area (ADEQ 2021). Agency-mapped features in the project area are illustrated on Figures 3a–3d.

Table 1. Summary of NWI Features

NWI Code	Description	Acreage within Project Area
R4SBC	Riverine, intermittent, streambed, seasonally flooded	45.9 acres
R5UBFx	Riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded, excavated	2.1 acres
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	0.6 acre
PUSJ	Palustrine, unconsolidated shore, intermittently flooded	2.5 acres
PUSAh	Palustrine, unconsolidated shore, temporarily flooded, diked/impounded	0.6 acres

Source: USACE, 2021b.

The project area is within FEMA Flood Insurance Rate Map panels 04005C4925G, 04005C4950G, 04005C5450G, and 04005C5475G. The entire area is mapped as a Zone X, areas of minimal flood hazard. FEMA-designated 100-year floodplains are not present in the project area (FEMA 2021).

The mean annual precipitation recorded at the nearest Agricultural Applied Climate Information System WETS (wetlands determination) station with adequate data (Sunset Crater, NM, AZ) for the previous 30 years (1991–2021) is 16.89 inches, with 48.8 inches of annual snowfall (NOAA 2021). Results from the USACE Antecedent Precipitation Tool indicate that the field visit on May 21, 2021, was conducted during the dry season, the drought index was "extreme drought," and the project area had been experiencing "normal" antecedent precipitation conditions in the 90 days prior to the field visit (USACE 2021).

A search of the ADWR's online database of registered wells (Wells 55) showed that there is one well mapped within approximately 0.5 mile of the project area. The well is not a field-verified Groundwater Site Inventory (GWSI) well. The nearest GWSI wells are recorded with depths to groundwater ranging from 40 to 430 feet below ground level (ADWR 2021).

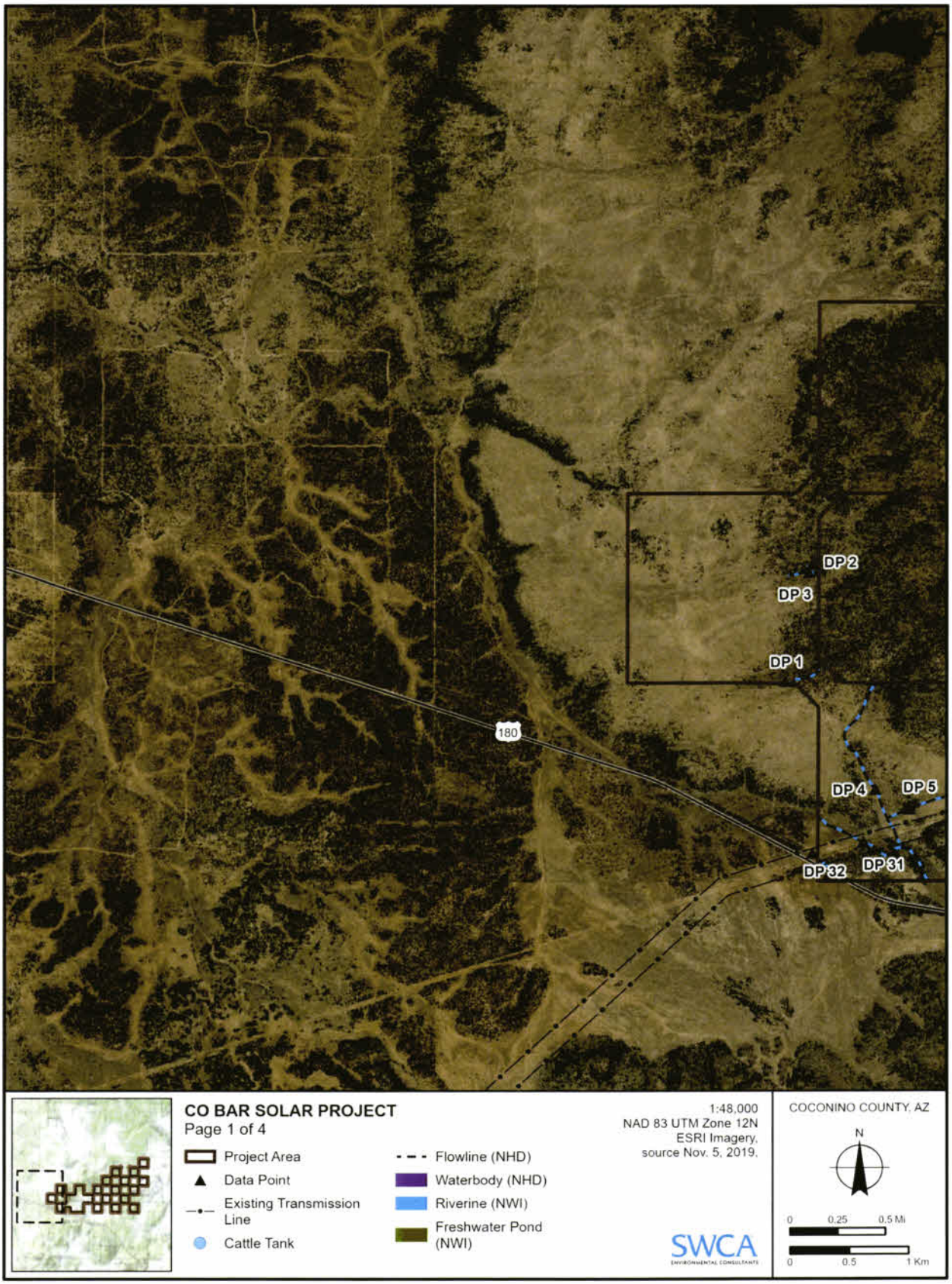

Figure 3a. Data point locations and agency-mapped features in the project area (west end).

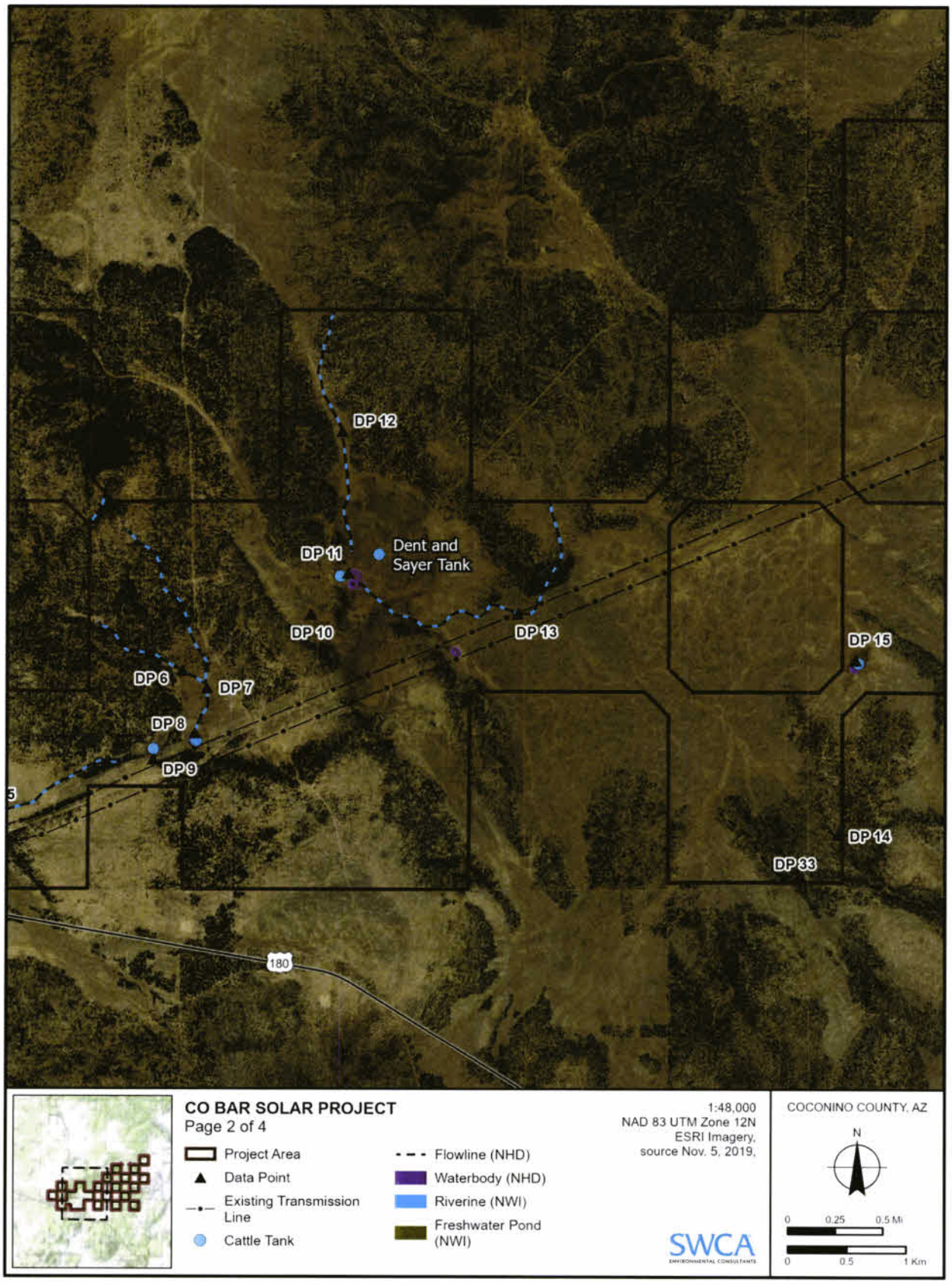

Figure 3b. Data point locations and agency-mapped features in the project area (central).

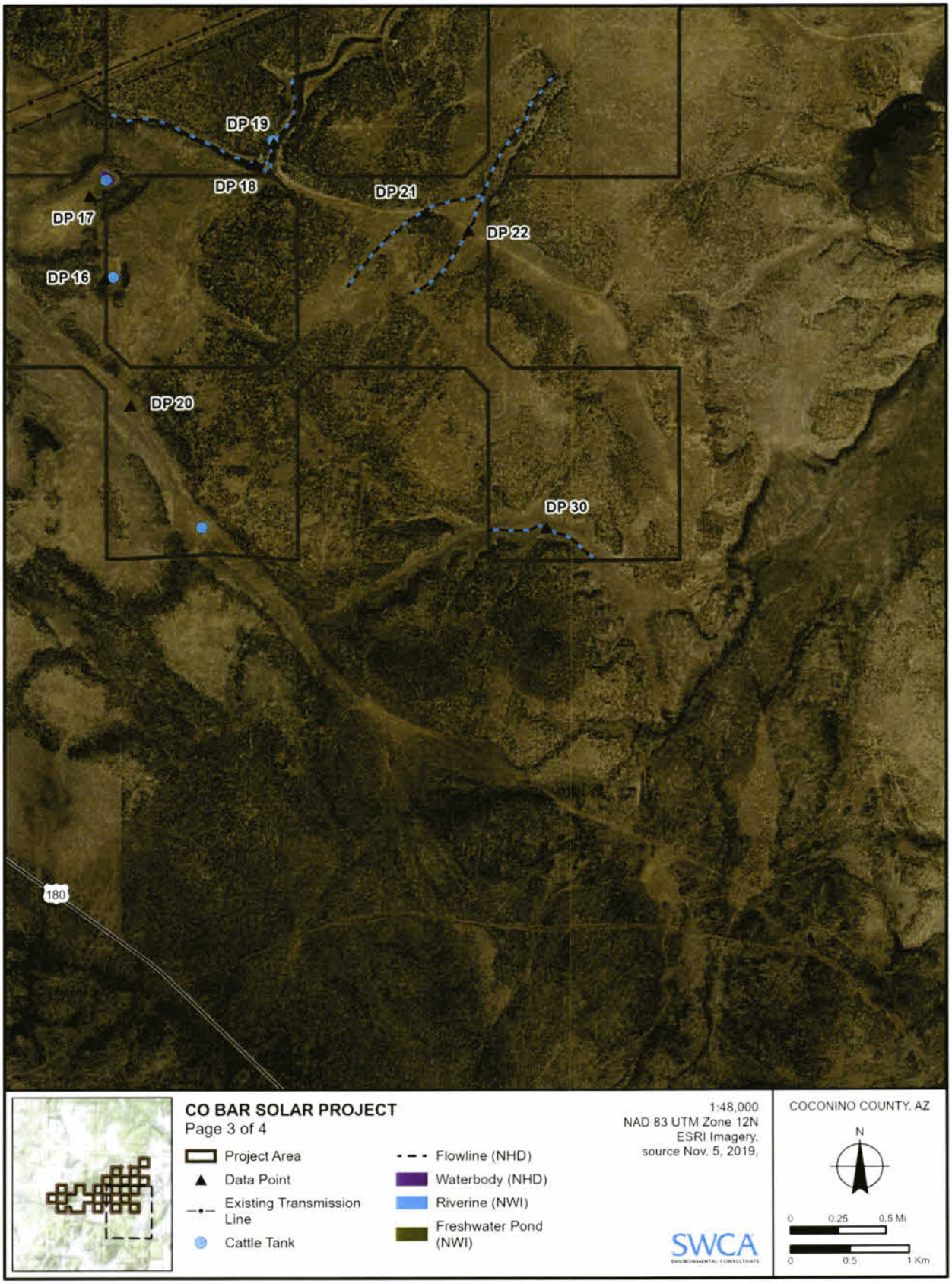

Figure 3c. Data point locations and agency-mapped features in the project area (southeast).

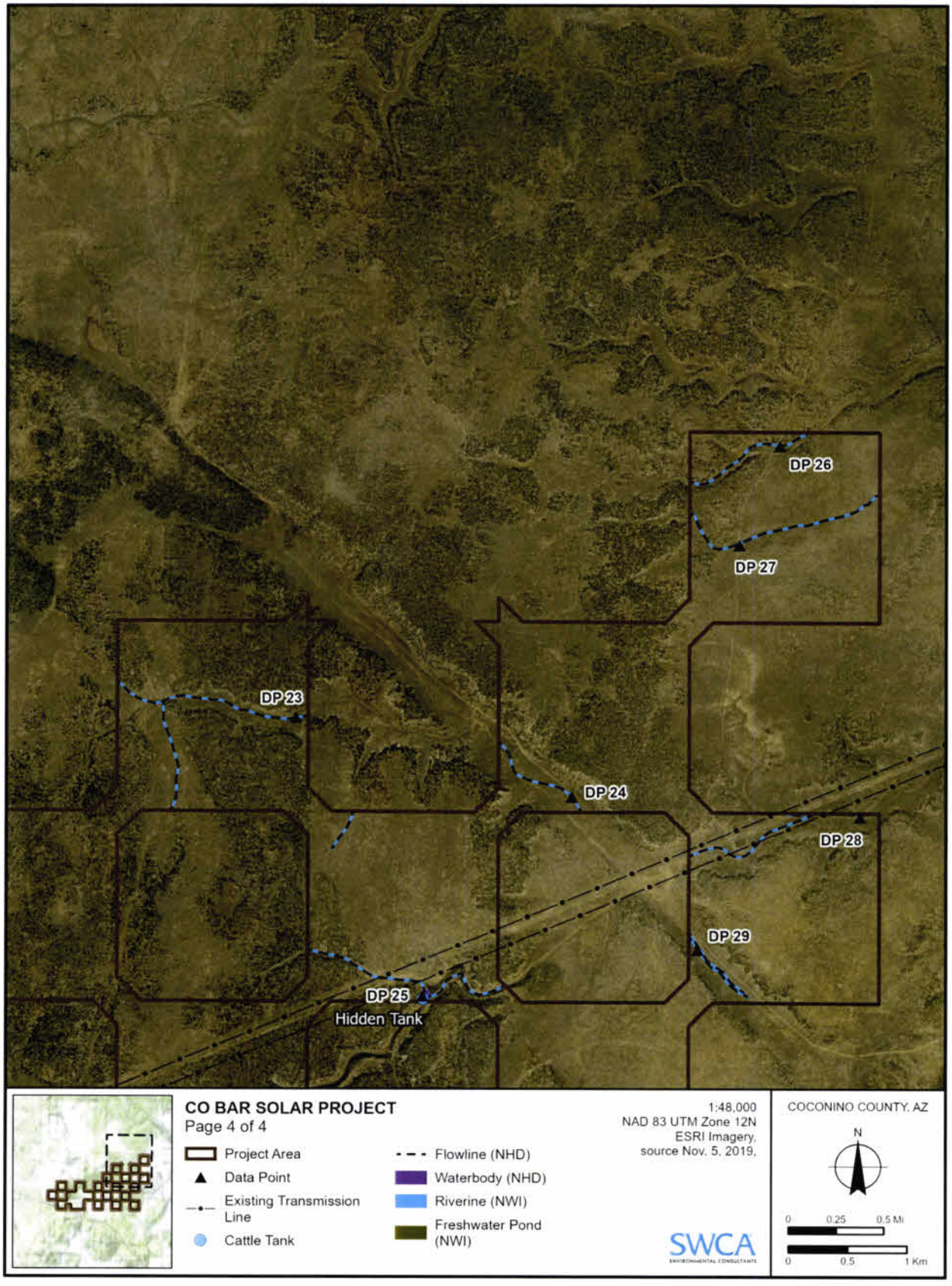

Figure 3d. Data point locations and agency-mapped features in the project area (northeast).

Vegetation

Vegetation can be characterized as typical of the Great Basin Conifer Woodland biotic community (Brown 1994). The USGS National Land Cover Database maps the site as primarily shrub/scrub (63%), grasslands/herbaceous (28%), and evergreen forest (8%), with developed areas (<1%) mapped along the dirt roads (USGS 2016). SWReGAP identifies seven vegetation communities in the project area (Table 2) (SWReGAP 2016). Dominant plant species include longflower rabbitbrush (*Chrysothamnus depressus*), tulip pricklypear (*Opuntia phaeacantha*), rubber rabbitbrush (*Ericameria nauseosa*), broom snakeweed (*Gutierrezia sarothrae*), oneseed juniper (*Juniperus monosperma*), two-needle pinyon (*Pinus edulis*), Fremont's mahonia (*Mahonia fremontii*), whipple cholla (*Cylindropuntia whipplei*), and prickly Russian thistle (*Salsola tragus*). Dominant grasses observed include blue grama (*Bouteloua gracilis*), squirreltail (*Elymus elymoides*), Indian ricegrass (*Achnatherum hymenoides*), New Mexico feathergrass (*Hesperostipa neomexicana*), sideoats grama (*Bouteloua curtipendula*), and slender wheatgrass (*Elymus trachycaulus*).

There were no facultative wetland or obligate plants or stands of deciduous broad-leaved riparian trees observed during the field investigation. Prickly Russian thistle, squirreltail, and slender wheatgrass are identified by the National Wetland Plant List (NWPL) as Facultative Upland plants, which usually occur in non-wetlands but can occasionally be found in wetlands. However, no plant species with a hydrophytic (i.e., facultative wetland or obligate) indicator status were observed on-site. All other species are either listed as Upland or not listed in the NWPL and therefore are considered upland species for wetland delineation purposes (USACE 2018).

Table 2. Summary of SWReGAP Vegetation Communities

Map Unit Name	Acreage within Project Area	Percent of Project Area
Colorado Plateau Pinyon-Juniper Woodland	8,676.9	59%
Inter-Mountain Basins Semi-Desert Shrub Steppe	4,443.9	30%
Inter-Mountain Basins Semi-Desert Grassland	815.0	6%
Inter-Mountain Basins Juniper Savanna	556.2	4%
Inter-Mountain Basins Big Sagebrush Shrubland	275.0	2%
Inter-Mountain Basins Mixed Salt Desert Scrub	9.6	<1%
Rocky Mountain Ponderosa Pine Woodland	7.5	<1%

Source: SWReGAP, 2016.

Soils

The dominant soil types in the project area are Deama-Toqui complex, 0 to 8 percent slopes; Deama stony loam, 1 to 15 percent slopes; Ashfork gravelly clay loam, 1 to 15 percent slopes; and Ziegler-Cross association, moderately sloping (Table 3). Soils in this area are categorized as well drained to somewhat excessively well drained; none of the mapped soil types are identified by the NRCS as hydric (i.e., developed under "conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part") (NRCS 2021a, 2021b).

Table 3. Summary of Soil Types

Map Unit Name	Acreage within Project Area	Percent of Project Area
Deama-Toqui complex, 0 to 8 percent slopes	2,808.3	19%
Deama stony loam, 1 to 15 percent slopes	2,327.8	16%
Ashfork gravelly clay loam, 1 to 15 percent slopes	2,254.4	15%
Ziegler-Cross association, moderately sloping	1,665.2	11%
Disterheff very gravelly sandy clay loam, 1 to 15 percent slopes	1,057.3	7%
Winona-Boysag gravelly loams, 0 to 8 percent slopes	926.9	6%
Winona stony loam, 0 to 8 percent slopes	736.7	5%
Aut-Cross association, moderately sloping	495.1	3%
Palma sandy loam, 0 to 5 percent slopes	466.5	3%
Thunderbird-Springerville association, strongly sloping	444.5	3%
Kopie-Servilleta association, moderately sloping	342.3	2%
Poley-Tusayan association, gently sloping	287.6	2%
Springerville very stony clay, 0 to 8 percent slopes	254.5	2%
Servilleta fine sandy loam, 1 to 8 percent slopes	225.2	2%
Rune silty clay loam, 0 to 8 percent slopes	206.9	1%
Paymaster-Lynx association, gently sloping	141.8	1%
Ziegler gravelly loam, 0 to 8 percent slopes	121.0	1%
Aut gravelly loam, 0 to 8 percent slopes	13.0	<1%
Wukoki-Wupatki very cindery loams, 15 to 60 percent slopes	4.5	<1%

Note: No digital data available for 8.9 acres (0.1%) of the project area.
Source: NRCS, 2021a.

Potentially Jurisdictional Areas

Table 4 summarizes surface water features that were identified during the desktop review and assessed during the field investigation. Ground-level photographs taken at representative data points (locations identified on Figures 3a–3d) are provided in Appendix A. Aerial photograph figures showing all numbered features and data point locations are in Appendix B (Figures B1–B56). Field notes for each of the data points taken during the field visit are provided in Appendix C.

Table 4. Summary of Features

Feature No.*	Data Point No.*	Lat.	Long.	Notes	Associated NWI Code	OHWM Indicators Observed on ASLD Lands	OHWM Indicators Observed on Private Lands
1	DP 1	35.599699°	-111.982229°	Identified by NWI as a linear drainage feature	R4SBC	None	None
2	DP 2	35.608728°	-111.979705°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None

Feature No.*	Data Point No.*	Lat.	Long.	Notes	Associated NWI Code	OHWM Indicators Observed on ASLD Lands	OHWM Indicators Observed on Private Lands
3	DP 3	35.608052°	-111.980043°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
4	DP 4	35.591470°	-111.973858°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
5	DP 5	35.589972°	-111.970719°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
6	DP 31	35.587485°	-111.974981°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
7	DP 32	35.586595°	-111.979714°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
8	DP 6	35.601149°	-111.952647°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
9	DP 7	35.599797°	-111.950333°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
10	DP 8	35.596415°	-111.951451°	Cattle tank; identified by NWI as a linear feature	R5UBH	None	None
11	DP 9	35.594393°	-111.955366°	Cattle tank visible on aerial	None	None	None
12	DP 12	35.619367°	-111.937819°	Identified by NHD and NWI as a linear drainage feature	R5UBFx	None	None
13	DP 13	35.605528°	-111.921334°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
14	DP 10	35.605469°	-111.940675°	Potential drainage visible on aerial near Dent and Sayer Tank	None	None	None
	DP 11	35.608626°	-111.937203°	Dent and Sayer Tank. End segments of features at DPs 12 and 13 terminate within this tank.	R5UBH and R5UBFx	None	None
15	DP 33	35.585343°	-111.896539°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
16	DP 14	35.588715°	-111.891448°	Potential drainage visible on aerial	None	None	None
17	DP 15	35.602025°	-111.889826°	Cattle tank visible on aerial	None	None	None
18	DP 16	35.606210°	-111.873396°	Cattle tank; identified by NWI as a pond feature	PUSJ	None	None
19	DP 17	35.612539°	-111.874836°	Cattle tank; identified by NWI as a pond feature	PUSJ	None	None
20	DP 18	35.614976°	-111.859439°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
21	DP 19	35.616535°	-111.857727°	Identified by NHD and NWI as a linear drainage feature; cattle tank along feature	R4SBC	None	None
	DP 28	35.642617°	-111.804059°	Identified by NHD and NWI as a linear drainage feature (Rabbit Canyon)	R4SBC	None	None

Feature No.*	Data Point No.*	Lat.	Long.	Notes	Associated NWI Code	OHWM Indicators Observed on ASLD Lands	OHWM Indicators Observed on Private Lands
N/A (Road)	DP 20	35.596628°	-111.871031°	Former road alignment adjacent to current road alignment	None	None	None
22	DP 25	35.628941°	-111.844789°	Identified by NHD and NWI as a linear drainage feature; cattle tank (Hidden Tank) along feature	R4SBC, R5UBH, and PUSAh	None	None
23	DP 21	35.611258°	-111.843571°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
24	DP 22	35.609906°	-111.839579°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
25	DP 23	35.650195°	-111.856696°	Identified by NWI as a linear drainage feature	R4SBC	None	None
26	DP 24	35.644128°	-111.830928°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
27	DP 29	35.632465°	-111.819189°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
28	DP 26	35.670869°	-111.811575°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
29	DP 27	35.663319°	-111.815335°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None
30	DP 30	35.587279°	-111.832375°	Identified by NHD and NWI as a linear drainage feature	R4SBC	None	None

* Agency-mapped features and data point locations are illustrated on Figures 3a–3d. All numbered features and data point locations are identified on the aerial photographs in Appendix C.

Regulatory Background

The definition of WOTUS under the CWA has recently been in flux. The Navigable Waters Protection Rule (NWPR) became effective in Arizona on June 22, 2020. The NWPR defined WOTUS as 1) territorial seas and traditional navigable waters (TNWs); 2) perennial and intermittent tributaries that contribute surface water flow to Category 1 waters in a typical year; 3) certain lakes, ponds, and impoundments of jurisdictional waters; and 4) wetlands adjacent to other jurisdictional waters. Under the NWPR, all ephemeral streams (e.g., arroyos) were categorically excluded from being considered WOTUS and therefore were not federally protected under the CWA. Section 404 permits for dredge or fill activities were not necessary for impacts to such drainage features.

However, the NWPR was recently remanded and vacated nationwide. On August 30, 2021, U.S. District Judge Rosemary Márquez, presiding in the District of Arizona, granted a request by the United States for voluntary remand of the NWPR to allow for reconsideration of the rule by the EPA and USACE. The judge also granted the plaintiffs' (Pascua Yaqui Tribe, et al.) request that the NWPR be vacated while the USACE and EPA reconsider the rule and work to develop a new definition of waters of the United States.

The future status of the WOTUS definition is unknown while the EPA and USACE reconsider the rule, but the definition of WOTUS as of August 30, 2021, has reverted back to the language in place prior to June 22, 2020. The NWPR exclusion for ephemeral waters (and other categories of waters) is no longer valid and, in certain circumstances, ephemeral waters may be considered jurisdictional under the CWA

guidance in place prior to June 22, 2020 (i.e., the 2008 post-Rapanos guidance [EPA and USACE 2008]). Under the post-Rapanos guidance, jurisdiction of non-navigable tributaries that are not relatively permanent (including ephemeral streams) are decided by the USACE based on fact-specific analysis to determine whether they have a significant nexus with a TNW. Hydrologic information (e.g., historic records of water flow, personal observations, etc.), physical characteristics of the feature (i.e., reliable OHWM and bed and banks), and contextual factors (e.g., size of the watershed, average annual rainfall, channel dimensions, etc.) are considered during the determination of whether or not a significant nexus is present between the tributary and the downstream TNW. SWCA reviewed the project area for all surface water features, including ephemeral streams and other water features, and evaluated potential jurisdiction under the 2008 post-Rapanos guidance (which is the currently active guidance at the time of this report).

Potentially Jurisdictional Areas Under 2008 Post-Rapanos Guidelines

Based on observations from the field reconnaissance and the desktop review of available information, there are no potential WOTUS within the project area. Features identified during the desktop review (e.g., from NHD, NWI, and aerial data) were given a feature number and observed during the field reconnaissance. Based the review and site observations, all of the surface water features identified in the project area were determined to be upland areas, ephemeral swales, small erosional features, or livestock tanks that did not exhibit consistent OHWM indicators as described by Lichvar and McColley (2008). Drainage features showed either no OHWM indicators or weak, discontinuous OHWM indicators and no clear bed and banks. The linear riverine features identified by NHD and NWI are either upland areas or ephemeral swale features; the ponds identified by NWI, as well as other ponded areas observed during the site investigation, are human-developed impoundments fed largely by well water. Some tanks contained surface water on the day of investigation; however, surface waters were contained within the impoundments, with no visible downstream conveyance. There are no special aquatic sites (including wetlands), relatively permanent waters, or TNWs in the project area.

Available data and field observations indicate that all drainage features on-site flow only in direct response to localized rainfall events and therefore have an ephemeral flow regime. The ephemeral flow regime determinations of the surface water features on-site are based on the SDAM (Mazor et al. 2021) and the following data for the project area:

- No hydrophytic vegetation (i.e., plant species designated as facultative wetland or obligate wetland in the Arid West regional wetland plant list) was observed.
- No aquatic invertebrates, algae, or fish were observed.
- No Ephemeroptera, Plecoptera, or Trichoptera taxa were observed.
- Depth to groundwater in the project vicinity averages more than 50 feet below the surface based on ADWR data.
- No hydric soils are mapped by NRCS in the project area.
- No potential wetlands were mapped by the NWI or observed during field reconnaissance.
- Areas upstream of the site do not receive enough snowfall or have a deep enough snowpack melt in a typical year to provide flows that would create intermittent flow conditions in the project area drainages (NOAA 2021).

The nearest downstream TNW to the project area is the Gila River, Powers Butte to Gillespie Dam, approximately 80 river miles downstream of the project area. The climate, low-gradient topography, and soil characteristics of the project area promote low volumes and low velocities of stormwater runoff across the project area and beyond. Infiltration and evaporation reduces long-distance stormwater runoff

flows (NRCS 2021; USGS 2021). The potential for a significant hydrological nexus and/or contribution of flows to the nearest TNW, with numerous barriers and diversions, would be speculative. Any stormwater runoff crossing the project area would be at such low levels at the nearest receiving TNW that it would have, at most, an insignificant effect on the biological, chemical, and physical integrity of the TNW.

Because of the reasons stated above, none of the surface waters crossing the project area should be considered WOTUS or subject to Section 404 of the CWA under the 2008 post-Rapanos (pre-NWPR) guidance (Appendix D).

REGULATORY CONSIDERATIONS

Based on the results of this assessment, there are no surface water features within the project area that would be considered WOTUS and regulated under the CWA. Since no features were identified as potential WOTUS, the Preliminary Jurisdictional Determination request process would not apply and the Approved Jurisdictional Determination request process would need to be completed to obtain written confirmation from the USACE that the aquatic features on-site are not WOTUS. A written Approved Jurisdictional Determination from the USACE is not required—unless written documentation of coordination with the USACE is requested by financial institutions or local government agency officials—but could provide assurance that the USACE agrees that no WOTUS are present.

LIMITATIONS AND WARRANTY

The results and conclusions of this report represent the best professional judgment of SWCA scientists and are based on information provided by the project proponent and on information obtained from agencies and other sources during the course of the study. No other warranty, expressed or implied, is made. The USACE and the EPA have the ultimate authority to determine the jurisdictional status of any surface water feature.

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APPENDIX A

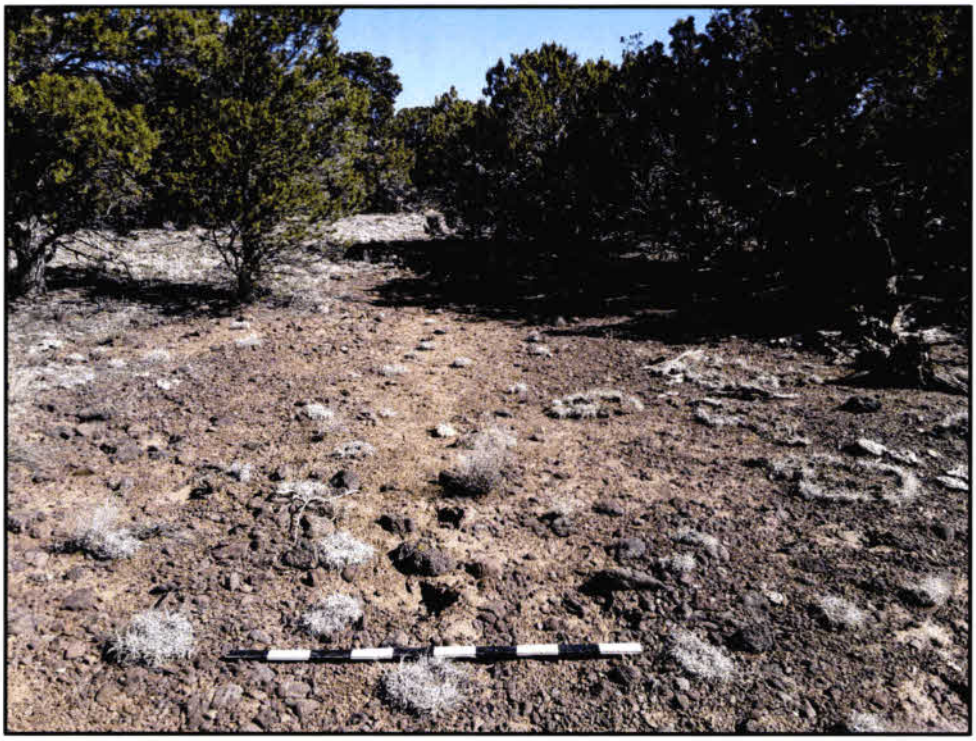
Representative Ground-Level Photographs

Photograph A-1. Data point (DP) 1, Feature 1, upland area with no OHWM indicators; view facing northeast.

Photograph A-2. DP 1, Feature 1, upland area with no OHWM indicators; view facing southwest.

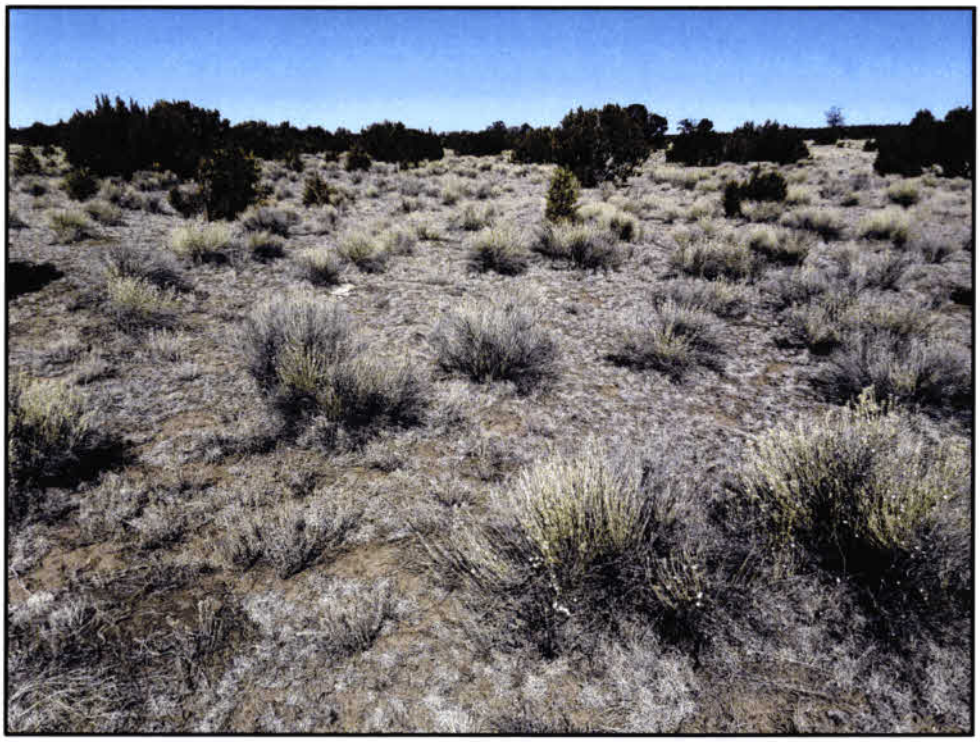
Photograph A-3. DP 2, Feature 2, upland area with no OHWM indicators; view facing northeast.

Photograph A-4. DP 2, Feature 2, upland area with no OHWM indicators; view facing southwest.



Photograph A-5. DP 3, Feature 3, upland area with no OHWM indicators; view facing east.

Photograph A-6. DP 3, Feature 3, upland area with no OHWM indicators; view facing west.



Photograph A-7. DP 4, Feature 4, upland area with no OHWM indicators; view facing northwest.

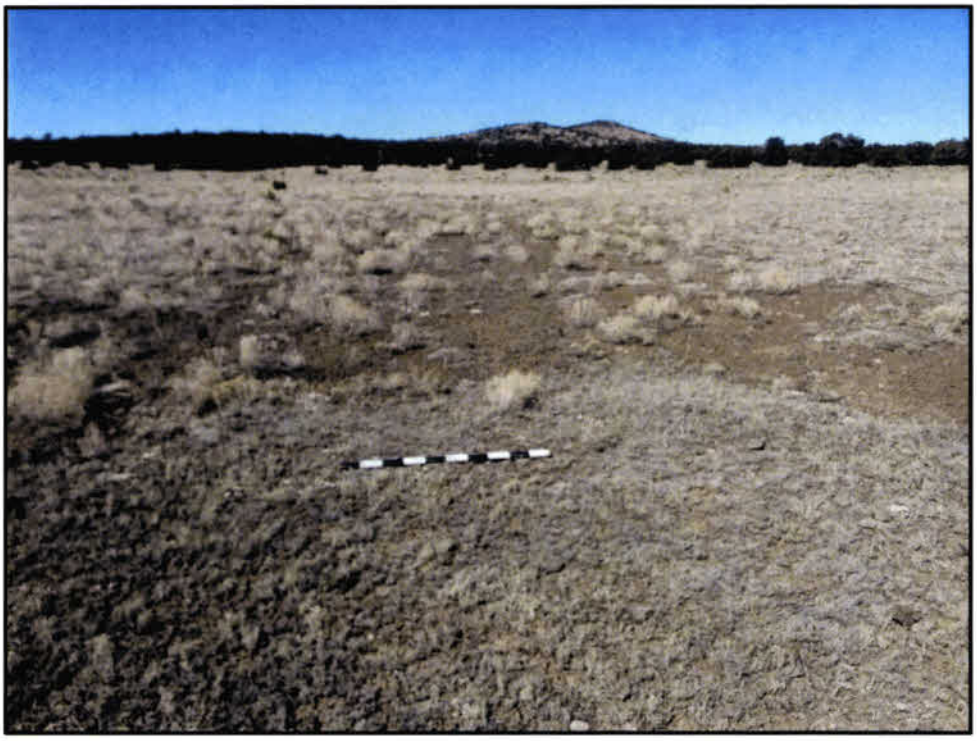
Photograph A-8. DP 4, Feature 4, upland area with no OHWM indicators; view facing southeast.

Photograph A-9. DP 5, Feature 5, rocky swale with no OHWM indicators; view facing northeast.

Photograph A-10. DP 5, Feature 5, rocky swale with no OHWM indicators; view facing southwest.

Photograph A-11. DP 6, Feature 8, upland area with no OHWM indicators; view facing northwest.

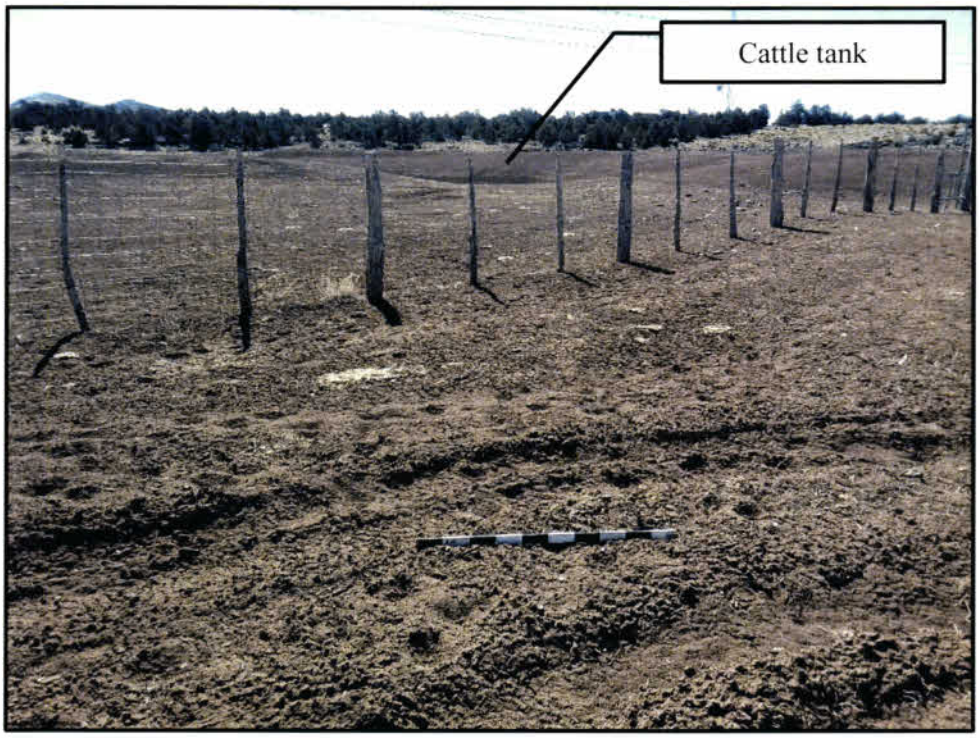
Photograph A-12. DP 6, Feature 8, upland area with no OHWM indicators; view facing southeast.



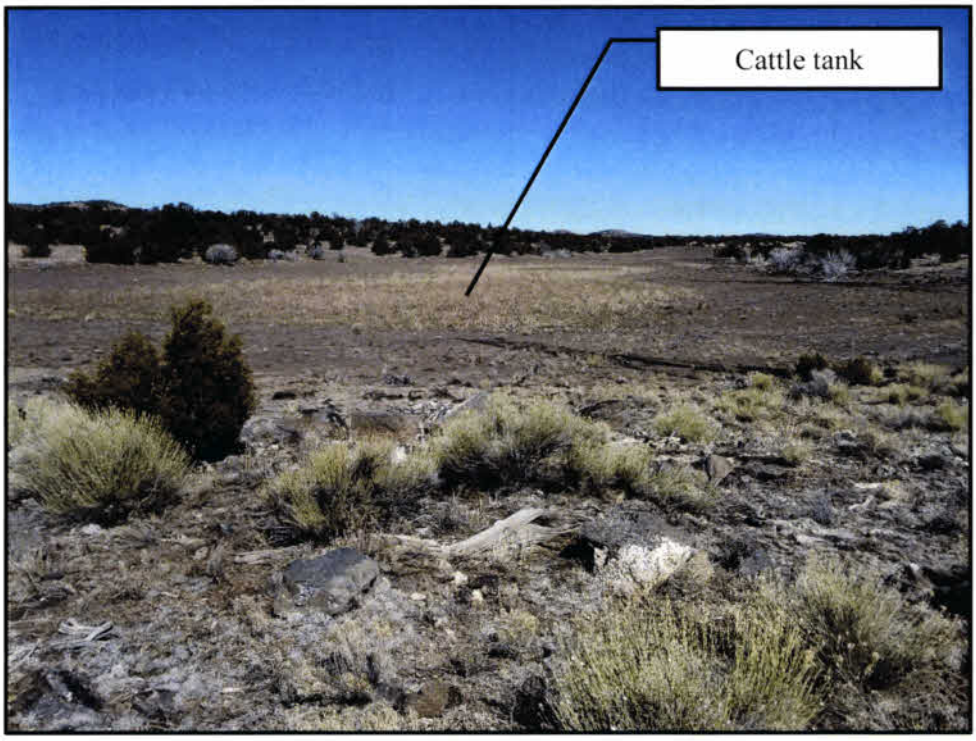
Photograph A-13. DP 7, Feature 9, upland area with no OHWM indicators; view facing north.

Photograph A-14. DP 7, Feature 9, upland area with no OHWM indicators; view facing south.

Photograph A-15. DP 8, Feature 10, upland area with no OHWM indicators; view facing north.



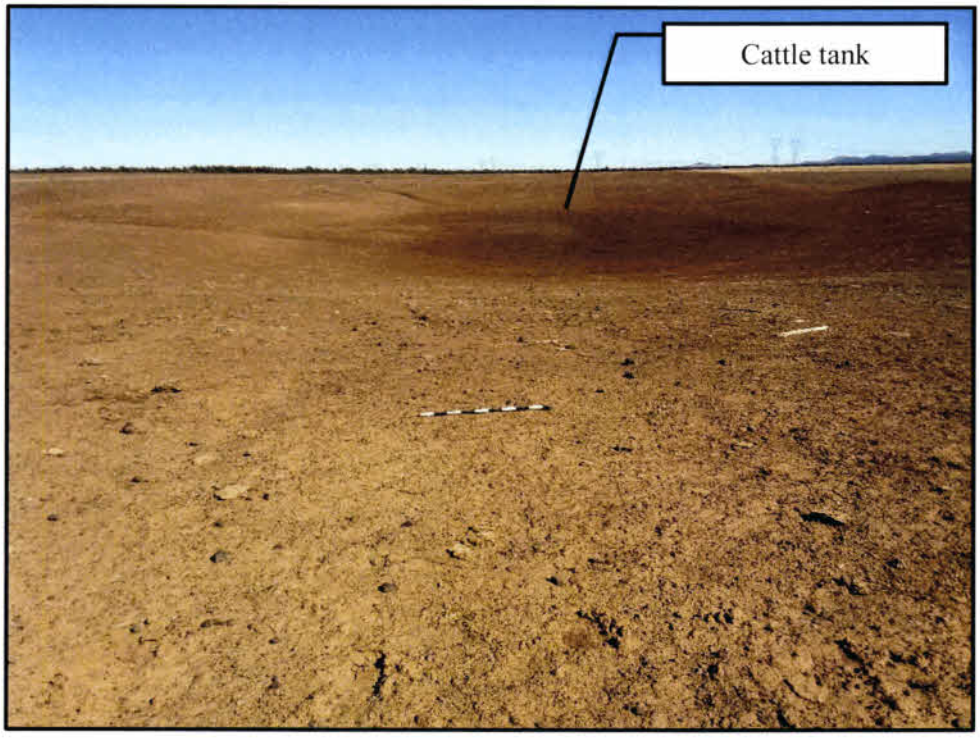
Photograph A-16. DP 8, Feature 10, cattle tank with no OHWM indicators; view facing south-southwest.



Photograph A-17. DP 9, Feature 11, cattle tank; view facing northeast.

Photograph A-18. DP 10, Feature 14, upland area adjacent to Feature 14 (Dent and Sayer Tank) with no OHWM indicators; view facing northwest.

Photograph A-19. DP 10, upland area adjacent to Feature 14 (Dent and Sayer Tank) with no OHWM indicators; view facing southeast.



Photograph A-20. DP 11, Feature 14 (Dent and Sayer Tank), cattle tank and surrounding ranching area; view facing east.